



# Amazon Comprehend API Reference



## Amazon Comprehend API Reference:

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# Comprehend API Reference

This document provides detailed information about the Amazon Comprehend API actions and their parameters.

For information about the IAM access control permissions you need to use this API, see [Using IAM identity policies to manage permissions](#).

You can use [AWS SDKs](#) to access Amazon Comprehend APIs using your favorite programming language. The SDKs automatically perform useful tasks for you, such as:

- Cryptographically sign your service requests
- Retry requests
- Handle error responses

The following resources provide additional information about the Amazon Comprehend API.

- *Amazon Web Services General Reference*
  - [Amazon Comprehend Endpoints for each region](#).
- *AWS Command Line Interface*
  - [Amazon Comprehend CLI commands](#).

## Topics

- [Actions](#)
- [Data Types](#)
- [Common Parameters](#)
- [Common Errors](#)

## Actions

The following actions are supported:

- [BatchDetectDominantLanguage](#)
- [BatchDetectEntities](#)
- [BatchDetectKeyPhrases](#)

- [BatchDetectSentiment](#)
- [BatchDetectSyntax](#)
- [BatchDetectTargetedSentiment](#)
- [ClassifyDocument](#)
- [ContainsPiiEntities](#)
- [CreateDataset](#)
- [CreateDocumentClassifier](#)
- [CreateEndpoint](#)
- [CreateEntityRecognizer](#)
- [CreateFlywheel](#)
- [DeleteDocumentClassifier](#)
- [DeleteEndpoint](#)
- [DeleteEntityRecognizer](#)
- [DeleteFlywheel](#)
- [DeleteResourcePolicy](#)
- [DescribeDataset](#)
- [DescribeDocumentClassificationJob](#)
- [DescribeDocumentClassifier](#)
- [DescribeDominantLanguageDetectionJob](#)
- [DescribeEndpoint](#)
- [DescribeEntitiesDetectionJob](#)
- [DescribeEntityRecognizer](#)
- [DescribeEventsDetectionJob](#)
- [DescribeFlywheel](#)
- [DescribeFlywheelIteration](#)
- [DescribeKeyPhrasesDetectionJob](#)
- [DescribePiiEntitiesDetectionJob](#)
- [DescribeResourcePolicy](#)
- [DescribeSentimentDetectionJob](#)
- [DescribeTargetedSentimentDetectionJob](#)
- [DescribeTopicsDetectionJob](#)

- [DetectDominantLanguage](#)
- [DetectEntities](#)
- [DetectKeyPhrases](#)
- [DetectPiiEntities](#)
- [DetectSentiment](#)
- [DetectSyntax](#)
- [DetectTargetedSentiment](#)
- [DetectToxicContent](#)
- [ImportModel](#)
- [ListDatasets](#)
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- [ListEndpoints](#)
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- [ListEventsDetectionJobs](#)
- [ListFlywheelIterationHistory](#)
- [ListFlywheels](#)
- [ListKeyPhrasesDetectionJobs](#)
- [ListPiiEntitiesDetectionJobs](#)
- [ListSentimentDetectionJobs](#)
- [ListTagsForResource](#)
- [ListTargetedSentimentDetectionJobs](#)
- [ListTopicsDetectionJobs](#)
- [PutResourcePolicy](#)
- [StartDocumentClassificationJob](#)
- [StartDominantLanguageDetectionJob](#)
- [StartEntitiesDetectionJob](#)

- [StartEventsDetectionJob](#)
- [StartFlywheelIteration](#)
- [StartKeyPhrasesDetectionJob](#)
- [StartPiiEntitiesDetectionJob](#)
- [StartSentimentDetectionJob](#)
- [StartTargetedSentimentDetectionJob](#)
- [StartTopicsDetectionJob](#)
- [StopDominantLanguageDetectionJob](#)
- [StopEntitiesDetectionJob](#)
- [StopEventsDetectionJob](#)
- [StopKeyPhrasesDetectionJob](#)
- [StopPiiEntitiesDetectionJob](#)
- [StopSentimentDetectionJob](#)
- [StopTargetedSentimentDetectionJob](#)
- [StopTrainingDocumentClassifier](#)
- [StopTrainingEntityRecognizer](#)
- [TagResource](#)
- [UntagResource](#)
- [UpdateEndpoint](#)
- [UpdateFlywheel](#)

## BatchDetectDominantLanguage

Determines the dominant language of the input text for a batch of documents. For a list of languages that Amazon Comprehend can detect, see [Amazon Comprehend Supported Languages](#).

### Request Syntax

```
{
  "TextList": [ "string" ]
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### TextList

A list containing the UTF-8 encoded text of the input documents. The list can contain a maximum of 25 documents. Each document should contain at least 20 characters. The maximum size of each document is 5 KB.

Type: Array of strings

Array Members: Minimum number of 1 item.

Length Constraints: Minimum length of 1.

Required: Yes

### Response Syntax

```
{
  "ErrorList": [
    {
      "ErrorCode": "string",
      "ErrorMessage": "string",
      "Index": number
    }
  ],
  "ResultList": [
```

```

    {
      "Index": number,
      "Languages": [
        {
          "LanguageCode": "string",
          "Score": number
        }
      ]
    }
  ]
}

```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### ErrorList

A list containing one [BatchItemError](#) object for each document that contained an error. The results are sorted in ascending order by the Index field and match the order of the documents in the input list. If there are no errors in the batch, the ErrorList is empty.

Type: Array of [BatchItemError](#) objects

### ResultList

A list of [BatchDetectDominantLanguageItemResult](#) objects containing the results of the operation. The results are sorted in ascending order by the Index field and match the order of the documents in the input list. If all of the documents contain an error, the ResultList is empty.

Type: Array of [BatchDetectDominantLanguageItemResult](#) objects

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **BatchSizeLimitExceededException**

The number of documents in the request exceeds the limit of 25. Try your request again with fewer documents.

HTTP Status Code: 400

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **TextSizeLimitExceededException**

The size of the input text exceeds the limit. Use a smaller document.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## BatchDetectEntities

Inspects the text of a batch of documents for named entities and returns information about them. For more information about named entities, see [Entities](#) in the Comprehend Developer Guide.

### Request Syntax

```
{  
  "LanguageCode": "string",  
  "TextList": [ "string" ]  
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### [LanguageCode](#)

The language of the input documents. You can specify any of the primary languages supported by Amazon Comprehend. All documents must be in the same language.

Type: String

Valid Values: en | es | fr | de | it | pt | ar | hi | ja | ko | zh | zh-TW

Required: Yes

#### [TextList](#)

A list containing the UTF-8 encoded text of the input documents. The list can contain a maximum of 25 documents. The maximum size of each document is 5 KB.

Type: Array of strings

Array Members: Minimum number of 1 item.

Length Constraints: Minimum length of 1.

Required: Yes



## Response Syntax

```

{
  "ErrorList": [
    {
      "ErrorCode": "string",
      "ErrorMessage": "string",
      "Index": number
    }
  ],
  "ResultList": [
    {
      "Entities": [
        {
          "BeginOffset": number,
          "BlockReferences": [
            {
              "BeginOffset": number,
              "BlockId": "string",
              "ChildBlocks": [
                {
                  "BeginOffset": number,
                  "ChildBlockId": "string",
                  "EndOffset": number
                }
              ],
              "EndOffset": number
            }
          ],
          "EndOffset": number,
          "Score": number,
          "Text": "string",
          "Type": "string"
        }
      ],
      "Index": number
    }
  ]
}

```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### ErrorList

A list containing one [BatchItemError](#) object for each document that contained an error. The results are sorted in ascending order by the Index field and match the order of the documents in the input list. If there are no errors in the batch, the ErrorList is empty.

Type: Array of [BatchItemError](#) objects

### ResultList

A list of [BatchDetectEntitiesItemResult](#) objects containing the results of the operation. The results are sorted in ascending order by the Index field and match the order of the documents in the input list. If all of the documents contain an error, the ResultList is empty.

Type: Array of [BatchDetectEntitiesItemResult](#) objects

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **BatchSizeLimitExceededException**

The number of documents in the request exceeds the limit of 25. Try your request again with fewer documents.

HTTP Status Code: 400

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **TextSizeLimitExceededException**

The size of the input text exceeds the limit. Use a smaller document.

HTTP Status Code: 400

### **UnsupportedLanguageException**

Amazon Comprehend can't process the language of the input text. For a list of supported languages, [Supported languages](#) in the Comprehend Developer Guide.

HTTP Status Code: 400

### **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## BatchDetectKeyPhrases

Detects the key noun phrases found in a batch of documents.

### Request Syntax

```
{
  "LanguageCode": "string",
  "TextList": [ "string" ]
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### LanguageCode

The language of the input documents. You can specify any of the primary languages supported by Amazon Comprehend. All documents must be in the same language.

Type: String

Valid Values: en | es | fr | de | it | pt | ar | hi | ja | ko | zh | zh-TW

Required: Yes

#### TextList

A list containing the UTF-8 encoded text of the input documents. The list can contain a maximum of 25 documents. The maximum size of each document is 5 KB.

Type: Array of strings

Array Members: Minimum number of 1 item.

Length Constraints: Minimum length of 1.

Required: Yes

### Response Syntax

```
{
```

```

    "ErrorList": [
      {
        "ErrorCode": "string",
        "ErrorMessage": "string",
        "Index": number
      }
    ],
    "ResultList": [
      {
        "Index": number,
        "KeyPhrases": [
          {
            "BeginOffset": number,
            "EndOffset": number,
            "Score": number,
            "Text": "string"
          }
        ]
      }
    ]
  }
}

```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### ErrorList

A list containing one [BatchItemError](#) object for each document that contained an error. The results are sorted in ascending order by the Index field and match the order of the documents in the input list. If there are no errors in the batch, the ErrorList is empty.

Type: Array of [BatchItemError](#) objects

### ResultList

A list of [BatchDetectKeyPhrasesItemResult](#) objects containing the results of the operation. The results are sorted in ascending order by the Index field and match the order of the documents in the input list. If all of the documents contain an error, the ResultList is empty.

Type: Array of [BatchDetectKeyPhrasesItemResult](#) objects

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **BatchSizeLimitExceededException**

The number of documents in the request exceeds the limit of 25. Try your request again with fewer documents.

HTTP Status Code: 400

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **TextSizeLimitExceededException**

The size of the input text exceeds the limit. Use a smaller document.

HTTP Status Code: 400

### **UnsupportedLanguageException**

Amazon Comprehend can't process the language of the input text. For a list of supported languages, [Supported languages](#) in the Comprehend Developer Guide.

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)

- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## BatchDetectSentiment

Inspects a batch of documents and returns an inference of the prevailing sentiment, POSITIVE, NEUTRAL, MIXED, or NEGATIVE, in each one.

### Request Syntax

```
{  
  "LanguageCode": "string",  
  "TextList": [ "string" ]  
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### LanguageCode

The language of the input documents. You can specify any of the primary languages supported by Amazon Comprehend. All documents must be in the same language.

Type: String

Valid Values: en | es | fr | de | it | pt | ar | hi | ja | ko | zh | zh-TW

Required: Yes

#### TextList

A list containing the UTF-8 encoded text of the input documents. The list can contain a maximum of 25 documents. The maximum size of each document is 5 KB.

Type: Array of strings

Array Members: Minimum number of 1 item.

Length Constraints: Minimum length of 1.

Required: Yes



## Response Syntax

```
{
  "ErrorList": [
    {
      "ErrorCode": "string",
      "ErrorMessage": "string",
      "Index": number
    }
  ],
  "ResultList": [
    {
      "Index": number,
      "Sentiment": "string",
      "SentimentScore": {
        "Mixed": number,
        "Negative": number,
        "Neutral": number,
        "Positive": number
      }
    }
  ]
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### ErrorList

A list containing one [BatchItemError](#) object for each document that contained an error. The results are sorted in ascending order by the Index field and match the order of the documents in the input list. If there are no errors in the batch, the `ErrorList` is empty.

Type: Array of [BatchItemError](#) objects

### ResultList

A list of [BatchDetectSentimentItemResult](#) objects containing the results of the operation. The results are sorted in ascending order by the Index field and match the order of the documents in the input list. If all of the documents contain an error, the `ResultList` is empty.

Type: Array of [BatchDetectSentimentItemResult](#) objects

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **BatchSizeLimitExceededException**

The number of documents in the request exceeds the limit of 25. Try your request again with fewer documents.

HTTP Status Code: 400

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **TextSizeLimitExceededException**

The size of the input text exceeds the limit. Use a smaller document.

HTTP Status Code: 400

### **UnsupportedLanguageException**

Amazon Comprehend can't process the language of the input text. For a list of supported languages, [Supported languages](#) in the Comprehend Developer Guide.

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)

- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## BatchDetectSyntax

Inspects the text of a batch of documents for the syntax and part of speech of the words in the document and returns information about them. For more information, see [Syntax](#) in the Comprehend Developer Guide.

### Request Syntax

```
{  
  "LanguageCode": "string",  
  "TextList": [ "string" ]  
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### [LanguageCode](#)

The language of the input documents. You can specify any of the following languages supported by Amazon Comprehend: German ("de"), English ("en"), Spanish ("es"), French ("fr"), Italian ("it"), or Portuguese ("pt"). All documents must be in the same language.

Type: String

Valid Values: en | es | fr | de | it | pt

Required: Yes

#### [TextList](#)

A list containing the UTF-8 encoded text of the input documents. The list can contain a maximum of 25 documents. The maximum size for each document is 5 KB.

Type: Array of strings

Array Members: Minimum number of 1 item.

Length Constraints: Minimum length of 1.

Required: Yes

## Response Syntax

```
{
  "ErrorList": [
    {
      "ErrorCode": "string",
      "ErrorMessage": "string",
      "Index": number
    }
  ],
  "ResultList": [
    {
      "Index": number,
      "SyntaxTokens": [
        {
          "BeginOffset": number,
          "EndOffset": number,
          "PartOfSpeech": {
            "Score": number,
            "Tag": "string"
          },
          "Text": "string",
          "TokenId": number
        }
      ]
    }
  ]
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### ErrorList

A list containing one [BatchItemError](#) object for each document that contained an error. The results are sorted in ascending order by the Index field and match the order of the documents in the input list. If there are no errors in the batch, the ErrorList is empty.

Type: Array of [BatchItemError](#) objects

## **ResultList**

A list of [BatchDetectSyntaxItemResult](#) objects containing the results of the operation. The results are sorted in ascending order by the Index field and match the order of the documents in the input list. If all of the documents contain an error, the ResultList is empty.

Type: Array of [BatchDetectSyntaxItemResult](#) objects

## **Errors**

For information about the errors that are common to all actions, see [Common Errors](#).

### **BatchSizeLimitExceededException**

The number of documents in the request exceeds the limit of 25. Try your request again with fewer documents.

HTTP Status Code: 400

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **TextSizeLimitExceededException**

The size of the input text exceeds the limit. Use a smaller document.

HTTP Status Code: 400

### **UnsupportedLanguageException**

Amazon Comprehend can't process the language of the input text. For a list of supported languages, [Supported languages](#) in the Comprehend Developer Guide.

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## BatchDetectTargetedSentiment

Inspects a batch of documents and returns a sentiment analysis for each entity identified in the documents.

For more information about targeted sentiment, see [Targeted sentiment](#) in the *Amazon Comprehend Developer Guide*.

### Request Syntax

```
{
  "LanguageCode": "string",
  "TextList": [ "string" ]
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### [LanguageCode](#)

The language of the input documents. Currently, English is the only supported language.

Type: String

Valid Values: en

Required: Yes

#### [TextList](#)

A list containing the UTF-8 encoded text of the input documents. The list can contain a maximum of 25 documents. The maximum size of each document is 5 KB.

Type: Array of strings

Array Members: Minimum number of 1 item.

Length Constraints: Minimum length of 1.

Required: Yes



## Response Syntax

```

{
  "ErrorList": [
    {
      "ErrorCode": "string",
      "ErrorMessage": "string",
      "Index": number
    }
  ],
  "ResultList": [
    {
      "Entities": [
        {
          "DescriptiveMentionIndex": [ number ],
          "Mentions": [
            {
              "BeginOffset": number,
              "EndOffset": number,
              "GroupScore": number,
              "MentionSentiment": {
                "Sentiment": "string",
                "SentimentScore": {
                  "Mixed": number,
                  "Negative": number,
                  "Neutral": number,
                  "Positive": number
                }
              }
            }
          ],
          "Score": number,
          "Text": "string",
          "Type": "string"
        }
      ]
    }
  ],
  "Index": number
}

```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### ErrorList

List of errors that the operation can return.

Type: Array of [BatchItemError](#) objects

### ResultList

A list of objects containing the results of the operation. The results are sorted in ascending order by the Index field and match the order of the documents in the input list. If all of the documents contain an error, the ResultList is empty.

Type: Array of [BatchDetectTargetedSentimentItemResult](#) objects

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **BatchSizeLimitExceededException**

The number of documents in the request exceeds the limit of 25. Try your request again with fewer documents.

HTTP Status Code: 400

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **TextSizeLimitExceededException**

The size of the input text exceeds the limit. Use a smaller document.

HTTP Status Code: 400

### **UnsupportedLanguageException**

Amazon Comprehend can't process the language of the input text. For a list of supported languages, [Supported languages](#) in the Comprehend Developer Guide.

HTTP Status Code: 400

### **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# ClassifyDocument

Creates a classification request to analyze a single document in real-time. `ClassifyDocument` supports the following model types:

- Custom classifier - a custom model that you have created and trained. For input, you can provide plain text, a single-page document (PDF, Word, or image), or Amazon Textract API output. For more information, see [Custom classification](#) in the *Amazon Comprehend Developer Guide*.
- Prompt safety classifier - Amazon Comprehend provides a pre-trained model for classifying input prompts for generative AI applications. For input, you provide English plain text input. For prompt safety classification, the response includes only the `Classes` field. For more information about prompt safety classifiers, see [Prompt safety classification](#) in the *Amazon Comprehend Developer Guide*.

If the system detects errors while processing a page in the input document, the API response includes an `Errors` field that describes the errors.

If the system detects a document-level error in your input document, the API returns an `InvalidRequestException` error response. For details about this exception, see [Errors in semi-structured documents](#) in the *Comprehend Developer Guide*.

## Request Syntax

```
{
  "Bytes": blob,
  "DocumentReaderConfig": {
    "DocumentReadAction": "string",
    "DocumentReadMode": "string",
    "FeatureTypes": [ "string" ]
  },
  "EndpointArn": "string",
  "Text": "string"
}
```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

## Bytes

Use the Bytes parameter to input a text, PDF, Word or image file.

When you classify a document using a custom model, you can also use the Bytes parameter to input an Amazon Textract DetectDocumentText or AnalyzeDocument output file.

To classify a document using the prompt safety classifier, use the Text parameter for input.

Provide the input document as a sequence of base64-encoded bytes. If your code uses an AWS SDK to classify documents, the SDK may encode the document file bytes for you.

The maximum length of this field depends on the input document type. For details, see [Inputs for real-time custom analysis](#) in the Comprehend Developer Guide.

If you use the Bytes parameter, do not use the Text parameter.

Type: Base64-encoded binary data object

Length Constraints: Minimum length of 1.

Required: No

## DocumentReaderConfig

Provides configuration parameters to override the default actions for extracting text from PDF documents and image files.

Type: [DocumentReaderConfig](#) object

Required: No

## EndpointArn

The Amazon Resource Number (ARN) of the endpoint.

For prompt safety classification, Amazon Comprehend provides the endpoint ARN. For more information about prompt safety classifiers, see [Prompt safety classification](#) in the *Amazon Comprehend Developer Guide*

For custom classification, you create an endpoint for your custom model. For more information, see [Using Amazon Comprehend endpoints](#).

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:( [0-9]{12}|aws):document-classifier-endpoint/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

Required: Yes

## Text

The document text to be analyzed. If you enter text using this parameter, do not use the Bytes parameter.

Type: String

Length Constraints: Minimum length of 1.

Required: No

## Response Syntax

```
{
  "Classes": [
    {
      "Name": "string",
      "Page": number,
      "Score": number
    }
  ],
  "DocumentMetadata": {
    "ExtractedCharacters": [
      {
        "Count": number,
        "Page": number
      }
    ],
    "Pages": number
  },
  "DocumentType": [
    {
      "Page": number,
      "Type": "string"
    }
  ],
  "Errors": [
    {
      "ErrorCode": "string",
```

```

    "ErrorMessage": "string",
    "Page": number
  },
],
"Labels": [
  {
    "Name": "string",
    "Page": number,
    "Score": number
  }
],
"Warnings": [
  {
    "Page": number,
    "WarnCode": "string",
    "WarnMessage": "string"
  }
]
}

```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### Classes

The classes used by the document being analyzed. These are used for models trained in multi-class mode. Individual classes are mutually exclusive and each document is expected to have only a single class assigned to it. For example, an animal can be a dog or a cat, but not both at the same time.

For prompt safety classification, the response includes only two classes (SAFE\_PROMPT and UNSAFE\_PROMPT), along with a confidence score for each class. The value range of the score is zero to one, where one is the highest confidence.

Type: Array of [DocumentClass](#) objects

### DocumentMetadata

Extraction information about the document. This field is present in the response only if your request includes the Byte parameter.

Type: [DocumentMetadata](#) object

## [DocumentType](#)

The document type for each page in the input document. This field is present in the response only if your request includes the `Byte` parameter.

Type: Array of [DocumentTypeListItem](#) objects

## [Errors](#)

Page-level errors that the system detected while processing the input document. The field is empty if the system encountered no errors.

Type: Array of [ErrorsListItem](#) objects

## [Labels](#)

The labels used in the document being analyzed. These are used for multi-label trained models. Individual labels represent different categories that are related in some manner and are not mutually exclusive. For example, a movie can be just an action movie, or it can be an action movie, a science fiction movie, and a comedy, all at the same time.

Type: Array of [DocumentLabel](#) objects

## [Warnings](#)

Warnings detected while processing the input document. The response includes a warning if there is a mismatch between the input document type and the model type associated with the endpoint that you specified. The response can also include warnings for individual pages that have a mismatch.

The field is empty if the system generated no warnings.

Type: Array of [WarningsListItem](#) objects

## **Errors**

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500



## **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

## **ResourceUnavailableException**

The specified resource is not available. Check the resource and try your request again.

HTTP Status Code: 400

## **TextSizeLimitExceededException**

The size of the input text exceeds the limit. Use a smaller document.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## ContainsPiiEntities

Analyzes input text for the presence of personally identifiable information (PII) and returns the labels of identified PII entity types such as name, address, bank account number, or phone number.

### Request Syntax

```
{  
  "LanguageCode": "string",  
  "Text": "string"  
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### LanguageCode

The language of the input documents.

Type: String

Valid Values: en

Required: Yes

#### Text

A UTF-8 text string. The maximum string size is 100 KB.

Type: String

Length Constraints: Minimum length of 1.

Required: Yes

### Response Syntax

```
{  
  "Labels": [  
    {
```

```
    "Name": "string",  
    "Score": number  
  }  
]  
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### Labels

The labels used in the document being analyzed. Individual labels represent personally identifiable information (PII) entity types.

Type: Array of [EntityLabel](#) objects

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **TextSizeLimitExceededException**

The size of the input text exceeds the limit. Use a smaller document.

HTTP Status Code: 400

### **UnsupportedLanguageException**

Amazon Comprehend can't process the language of the input text. For a list of supported languages, [Supported languages](#) in the Comprehend Developer Guide.

## HTTP Status Code: 400

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## CreateDataset

Creates a dataset to upload training or test data for a model associated with a flywheel. For more information about datasets, see [Flywheel overview](#) in the *Amazon Comprehend Developer Guide*.

### Request Syntax

```
{
  "ClientRequestToken": "string",
  "DatasetName": "string",
  "DatasetType": "string",
  "Description": "string",
  "FlywheelArn": "string",
  "InputDataConfig": {
    "AugmentedManifests": [
      {
        "AnnotationDataS3Uri": "string",
        "AttributeNames": [ "string" ],
        "DocumentType": "string",
        "S3Uri": "string",
        "SourceDocumentsS3Uri": "string"
      }
    ],
    "DataFormat": "string",
    "DocumentClassifierInputDataConfig": {
      "LabelDelimiter": "string",
      "S3Uri": "string"
    },
    "EntityRecognizerInputDataConfig": {
      "Annotations": {
        "S3Uri": "string"
      },
      "Documents": {
        "InputFormat": "string",
        "S3Uri": "string"
      },
      "EntityList": {
        "S3Uri": "string"
      }
    }
  },
  "Tags": [
    {
      "Key": "string",
```

```
    "Value": "string"  
  }  
]  
}
```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

### ClientRequestToken

A unique identifier for the request. If you don't set the client request token, Amazon Comprehend generates one.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[a-zA-Z0-9-]+$`

Required: No

### DatasetName

Name of the dataset.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[a-zA-Z0-9](-*[a-zA-Z0-9])*$`

Required: Yes

### DatasetType

The dataset type. You can specify that the data in a dataset is for training the model or for testing the model.

Type: String

Valid Values: TRAIN | TEST

Required: No

### Description

Description of the dataset.

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^([a-zA-Z0-9_])[\a-zA-Z0-9_@#%*+=:?./!\s-]*$`

Required: No

### FlywheelArn

The Amazon Resource Number (ARN) of the flywheel of the flywheel to receive the data.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:flywheel/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

Required: Yes

### InputDataConfig

Information about the input data configuration. The type of input data varies based on the format of the input and whether the data is for a classifier model or an entity recognition model.

Type: [DatasetInputDataConfig](#) object

Required: Yes

### Tags

Tags for the dataset.

Type: Array of [Tag](#) objects

Required: No

## Response Syntax

```
{  
  "DatasetArn": "string"  
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### [DatasetArn](#)

The ARN of the dataset.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:flywheel/[a-zA-Z0-9](-*[a-zA-Z0-9])*/dataset/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **ResourceInUseException**

The specified resource name is already in use. Use a different name and try your request again.

HTTP Status Code: 400



### **ResourceLimitExceededException**

The maximum number of resources per account has been exceeded. Review the resources, and then try your request again.

HTTP Status Code: 400

### **ResourceNotFoundException**

The specified resource ARN was not found. Check the ARN and try your request again.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

### **TooManyTagsException**

The request contains more tags than can be associated with a resource (50 tags per resource). The maximum number of tags includes both existing tags and those included in your current request.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)



## CreateDocumentClassifier

Creates a new document classifier that you can use to categorize documents. To create a classifier, you provide a set of training documents that are labeled with the categories that you want to use. For more information, see [Training classifier models](#) in the Comprehend Developer Guide.

### Request Syntax

```
{
  "ClientRequestToken": "string",
  "DataAccessRoleArn": "string",
  "DocumentClassifierName": "string",
  "InputDataConfig": {
    "AugmentedManifests": [
      {
        "AnnotationDataS3Uri": "string",
        "AttributeNames": [ "string" ],
        "DocumentType": "string",
        "S3Uri": "string",
        "SourceDocumentsS3Uri": "string",
        "Split": "string"
      }
    ],
    "DataFormat": "string",
    "DocumentReaderConfig": {
      "DocumentReadAction": "string",
      "DocumentReadMode": "string",
      "FeatureTypes": [ "string" ]
    },
    "Documents": {
      "S3Uri": "string",
      "TestS3Uri": "string"
    },
    "DocumentType": "string",
    "LabelDelimiter": "string",
    "S3Uri": "string",
    "TestS3Uri": "string"
  },
  "LanguageCode": "string",
  "Mode": "string",
  "ModelKmsKeyId": "string",
  "ModelPolicy": "string",
  "OutputDataConfig": {
```

```

    "FlywheelStatsS3Prefix": "string",
    "KmsKeyId": "string",
    "S3Uri": "string"
  },
  "Tags": [
    {
      "Key": "string",
      "Value": "string"
    }
  ],
  "VersionName": "string",
  "VolumeKmsKeyId": "string",
  "VpcConfig": {
    "SecurityGroupIds": [ "string" ],
    "Subnets": [ "string" ]
  }
}

```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

### ClientRequestToken

A unique identifier for the request. If you don't set the client request token, Amazon Comprehend generates one.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[a-zA-Z0-9-]+$`

Required: No

### DataAccessRoleArn

The Amazon Resource Name (ARN) of the IAM role that grants Amazon Comprehend read access to your input data.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:aws(-[^\:]+)?:iam::[0-9]{12}:role/.+`

Required: Yes

### DocumentClassifierName

The name of the document classifier.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[a-zA-Z0-9](-*[a-zA-Z0-9])*$`

Required: Yes

### InputDataConfig

Specifies the format and location of the input data for the job.

Type: [DocumentClassifierInputDataConfig](#) object

Required: Yes

### LanguageCode

The language of the input documents. You can specify any of the languages supported by Amazon Comprehend. All documents must be in the same language.

Type: String

Valid Values: `en | es | fr | de | it | pt`

Required: Yes

### Mode

Indicates the mode in which the classifier will be trained. The classifier can be trained in multi-class (single-label) mode or multi-label mode. Multi-class mode identifies a single class label for each document and multi-label mode identifies one or more class labels for each document. Multiple labels for an individual document are separated by a delimiter. The default delimiter between labels is a pipe (`|`).

Type: String

Valid Values: `MULTI_CLASS | MULTI_LABEL`

Required: No

### ModelKmsKeyId

ID for the AWS KMS key that Amazon Comprehend uses to encrypt trained custom models. The ModelKmsKeyId can be either of the following formats:

- KMS Key ID: "1234abcd-12ab-34cd-56ef-1234567890ab"
- Amazon Resource Name (ARN) of a KMS Key: "arn:aws:kms:us-west-2:111122223333:key/1234abcd-12ab-34cd-56ef-1234567890ab"

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^\p{ASCII}+$`

Required: No

### ModelPolicy

The resource-based policy to attach to your custom document classifier model. You can use this policy to allow another AWS account to import your custom model.

Provide your policy as a JSON body that you enter as a UTF-8 encoded string without line breaks. To provide valid JSON, enclose the attribute names and values in double quotes. If the JSON body is also enclosed in double quotes, then you must escape the double quotes that are inside the policy:

```
"{\"attribute\": \"value\", \"attribute\": [\"value\"]}"
```

To avoid escaping quotes, you can use single quotes to enclose the policy and double quotes to enclose the JSON names and values:

```
'{"attribute": "value", "attribute": ["value"]}'
```

Type: String

Length Constraints: Minimum length of 1. Maximum length of 20000.

Pattern: `[\u0009\u000A\u000D\u0020-\u00FF]+`

Required: No

## OutputDataConfig

Specifies the location for the output files from a custom classifier job. This parameter is required for a request that creates a native document model.

Type: [DocumentClassifierOutputDataConfig](#) object

Required: No

## Tags

Tags to associate with the document classifier. A tag is a key-value pair that adds as a metadata to a resource used by Amazon Comprehend. For example, a tag with "Sales" as the key might be added to a resource to indicate its use by the sales department.

Type: Array of [Tag](#) objects

Required: No

## VersionName

The version name given to the newly created classifier. Version names can have a maximum of 256 characters. Alphanumeric characters, hyphens (-) and underscores (\_) are allowed. The version name must be unique among all models with the same classifier name in the AWS account/AWS Region.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[a-zA-Z0-9](-*[a-zA-Z0-9])*$`

Required: No

## VolumeKmsKeyId

ID for the AWS Key Management Service (KMS) key that Amazon Comprehend uses to encrypt data on the storage volume attached to the ML compute instance(s) that process the analysis job. The VolumeKmsKeyId can be either of the following formats:

- KMS Key ID: "1234abcd-12ab-34cd-56ef-1234567890ab"
- Amazon Resource Name (ARN) of a KMS Key: "arn:aws:kms:us-west-2:111122223333:key/1234abcd-12ab-34cd-56ef-1234567890ab"

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^\p{ASCII}+$`

Required: No

### [VpcConfig](#)

Configuration parameters for an optional private Virtual Private Cloud (VPC) containing the resources you are using for your custom classifier. For more information, see [Amazon VPC](#).

Type: [VpcConfig](#) object

Required: No

## Response Syntax

```
{
  "DocumentClassifierArn": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### [DocumentClassifierArn](#)

The Amazon Resource Name (ARN) that identifies the document classifier.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:document-classifier/[a-zA-Z0-9](-*[a-zA-Z0-9])*(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*)?`

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).



**InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

**InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

**KmsKeyValidationException**

The KMS customer managed key (CMK) entered cannot be validated. Verify the key and re-enter it.

HTTP Status Code: 400

**ResourceInUseException**

The specified resource name is already in use. Use a different name and try your request again.

HTTP Status Code: 400

**ResourceLimitExceededException**

The maximum number of resources per account has been exceeded. Review the resources, and then try your request again.

HTTP Status Code: 400

**TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

**TooManyTagsException**

The request contains more tags than can be associated with a resource (50 tags per resource). The maximum number of tags includes both existing tags and those included in your current request.

HTTP Status Code: 400

## UnsupportedLanguageException

Amazon Comprehend can't process the language of the input text. For a list of supported languages, [Supported languages](#) in the Comprehend Developer Guide.

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## CreateEndpoint

Creates a model-specific endpoint for synchronous inference for a previously trained custom model. For information about endpoints, see [Managing endpoints](#).

### Request Syntax

```
{
  "ClientRequestToken": "string",
  "DataAccessRoleArn": "string",
  "DesiredInferenceUnits": number,
  "EndpointName": "string",
  "FlywheelArn": "string",
  "ModelArn": "string",
  "Tags": [
    {
      "Key": "string",
      "Value": "string"
    }
  ]
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### ClientRequestToken

An idempotency token provided by the customer. If this token matches a previous endpoint creation request, Amazon Comprehend will not return a ResourceInUseException.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[a-zA-Z0-9-]+$`

Required: No

### DataAccessRoleArn

The Amazon Resource Name (ARN) of the IAM role that grants Amazon Comprehend read access to trained custom models encrypted with a customer managed key (ModelKmsKeyId).

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:aws(-[^\:]+)?:iam::[0-9]{12}:role/.+`

Required: No

### DesiredInferenceUnits

The desired number of inference units to be used by the model using this endpoint. Each inference unit represents of a throughput of 100 characters per second.

Type: Integer

Valid Range: Minimum value of 1.

Required: Yes

### EndpointName

This is the descriptive suffix that becomes part of the `EndpointArn` used for all subsequent requests to this resource.

Type: String

Length Constraints: Maximum length of 40.

Pattern: `^[a-zA-Z0-9](-*[a-zA-Z0-9])*$`

Required: Yes

### FlywheelArn

The Amazon Resource Number (ARN) of the flywheel to which the endpoint will be attached.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:flywheel/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

Required: No

### ModelArn

The Amazon Resource Number (ARN) of the model to which the endpoint will be attached.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:(document-classifier|entity-recognizer)/[a-zA-Z0-9](-*[a-zA-Z0-9])*/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*`?

Required: No

### Tags

Tags to associate with the endpoint. A tag is a key-value pair that adds metadata to the endpoint. For example, a tag with "Sales" as the key might be added to an endpoint to indicate its use by the sales department.

Type: Array of [Tag](#) objects

Required: No

## Response Syntax

```
{
  "EndpointArn": "string",
  "ModelArn": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### EndpointArn

The Amazon Resource Number (ARN) of the endpoint being created.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9-]*:[0-9]{12}:(document-classifier-endpoint|entity-recognizer-endpoint)/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

### **ModelArn**

The Amazon Resource Number (ARN) of the model to which the endpoint is attached.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9-]*:[0-9]{12}:(document-classifier|entity-recognizer)/[a-zA-Z0-9](-*[a-zA-Z0-9])*(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*)?`

## **Errors**

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **ResourceInUseException**

The specified resource name is already in use. Use a different name and try your request again.

HTTP Status Code: 400

### **ResourceLimitExceededException**

The maximum number of resources per account has been exceeded. Review the resources, and then try your request again.

HTTP Status Code: 400

### **ResourceNotFoundException**

The specified resource ARN was not found. Check the ARN and try your request again.

HTTP Status Code: 400

### **ResourceUnavailableException**

The specified resource is not available. Check the resource and try your request again.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

### **TooManyTagsException**

The request contains more tags than can be associated with a resource (50 tags per resource). The maximum number of tags includes both existing tags and those included in your current request.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)





## CreateEntityRecognizer

Creates an entity recognizer using submitted files. After your CreateEntityRecognizer request is submitted, you can check job status using the DescribeEntityRecognizer API.

### Request Syntax

```
{
  "ClientRequestToken": "string",
  "DataAccessRoleArn": "string",
  "InputDataConfig": {
    "Annotations": {
      "S3Uri": "string",
      "TestS3Uri": "string"
    },
    "AugmentedManifests": [
      {
        "AnnotationDataS3Uri": "string",
        "AttributeNames": [ "string" ],
        "DocumentType": "string",
        "S3Uri": "string",
        "SourceDocumentsS3Uri": "string",
        "Split": "string"
      }
    ],
    "DataFormat": "string",
    "Documents": {
      "InputFormat": "string",
      "S3Uri": "string",
      "TestS3Uri": "string"
    },
    "EntityList": {
      "S3Uri": "string"
    },
    "EntityTypes": [
      {
        "Type": "string"
      }
    ]
  },
  "LanguageCode": "string",
  "ModelKmsKeyId": "string",
  "ModelPolicy": "string",
  "RecognizerName": "string",
}
```

```

  "Tags": [
    {
      "Key": "string",
      "Value": "string"
    }
  ],
  "VersionName": "string",
  "VolumeKmsKeyId": "string",
  "VpcConfig": {
    "SecurityGroupIds": [ "string" ],
    "Subnets": [ "string" ]
  }
}

```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

### ClientRequestToken

A unique identifier for the request. If you don't set the client request token, Amazon Comprehend generates one.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[a-zA-Z0-9-]+$`

Required: No

### DataAccessRoleArn

The Amazon Resource Name (ARN) of the IAM role that grants Amazon Comprehend read access to your input data.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:aws(-[:^:]+)?:iam::[0-9]{12}:role/.+`

Required: Yes

### [InputDataConfig](#)

Specifies the format and location of the input data. The S3 bucket containing the input data must be located in the same Region as the entity recognizer being created.

Type: [EntityRecognizerInputDataConfig](#) object

Required: Yes

### [LanguageCode](#)

You can specify any of the following languages: English ("en"), Spanish ("es"), French ("fr"), Italian ("it"), German ("de"), or Portuguese ("pt"). If you plan to use this entity recognizer with PDF, Word, or image input files, you must specify English as the language. All training documents must be in the same language.

Type: String

Valid Values: en | es | fr | it | de | pt

Required: Yes

### [ModelKmsKeyId](#)

ID for the AWS KMS key that Amazon Comprehend uses to encrypt trained custom models. The ModelKmsKeyId can be either of the following formats:

- KMS Key ID: "1234abcd-12ab-34cd-56ef-1234567890ab"
- Amazon Resource Name (ARN) of a KMS Key: "arn:aws:kms:us-west-2:111122223333:key/1234abcd-12ab-34cd-56ef-1234567890ab"

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^\p{ASCII}+$`

Required: No

### [ModelPolicy](#)

The JSON resource-based policy to attach to your custom entity recognizer model. You can use this policy to allow another AWS account to import your custom model.

Provide your JSON as a UTF-8 encoded string without line breaks. To provide valid JSON for your policy, enclose the attribute names and values in double quotes. If the JSON body is also enclosed in double quotes, then you must escape the double quotes that are inside the policy:

```
"{\\"attribute\\": \\"value\\", \\"attribute\\": [\\"value\\"]}"
```

To avoid escaping quotes, you can use single quotes to enclose the policy and double quotes to enclose the JSON names and values:

```
'{"attribute": "value", "attribute": ["value"]}'
```

Type: String

Length Constraints: Minimum length of 1. Maximum length of 20000.

Pattern: `[\\u0009\\u000A\\u000D\\u0020-\\u00FF]+`

Required: No

### RecognizerName

The name given to the newly created recognizer. Recognizer names can be a maximum of 256 characters. Alphanumeric characters, hyphens (-) and underscores (\_) are allowed. The name must be unique in the account/Region.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[a-zA-Z0-9](-*[a-zA-Z0-9])*$`

Required: Yes

### Tags

Tags to associate with the entity recognizer. A tag is a key-value pair that adds as a metadata to a resource used by Amazon Comprehend. For example, a tag with "Sales" as the key might be added to a resource to indicate its use by the sales department.

Type: Array of [Tag](#) objects

Required: No

### VersionName

The version name given to the newly created recognizer. Version names can be a maximum of 256 characters. Alphanumeric characters, hyphens (-) and underscores (\_) are allowed. The

version name must be unique among all models with the same recognizer name in the account/Region.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[a-zA-Z0-9](-*[a-zA-Z0-9])*$`

Required: No

### VolumeKmsKeyId

ID for the AWS Key Management Service (KMS) key that Amazon Comprehend uses to encrypt data on the storage volume attached to the ML compute instance(s) that process the analysis job. The VolumeKmsKeyId can be either of the following formats:

- KMS Key ID: "1234abcd-12ab-34cd-56ef-1234567890ab"
- Amazon Resource Name (ARN) of a KMS Key: "arn:aws:kms:us-west-2:111122223333:key/1234abcd-12ab-34cd-56ef-1234567890ab"

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^\p{ASCII}+$`

Required: No

### VpcConfig

Configuration parameters for an optional private Virtual Private Cloud (VPC) containing the resources you are using for your custom entity recognizer. For more information, see [Amazon VPC](#).

Type: [VpcConfig](#) object

Required: No

## Response Syntax

```
{
```

```
"EntityRecognizerArn": "string"  
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### EntityRecognizerArn

The Amazon Resource Name (ARN) that identifies the entity recognizer.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:entity-recognizer/[a-zA-Z0-9](-*[a-zA-Z0-9])*(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*)?`

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **KmsKeyValidationException**

The KMS customer managed key (CMK) entered cannot be validated. Verify the key and re-enter it.

HTTP Status Code: 400

### **ResourceInUseException**

The specified resource name is already in use. Use a different name and try your request again.

HTTP Status Code: 400

### **ResourceLimitExceededException**

The maximum number of resources per account has been exceeded. Review the resources, and then try your request again.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

### **TooManyTagsException**

The request contains more tags than can be associated with a resource (50 tags per resource). The maximum number of tags includes both existing tags and those included in your current request.

HTTP Status Code: 400

### **UnsupportedLanguageException**

Amazon Comprehend can't process the language of the input text. For a list of supported languages, [Supported languages](#) in the Comprehend Developer Guide.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)

- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)



## CreateFlywheel

A flywheel is an AWS resource that orchestrates the ongoing training of a model for custom classification or custom entity recognition. You can create a flywheel to start with an existing trained model, or Comprehend can create and train a new model.

When you create the flywheel, Comprehend creates a data lake in your account. The data lake holds the training data and test data for all versions of the model.

To use a flywheel with an existing trained model, you specify the active model version. Comprehend copies the model's training data and test data into the flywheel's data lake.

To use the flywheel with a new model, you need to provide a dataset for training data (and optional test data) when you create the flywheel.

For more information about flywheels, see [Flywheel overview](#) in the *Amazon Comprehend Developer Guide*.

### Request Syntax

```
{
  "ActiveModelArn": "string",
  "ClientRequestToken": "string",
  "DataAccessRoleArn": "string",
  "DataLakeS3Uri": "string",
  "DataSecurityConfig": {
    "DataLakeKmsKeyId": "string",
    "ModelKmsKeyId": "string",
    "VolumeKmsKeyId": "string",
    "VpcConfig": {
      "SecurityGroupIds": [ "string" ],
      "Subnets": [ "string" ]
    }
  },
  "FlywheelName": "string",
  "ModelType": "string",
  "Tags": [
    {
      "Key": "string",
      "Value": "string"
    }
  ],
  "TaskConfig": {
```

```

    "DocumentClassificationConfig": {
      "Labels": [ "string" ],
      "Mode": "string"
    },
    "EntityRecognitionConfig": {
      "EntityTypes": [
        {
          "Type": "string"
        }
      ]
    },
    "LanguageCode": "string"
  }
}

```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

### ActiveModelArn

To associate an existing model with the flywheel, specify the Amazon Resource Number (ARN) of the model version. Do not set TaskConfig or ModelType if you specify an ActiveModelArn.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9-]*:[0-9]{12}:(document-classifier|entity-recognizer)/[a-zA-Z0-9](-*[a-zA-Z0-9])*/(version/[a-zA-Z0-9](-*[a-zA-Z0-9])*)?`

Required: No

### ClientRequestToken

A unique identifier for the request. If you don't set the client request token, Amazon Comprehend generates one.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[a-zA-Z0-9-]+$`

Required: No

### DataAccessRoleArn

The Amazon Resource Name (ARN) of the IAM role that grants Amazon Comprehend the permissions required to access the flywheel data in the data lake.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:aws(-[[:^:]]+)?:iam::[0-9]{12}:role/.+`

Required: Yes

### DataLakeS3Uri

Enter the S3 location for the data lake. You can specify a new S3 bucket or a new folder of an existing S3 bucket. The flywheel creates the data lake at this location.

Type: String

Length Constraints: Maximum length of 512.

Pattern: `s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/.*)?`

Required: Yes

### DataSecurityConfig

Data security configurations.

Type: [DataSecurityConfig](#) object

Required: No

### FlywheelName

Name for the flywheel.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[a-zA-Z0-9](-*[a-zA-Z0-9])*$`

Required: Yes

### ModelType

The model type. You need to set `ModelType` if you are creating a flywheel for a new model.

Type: String

Valid Values: `DOCUMENT_CLASSIFIER` | `ENTITY_RECOGNIZER`

Required: No

### Tags

The tags to associate with this flywheel.

Type: Array of [Tag](#) objects

Required: No

### TaskConfig

Configuration about the model associated with the flywheel. You need to set `TaskConfig` if you are creating a flywheel for a new model.

Type: [TaskConfig](#) object

Required: No

## Response Syntax

```
{
  "ActiveModelArn": "string",
  "FlywheelArn": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### ActiveModelArn

The Amazon Resource Number (ARN) of the active model version.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:(document-classifier|entity-recognizer)/[a-zA-Z0-9](-*[a-zA-Z0-9])*/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*)?`

### FlywheelArn

The Amazon Resource Number (ARN) of the flywheel.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:flywheel/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **KmsKeyValidationException**

The KMS customer managed key (CMK) entered cannot be validated. Verify the key and re-enter it.

HTTP Status Code: 400

### **ResourceInUseException**

The specified resource name is already in use. Use a different name and try your request again.

HTTP Status Code: 400

### **ResourceLimitExceededException**

The maximum number of resources per account has been exceeded. Review the resources, and then try your request again.

HTTP Status Code: 400

### **ResourceNotFoundException**

The specified resource ARN was not found. Check the ARN and try your request again.

HTTP Status Code: 400

### **ResourceUnavailableException**

The specified resource is not available. Check the resource and try your request again.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

### **TooManyTagsException**

The request contains more tags than can be associated with a resource (50 tags per resource). The maximum number of tags includes both existing tags and those included in your current request.

HTTP Status Code: 400

### **UnsupportedLanguageException**

Amazon Comprehend can't process the language of the input text. For a list of supported languages, [Supported languages](#) in the Comprehend Developer Guide.

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## DeleteDocumentClassifier

Deletes a previously created document classifier

Only those classifiers that are in terminated states (IN\_ERROR, TRAINED) will be deleted. If an active inference job is using the model, a `ResourceInUseException` will be returned.

This is an asynchronous action that puts the classifier into a DELETING state, and it is then removed by a background job. Once removed, the classifier disappears from your account and is no longer available for use.

### Request Syntax

```
{
  "DocumentClassifierArn": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### DocumentClassifierArn

The Amazon Resource Name (ARN) that identifies the document classifier.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9-]*:[0-9]{12}:document-classifier/[a-zA-Z0-9](-*[a-zA-Z0-9])*(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*)?`

Required: Yes

### Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.



## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **ResourceInUseException**

The specified resource name is already in use. Use a different name and try your request again.

HTTP Status Code: 400

### **ResourceNotFoundException**

The specified resource ARN was not found. Check the ARN and try your request again.

HTTP Status Code: 400

### **ResourceUnavailableException**

The specified resource is not available. Check the resource and try your request again.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)

- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## DeleteEndpoint

Deletes a model-specific endpoint for a previously-trained custom model. All endpoints must be deleted in order for the model to be deleted. For information about endpoints, see [Managing endpoints](#).

### Request Syntax

```
{
  "EndpointArn": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### [EndpointArn](#)

The Amazon Resource Number (ARN) of the endpoint being deleted.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:(document-classifier-endpoint|entity-recognizer-endpoint)/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

Required: Yes

### Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

### Errors

For information about the errors that are common to all actions, see [Common Errors](#).

#### InternalServerErrorException

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **ResourceInUseException**

The specified resource name is already in use. Use a different name and try your request again.

HTTP Status Code: 400

### **ResourceNotFoundException**

The specified resource ARN was not found. Check the ARN and try your request again.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## DeleteEntityRecognizer

Deletes an entity recognizer.

Only those recognizers that are in terminated states (IN\_ERROR, TRAINED) will be deleted. If an active inference job is using the model, a `ResourceInUseException` will be returned.

This is an asynchronous action that puts the recognizer into a DELETING state, and it is then removed by a background job. Once removed, the recognizer disappears from your account and is no longer available for use.

### Request Syntax

```
{
  "EntityRecognizerArn": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### [EntityRecognizerArn](#)

The Amazon Resource Name (ARN) that identifies the entity recognizer.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9-]*:[0-9]{12}:entity-recognizer/[a-zA-Z0-9](-*[a-zA-Z0-9])*(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*)?`

Required: Yes

### Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **ResourceInUseException**

The specified resource name is already in use. Use a different name and try your request again.

HTTP Status Code: 400

### **ResourceNotFoundException**

The specified resource ARN was not found. Check the ARN and try your request again.

HTTP Status Code: 400

### **ResourceUnavailableException**

The specified resource is not available. Check the resource and try your request again.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)

- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## DeleteFlywheel

Deletes a flywheel. When you delete the flywheel, Amazon Comprehend does not delete the data lake or the model associated with the flywheel.

For more information about flywheels, see [Flywheel overview](#) in the *Amazon Comprehend Developer Guide*.

### Request Syntax

```
{
  "FlywheelArn": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### [FlywheelArn](#)

The Amazon Resource Number (ARN) of the flywheel to delete.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:flywheel/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

Required: Yes

### Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

### Errors

For information about the errors that are common to all actions, see [Common Errors](#).



**InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

**InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

**ResourceInUseException**

The specified resource name is already in use. Use a different name and try your request again.

HTTP Status Code: 400

**ResourceNotFoundException**

The specified resource ARN was not found. Check the ARN and try your request again.

HTTP Status Code: 400

**ResourceUnavailableException**

The specified resource is not available. Check the resource and try your request again.

HTTP Status Code: 400

**TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)

- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# DeleteResourcePolicy

Deletes a resource-based policy that is attached to a custom model.

## Request Syntax

```
{  
  "PolicyRevisionId": "string",  
  "ResourceArn": "string"  
}
```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

### PolicyRevisionId

The revision ID of the policy to delete.

Type: String

Length Constraints: Maximum length of 64.

Pattern: `[0-9A-Fa-f]+`

Required: No

### ResourceArn

The Amazon Resource Name (ARN) of the custom model version that has the policy to delete.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:(document-classifier|entity-recognizer)/[a-zA-Z0-9](-*[a-zA-Z0-9])*/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

Required: Yes

## Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### InternalServerErrorException

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### InvalidRequestException

The request is invalid.

HTTP Status Code: 400

### ResourceNotFoundException

The specified resource ARN was not found. Check the ARN and try your request again.

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)



## DescribeDataset

Returns information about the dataset that you specify. For more information about datasets, see [Flywheel overview](#) in the *Amazon Comprehend Developer Guide*.

### Request Syntax

```
{
  "DatasetArn": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### [DatasetArn](#)

The ARN of the dataset.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:flywheel/[a-zA-Z0-9](-*[a-zA-Z0-9])*/dataset/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

Required: Yes

### Response Syntax

```
{
  "DatasetProperties": {
    "CreationTime": number,
    "DatasetArn": "string",
    "DatasetName": "string",
    "DatasetS3Uri": "string",
    "DatasetType": "string",
    "Description": "string",
    "EndTime": number,
  }
}
```

```
"Message": "string",  
"NumberOfDocuments": number,  
"Status": "string"  
}  
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### DatasetProperties

The dataset properties.

Type: [DatasetProperties](#) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **ResourceNotFoundException**

The specified resource ARN was not found. Check the ARN and try your request again.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)



## DescribeDocumentClassificationJob

Gets the properties associated with a document classification job. Use this operation to get the status of a classification job.

### Request Syntax

```
{
  "JobId": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### JobId

The identifier that Amazon Comprehend generated for the job. The `StartDocumentClassificationJob` operation returns this identifier in its response.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^[^\p{L}\p{Z}\p{N}_.:/+\\-%@]*$`

Required: Yes

### Response Syntax

```
{
  "DocumentClassificationJobProperties": {
    "DataAccessRoleArn": "string",
    "DocumentClassifierArn": "string",
    "EndTime": number,
    "FlywheelArn": "string",
    "InputDataConfig": {
      "DocumentReaderConfig": {
        "DocumentReadAction": "string",
```

```

        "DocumentReadMode": "string",
        "FeatureTypes": [ "string" ]
    },
    "InputFormat": "string",
    "S3Uri": "string"
},
"JobArn": "string",
"JobId": "string",
"JobName": "string",
"JobStatus": "string",
"Message": "string",
"OutputDataConfig": {
    "KmsKeyId": "string",
    "S3Uri": "string"
},
"SubmitTime": number,
"VolumeKmsKeyId": "string",
"VpcConfig": {
    "SecurityGroupIds": [ "string" ],
    "Subnets": [ "string" ]
}
}
}

```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### DocumentClassificationJobProperties

An object that describes the properties associated with the document classification job.

Type: [DocumentClassificationJobProperties](#) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### InternalServerError

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **JobNotFoundException**

The specified job was not found. Check the job ID and try again.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## DescribeDocumentClassifier

Gets the properties associated with a document classifier.

### Request Syntax

```
{  
  "DocumentClassifierArn": "string"  
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### DocumentClassifierArn

The Amazon Resource Name (ARN) that identifies the document classifier. The `CreateDocumentClassifier` operation returns this identifier in its response.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:document-classifier/[a-zA-Z0-9](-*[a-zA-Z0-9])*(/version/[a-zA-Z0-9](-*[a-zA-Z0-9]))*`

Required: Yes

### Response Syntax

```
{  
  "DocumentClassifierProperties": {  
    "ClassifierMetadata": {  
      "EvaluationMetrics": {  
        "Accuracy": number,  
        "F1Score": number,  
        "HammingLoss": number,  
        "MicroF1Score": number,  
        "MicroPrecision": number,  
        "MicroRecall": number,  
      }  
    }  
  }  
}
```

```

    "Precision": number,
    "Recall": number
  },
  "NumberOfLabels": number,
  "NumberOfTestDocuments": number,
  "NumberOfTrainedDocuments": number
},
"DataAccessRoleArn": "string",
"DocumentClassifierArn": "string",
"EndTime": number,
"FlywheelArn": "string",
"InputDataConfig": {
  "AugmentedManifests": [
    {
      "AnnotationDataS3Uri": "string",
      "AttributeNames": [ "string" ],
      "DocumentType": "string",
      "S3Uri": "string",
      "SourceDocumentsS3Uri": "string",
      "Split": "string"
    }
  ],
  "DataFormat": "string",
  "DocumentReaderConfig": {
    "DocumentReadAction": "string",
    "DocumentReadMode": "string",
    "FeatureTypes": [ "string" ]
  },
  "Documents": {
    "S3Uri": "string",
    "TestS3Uri": "string"
  },
  "DocumentType": "string",
  "LabelDelimiter": "string",
  "S3Uri": "string",
  "TestS3Uri": "string"
},
"LanguageCode": "string",
"Message": "string",
"Mode": "string",
"ModelKmsKeyId": "string",
"OutputDataConfig": {
  "FlywheelStatsS3Prefix": "string",
  "KmsKeyId": "string",

```

```

    "S3Uri": "string"
  },
  "SourceModelArn": "string",
  "Status": "string",
  "SubmitTime": number,
  "TrainingEndTime": number,
  "TrainingStartTime": number,
  "VersionName": "string",
  "VolumeKmsKeyId": "string",
  "VpcConfig": {
    "SecurityGroupIds": [ "string" ],
    "Subnets": [ "string" ]
  }
}
}

```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### DocumentClassifierProperties

An object that contains the properties associated with a document classifier.

Type: [DocumentClassifierProperties](#) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### InternalServerError

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### InvalidRequestException

The request is invalid.

HTTP Status Code: 400

## ResourceNotFoundException

The specified resource ARN was not found. Check the ARN and try your request again.

HTTP Status Code: 400

## TooManyRequestsException

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## DescribeDominantLanguageDetectionJob

Gets the properties associated with a dominant language detection job. Use this operation to get the status of a detection job.

### Request Syntax

```
{
  "JobId": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### JobId

The identifier that Amazon Comprehend generated for the job. The `StartDominantLanguageDetectionJob` operation returns this identifier in its response.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^[^\p{L}\p{Z}\p{N}_.:/+\\-%@]*$`

Required: Yes

### Response Syntax

```
{
  "DominantLanguageDetectionJobProperties": {
    "DataAccessRoleArn": "string",
    "EndTime": number,
    "InputDataConfig": {
      "DocumentReaderConfig": {
        "DocumentReadAction": "string",
        "DocumentReadMode": "string",
        "FeatureTypes": [ "string" ]
      }
    }
  }
}
```



```

    },
    "InputFormat": "string",
    "S3Uri": "string"
  },
  "JobArn": "string",
  "JobId": "string",
  "JobName": "string",
  "JobStatus": "string",
  "Message": "string",
  "OutputDataConfig": {
    "KmsKeyId": "string",
    "S3Uri": "string"
  },
  "SubmitTime": number,
  "VolumeKmsKeyId": "string",
  "VpcConfig": {
    "SecurityGroupIds": [ "string" ],
    "Subnets": [ "string" ]
  }
}
}

```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### DominantLanguageDetectionJobProperties

An object that contains the properties associated with a dominant language detection job.

Type: [DominantLanguageDetectionJobProperties](#) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### InternalServerError

An internal server error occurred. Retry your request.

HTTP Status Code: 500

## **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

## **JobNotFoundException**

The specified job was not found. Check the job ID and try again.

HTTP Status Code: 400

## **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## DescribeEndpoint

Gets the properties associated with a specific endpoint. Use this operation to get the status of an endpoint. For information about endpoints, see [Managing endpoints](#).

### Request Syntax

```
{
  "EndpointArn": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### [EndpointArn](#)

The Amazon Resource Number (ARN) of the endpoint being described.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:(document-classifier-endpoint|entity-recognizer-endpoint)/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

Required: Yes

### Response Syntax

```
{
  "EndpointProperties": {
    "CreationTime": number,
    "CurrentInferenceUnits": number,
    "DataAccessRoleArn": "string",
    "DesiredDataAccessRoleArn": "string",
    "DesiredInferenceUnits": number,
    "DesiredModelArn": "string",
    "EndpointArn": "string",
  }
}
```

```
"FlywheelArn": "string",
"LastModifiedTime": number,
"Message": "string",
"ModelArn": "string",
"Status": "string"
}
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### EndpointProperties

Describes information associated with the specific endpoint.

Type: [EndpointProperties](#) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **ResourceNotFoundException**

The specified resource ARN was not found. Check the ARN and try your request again.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

## HTTP Status Code: 400

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## DescribeEntitiesDetectionJob

Gets the properties associated with an entities detection job. Use this operation to get the status of a detection job.

### Request Syntax

```
{
  "JobId": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### JobId

The identifier that Amazon Comprehend generated for the job. The `StartEntitiesDetectionJob` operation returns this identifier in its response.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^([\p{L}\p{Z}\p{N}_.:/+\\-%@]*)$`

Required: Yes

### Response Syntax

```
{
  "EntitiesDetectionJobProperties": {
    "DataAccessRoleArn": "string",
    "EndTime": number,
    "EntityRecognizerArn": "string",
    "FlywheelArn": "string",
    "InputDataConfig": {
      "DocumentReaderConfig": {
        "DocumentReadAction": "string",
        "DocumentReadMode": "string",

```

```

        "FeatureTypes": [ "string" ]
    },
    "InputFormat": "string",
    "S3Uri": "string"
},
"JobArn": "string",
"JobId": "string",
"JobName": "string",
"JobStatus": "string",
"LanguageCode": "string",
"Message": "string",
"OutputDataConfig": {
    "KmsKeyId": "string",
    "S3Uri": "string"
},
"SubmitTime": number,
"VolumeKmsKeyId": "string",
"VpcConfig": {
    "SecurityGroupIds": [ "string" ],
    "Subnets": [ "string" ]
}
}
}

```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### EntitiesDetectionJobProperties

An object that contains the properties associated with an entities detection job.

Type: [EntitiesDetectionJobProperties](#) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### InternalServerError

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **JobNotFoundException**

The specified job was not found. Check the job ID and try again.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)



## DescribeEntityRecognizer

Provides details about an entity recognizer including status, S3 buckets containing training data, recognizer metadata, metrics, and so on.

### Request Syntax

```
{
  "EntityRecognizerArn": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### [EntityRecognizerArn](#)

The Amazon Resource Name (ARN) that identifies the entity recognizer.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9-]*:[0-9]{12}:entity-recognizer/[a-zA-Z0-9](-*[a-zA-Z0-9])*(/version/[a-zA-Z0-9](-*[a-zA-Z0-9]))*`

Required: Yes

### Response Syntax

```
{
  "EntityRecognizerProperties": {
    "DataAccessRoleArn": "string",
    "EndTime": number,
    "EntityRecognizerArn": "string",
    "FlywheelArn": "string",
    "InputDataConfig": {
      "Annotations": {
        "S3Uri": "string",
        "TestS3Uri": "string"
      }
    }
  }
}
```

```

    },
    "AugmentedManifests": [
      {
        "AnnotationDataS3Uri": "string",
        "AttributeNames": [ "string" ],
        "DocumentType": "string",
        "S3Uri": "string",
        "SourceDocumentsS3Uri": "string",
        "Split": "string"
      }
    ],
    "DataFormat": "string",
    "Documents": {
      "InputFormat": "string",
      "S3Uri": "string",
      "TestS3Uri": "string"
    },
    "EntityList": {
      "S3Uri": "string"
    },
    "EntityTypes": [
      {
        "Type": "string"
      }
    ]
  ],
  "LanguageCode": "string",
  "Message": "string",
  "ModelKmsKeyId": "string",
  "OutputDataConfig": {
    "FlywheelStatsS3Prefix": "string"
  },
  "RecognizerMetadata": {
    "EntityTypes": [
      {
        "EvaluationMetrics": {
          "F1Score": number,
          "Precision": number,
          "Recall": number
        },
        "NumberOfTrainMentions": number,
        "Type": "string"
      }
    ]
  },
],

```

```

    "EvaluationMetrics": {
      "F1Score": number,
      "Precision": number,
      "Recall": number
    },
    "NumberOfTestDocuments": number,
    "NumberOfTrainedDocuments": number
  },
  "SourceModelArn": "string",
  "Status": "string",
  "SubmitTime": number,
  "TrainingEndTime": number,
  "TrainingStartTime": number,
  "VersionName": "string",
  "VolumeKmsKeyId": "string",
  "VpcConfig": {
    "SecurityGroupIds": [ "string" ],
    "Subnets": [ "string" ]
  }
}

```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### EntityRecognizerProperties

Describes information associated with an entity recognizer.

Type: [EntityRecognizerProperties](#) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### InternalServerError

An internal server error occurred. Retry your request.

HTTP Status Code: 500

## **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

## **ResourceNotFoundException**

The specified resource ARN was not found. Check the ARN and try your request again.

HTTP Status Code: 400

## **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## DescribeEventsDetectionJob

Gets the status and details of an events detection job.

### Request Syntax

```
{
  "JobId": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### JobId

The identifier of the events detection job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern:  $^([\p{L}\p{Z}\p{N}_\cdot:/=\+\-\%@]*)\$$

Required: Yes

### Response Syntax

```
{
  "EventsDetectionJobProperties": {
    "DataAccessRoleArn": "string",
    "EndTime": number,
    "InputDataConfig": {
      "DocumentReaderConfig": {
        "DocumentReadAction": "string",
        "DocumentReadMode": "string",
        "FeatureTypes": [ "string" ]
      },
      "InputFormat": "string",
      "S3Uri": "string"
    }
  }
}
```

```

    },
    "JobArn": "string",
    "JobId": "string",
    "JobName": "string",
    "JobStatus": "string",
    "LanguageCode": "string",
    "Message": "string",
    "OutputDataConfig": {
      "KmsKeyId": "string",
      "S3Uri": "string"
    },
    "SubmitTime": number,
    "TargetEventTypes": [ "string" ]
  }
}

```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### EventsDetectionJobProperties

An object that contains the properties associated with an event detection job.

Type: [EventsDetectionJobProperties](#) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### InternalServerError

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### InvalidRequestException

The request is invalid.

HTTP Status Code: 400

## **JobNotFoundException**

The specified job was not found. Check the job ID and try again.

HTTP Status Code: 400

## **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# DescribeFlywheel

Provides configuration information about the flywheel. For more information about flywheels, see [Flywheel overview](#) in the *Amazon Comprehend Developer Guide*.

## Request Syntax

```
{
  "FlywheelArn": "string"
}
```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

### [FlywheelArn](#)

The Amazon Resource Number (ARN) of the flywheel.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:flywheel/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

Required: Yes

## Response Syntax

```
{
  "FlywheelProperties": {
    "ActiveModelArn": "string",
    "CreationTime": number,
    "DataAccessRoleArn": "string",
    "DataLakeS3Uri": "string",
    "DataSecurityConfig": {
      "DataLakeKmsKeyId": "string",
      "ModelKmsKeyId": "string",
      "VolumeKmsKeyId": "string",
    }
  }
}
```



```

    "VpcConfig": {
      "SecurityGroupIds": [ "string" ],
      "Subnets": [ "string" ]
    }
  },
  "FlywheelArn": "string",
  "LastModifiedTime": number,
  "LatestFlywheelIteration": "string",
  "Message": "string",
  "ModelType": "string",
  "Status": "string",
  "TaskConfig": {
    "DocumentClassificationConfig": {
      "Labels": [ "string" ],
      "Mode": "string"
    },
    "EntityRecognitionConfig": {
      "EntityTypes": [
        {
          "Type": "string"
        }
      ]
    },
    "LanguageCode": "string"
  }
}
}

```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### FlywheelProperties

The flywheel properties.

Type: [FlywheelProperties](#) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

## **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

## **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

## **ResourceNotFoundException**

The specified resource ARN was not found. Check the ARN and try your request again.

HTTP Status Code: 400

## **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## DescribeFlywheelIteration

Retrieve the configuration properties of a flywheel iteration. For more information about flywheels, see [Flywheel overview](#) in the *Amazon Comprehend Developer Guide*.

### Request Syntax

```
{  
  "FlywheelArn": "string",  
  "FlywheelIterationId": "string"  
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### [FlywheelArn](#)

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:flywheel/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

Required: Yes

#### [FlywheelIterationId](#)

Type: String

Length Constraints: Maximum length of 63.

Pattern: `[0-9]{8}T[0-9]{6}Z`

Required: Yes

### Response Syntax

```
{
```

```

    "FlywheelIterationProperties": {
      "CreationTime": number,
      "EndTime": number,
      "EvaluatedModelArn": "string",
      "EvaluatedModelMetrics": {
        "AverageAccuracy": number,
        "AverageF1Score": number,
        "AveragePrecision": number,
        "AverageRecall": number
      },
      "EvaluationManifestS3Prefix": "string",
      "FlywheelArn": "string",
      "FlywheelIterationId": "string",
      "Message": "string",
      "Status": "string",
      "TrainedModelArn": "string",
      "TrainedModelMetrics": {
        "AverageAccuracy": number,
        "AverageF1Score": number,
        "AveragePrecision": number,
        "AverageRecall": number
      }
    }
  }
}

```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### [FlywheelIterationProperties](#)

The configuration properties of a flywheel iteration.

Type: [FlywheelIterationProperties](#) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### InternalServerErrorException

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **ResourceNotFoundException**

The specified resource ARN was not found. Check the ARN and try your request again.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## DescribeKeyPhrasesDetectionJob

Gets the properties associated with a key phrases detection job. Use this operation to get the status of a detection job.

### Request Syntax

```
{
  "JobId": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### JobId

The identifier that Amazon Comprehend generated for the job. The `StartKeyPhrasesDetectionJob` operation returns this identifier in its response.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^([\p{L}\p{Z}\p{N}_.:/+\\-%@]*)$`

Required: Yes

### Response Syntax

```
{
  "KeyPhrasesDetectionJobProperties": {
    "DataAccessRoleArn": "string",
    "EndTime": number,
    "InputDataConfig": {
      "DocumentReaderConfig": {
        "DocumentReadAction": "string",
        "DocumentReadMode": "string",
        "FeatureTypes": [ "string" ]
      },

```

```

    "InputFormat": "string",
    "S3Uri": "string"
  },
  "JobArn": "string",
  "JobId": "string",
  "JobName": "string",
  "JobStatus": "string",
  "LanguageCode": "string",
  "Message": "string",
  "OutputDataConfig": {
    "KmsKeyId": "string",
    "S3Uri": "string"
  },
  "SubmitTime": number,
  "VolumeKmsKeyId": "string",
  "VpcConfig": {
    "SecurityGroupIds": [ "string" ],
    "Subnets": [ "string" ]
  }
}

```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### KeyPhrasesDetectionJobProperties

An object that contains the properties associated with a key phrases detection job.

Type: [KeyPhrasesDetectionJobProperties](#) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### InternalServerErrorException

An internal server error occurred. Retry your request.

HTTP Status Code: 500

## **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

## **JobNotFoundException**

The specified job was not found. Check the job ID and try again.

HTTP Status Code: 400

## **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)



## DescribePiiEntitiesDetectionJob

Gets the properties associated with a PII entities detection job. For example, you can use this operation to get the job status.

### Request Syntax

```
{
  "JobId": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### JobId

The identifier that Amazon Comprehend generated for the job. The [StartPiiEntitiesDetectionJob](#) operation returns this identifier in its response.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^([\p{L}\p{Z}\p{N}_.:/+\\-%@]*)$`

Required: Yes

### Response Syntax

```
{
  "PiiEntitiesDetectionJobProperties": {
    "DataAccessRoleArn": "string",
    "EndTime": number,
    "InputDataConfig": {
      "DocumentReaderConfig": {
        "DocumentReadAction": "string",
        "DocumentReadMode": "string",
        "FeatureTypes": [ "string" ]
      }
    }
  }
}
```

```

    },
    "InputFormat": "string",
    "S3Uri": "string"
  },
  "JobArn": "string",
  "JobId": "string",
  "JobName": "string",
  "JobStatus": "string",
  "LanguageCode": "string",
  "Message": "string",
  "Mode": "string",
  "OutputDataConfig": {
    "KmsKeyId": "string",
    "S3Uri": "string"
  },
  "RedactionConfig": {
    "MaskCharacter": "string",
    "MaskMode": "string",
    "PiiEntityTypes": [ "string" ]
  },
  "SubmitTime": number
}
}

```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### PiiEntitiesDetectionJobProperties

Provides information about a PII entities detection job.

Type: [PiiEntitiesDetectionJobProperties](#) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### InternalServerError

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **JobNotFoundException**

The specified job was not found. Check the job ID and try again.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## DescribeResourcePolicy

Gets the details of a resource-based policy that is attached to a custom model, including the JSON body of the policy.

### Request Syntax

```
{  
  "ResourceArn": "string"  
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### ResourceArn

The Amazon Resource Name (ARN) of the custom model version that has the resource policy.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:(document-classifier|entity-recognizer)/[a-zA-Z0-9](-*[a-zA-Z0-9])*/(version/[a-zA-Z0-9](-*[a-zA-Z0-9])*)?`

Required: Yes

### Response Syntax

```
{  
  "CreationTime": number,  
  "LastModifiedTime": number,  
  "PolicyRevisionId": "string",  
  "ResourcePolicy": "string"  
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### CreationTime

The time at which the policy was created.

Type: Timestamp

### LastModifiedTime

The time at which the policy was last modified.

Type: Timestamp

### PolicyRevisionId

The revision ID of the policy. Each time you modify a policy, Amazon Comprehend assigns a new revision ID, and it deletes the prior version of the policy.

Type: String

Length Constraints: Maximum length of 64.

Pattern: `[0-9A-Za-f]+`

### ResourcePolicy

The JSON body of the resource-based policy.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 20000.

Pattern: `[\u0009\u000A\u000D\u0020-\u00FF]+`

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **ResourceNotFoundException**

The specified resource ARN was not found. Check the ARN and try your request again.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## DescribeSentimentDetectionJob

Gets the properties associated with a sentiment detection job. Use this operation to get the status of a detection job.

### Request Syntax

```
{
  "JobId": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### JobId

The identifier that Amazon Comprehend generated for the job. The [StartSentimentDetectionJob](#) operation returns this identifier in its response.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^([\p{L}\p{Z}\p{N}_.:/+\\-%@]*)$`

Required: Yes

### Response Syntax

```
{
  "SentimentDetectionJobProperties": {
    "DataAccessRoleArn": "string",
    "EndTime": number,
    "InputDataConfig": {
      "DocumentReaderConfig": {
        "DocumentReadAction": "string",
        "DocumentReadMode": "string",
        "FeatureTypes": [ "string" ]
      }
    }
  },
}
```

```

    "InputFormat": "string",
    "S3Uri": "string"
  },
  "JobArn": "string",
  "JobId": "string",
  "JobName": "string",
  "JobStatus": "string",
  "LanguageCode": "string",
  "Message": "string",
  "OutputDataConfig": {
    "KmsKeyId": "string",
    "S3Uri": "string"
  },
  "SubmitTime": number,
  "VolumeKmsKeyId": "string",
  "VpcConfig": {
    "SecurityGroupIds": [ "string" ],
    "Subnets": [ "string" ]
  }
}

```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### SentimentDetectionJobProperties

An object that contains the properties associated with a sentiment detection job.

Type: [SentimentDetectionJobProperties](#) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### InternalServerError

An internal server error occurred. Retry your request.

HTTP Status Code: 500



## **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

## **JobNotFoundException**

The specified job was not found. Check the job ID and try again.

HTTP Status Code: 400

## **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## DescribeTargetedSentimentDetectionJob

Gets the properties associated with a targeted sentiment detection job. Use this operation to get the status of the job.

### Request Syntax

```
{
  "JobId": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### JobId

The identifier that Amazon Comprehend generated for the job. The `StartTargetedSentimentDetectionJob` operation returns this identifier in its response.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^([\p{L}\p{Z}\p{N}_.:/+\\-%@]*)$`

Required: Yes

### Response Syntax

```
{
  "TargetedSentimentDetectionJobProperties": {
    "DataAccessRoleArn": "string",
    "EndTime": number,
    "InputDataConfig": {
      "DocumentReaderConfig": {
        "DocumentReadAction": "string",
        "DocumentReadMode": "string",
        "FeatureTypes": [ "string" ]
      }
    }
  },
}
```

```

    "InputFormat": "string",
    "S3Uri": "string"
  },
  "JobArn": "string",
  "JobId": "string",
  "JobName": "string",
  "JobStatus": "string",
  "LanguageCode": "string",
  "Message": "string",
  "OutputDataConfig": {
    "KmsKeyId": "string",
    "S3Uri": "string"
  },
  "SubmitTime": number,
  "VolumeKmsKeyId": "string",
  "VpcConfig": {
    "SecurityGroupIds": [ "string" ],
    "Subnets": [ "string" ]
  }
}

```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### TargetedSentimentDetectionJobProperties

An object that contains the properties associated with a targeted sentiment detection job.

Type: [TargetedSentimentDetectionJobProperties](#) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### InternalServerError

An internal server error occurred. Retry your request.

HTTP Status Code: 500

## **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

## **JobNotFoundException**

The specified job was not found. Check the job ID and try again.

HTTP Status Code: 400

## **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## DescribeTopicsDetectionJob

Gets the properties associated with a topic detection job. Use this operation to get the status of a detection job.

### Request Syntax

```
{  
  "JobId": "string"  
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### JobId

The identifier assigned by the user to the detection job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern:  $^([\p{L}\p{Z}\p{N}_\cdot:/=+\-%@]*)\$$

Required: Yes

### Response Syntax

```
{  
  "TopicsDetectionJobProperties": {  
    "DataAccessRoleArn": "string",  
    "EndTime": number,  
    "InputDataConfig": {  
      "DocumentReaderConfig": {  
        "DocumentReadAction": "string",  
        "DocumentReadMode": "string",  
        "FeatureTypes": [ "string" ]  
      },  
    },  
  },  
}
```

```

    "InputFormat": "string",
    "S3Uri": "string"
  },
  "JobArn": "string",
  "JobId": "string",
  "JobName": "string",
  "JobStatus": "string",
  "Message": "string",
  "NumberOfTopics": number,
  "OutputDataConfig": {
    "KmsKeyId": "string",
    "S3Uri": "string"
  },
  "SubmitTime": number,
  "VolumeKmsKeyId": "string",
  "VpcConfig": {
    "SecurityGroupIds": [ "string" ],
    "Subnets": [ "string" ]
  }
}

```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### TopicsDetectionJobProperties

The list of properties for the requested job.

Type: [TopicsDetectionJobProperties](#) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### InternalServerError

An internal server error occurred. Retry your request.

HTTP Status Code: 500

## **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

## **JobNotFoundException**

The specified job was not found. Check the job ID and try again.

HTTP Status Code: 400

## **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## DetectDominantLanguage

Determines the dominant language of the input text. For a list of languages that Amazon Comprehend can detect, see [Amazon Comprehend Supported Languages](#).

### Request Syntax

```
{  
  "Text": "string"  
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### Text

A UTF-8 text string. The string must contain at least 20 characters. The maximum string size is 100 KB.

Type: String

Length Constraints: Minimum length of 1.

Required: Yes

### Response Syntax

```
{  
  "Languages": [  
    {  
      "LanguageCode": "string",  
      "Score": number  
    }  
  ]  
}
```

### Response Elements

If the action is successful, the service sends back an HTTP 200 response.



The following data is returned in JSON format by the service.

## Languages

Array of languages that Amazon Comprehend detected in the input text. The array is sorted in descending order of the score (the dominant language is always the first element in the array).

For each language, the response returns the RFC 5646 language code and the level of confidence that Amazon Comprehend has in the accuracy of its inference. For more information about RFC 5646, see [Tags for Identifying Languages](#) on the *IETF Tools* web site.

Type: Array of [DominantLanguage](#) objects

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **TextSizeLimitExceededException**

The size of the input text exceeds the limit. Use a smaller document.

HTTP Status Code: 400

## Examples

### **Detect dominant language**

If the input text is "Bob lives in Seattle. He is a software engineer at Amazon.", the operation returns the following:

```
{
```

```
"Languages": [  
  {  
    "LanguageCode": "en",  
    "Score": 0.9774383902549744  
  },  
  {  
    "LanguageCode": "de",  
    "Score": 0.010717987082898617  
  }  
]  
}
```

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## DetectEntities

Detects named entities in input text when you use the pre-trained model. Detects custom entities if you have a custom entity recognition model.

When detecting named entities using the pre-trained model, use plain text as the input. For more information about named entities, see [Entities](#) in the Comprehend Developer Guide.

When you use a custom entity recognition model, you can input plain text or you can upload a single-page input document (text, PDF, Word, or image).

If the system detects errors while processing a page in the input document, the API response includes an entry in `Errors` for each error.

If the system detects a document-level error in your input document, the API returns an `InvalidRequestException` error response. For details about this exception, see [Errors in semi-structured documents](#) in the Comprehend Developer Guide.

### Request Syntax

```
{
  "Bytes": blob,
  "DocumentReaderConfig": {
    "DocumentReadAction": "string",
    "DocumentReadMode": "string",
    "FeatureTypes": [ "string" ]
  },
  "EndpointArn": "string",
  "LanguageCode": "string",
  "Text": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### [Bytes](#)

This field applies only when you use a custom entity recognition model that was trained with PDF annotations. For other cases, enter your text input in the `Text` field.

Use the Bytes parameter to input a text, PDF, Word or image file. Using a plain-text file in the Bytes parameter is equivalent to using the Text parameter (the Entities field in the response is identical).

You can also use the Bytes parameter to input an Amazon Textract DetectDocumentText or AnalyzeDocument output file.

Provide the input document as a sequence of base64-encoded bytes. If your code uses an AWS SDK to detect entities, the SDK may encode the document file bytes for you.

The maximum length of this field depends on the input document type. For details, see [Inputs for real-time custom analysis](#) in the Comprehend Developer Guide.

If you use the Bytes parameter, do not use the Text parameter.

Type: Base64-encoded binary data object

Length Constraints: Minimum length of 1.

Required: No

### [DocumentReaderConfig](#)

Provides configuration parameters to override the default actions for extracting text from PDF documents and image files.

Type: [DocumentReaderConfig](#) object

Required: No

### [EndpointArn](#)

The Amazon Resource Name of an endpoint that is associated with a custom entity recognition model. Provide an endpoint if you want to detect entities by using your own custom model instead of the default model that is used by Amazon Comprehend.

If you specify an endpoint, Amazon Comprehend uses the language of your custom model, and it ignores any language code that you provide in your request.

For information about endpoints, see [Managing endpoints](#).

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:entity-recognizer-endpoint/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

Required: No

### LanguageCode

The language of the input documents. You can specify any of the primary languages supported by Amazon Comprehend. If your request includes the endpoint for a custom entity recognition model, Amazon Comprehend uses the language of your custom model, and it ignores any language code that you specify here.

All input documents must be in the same language.

Type: String

Valid Values: `en | es | fr | de | it | pt | ar | hi | ja | ko | zh | zh-TW`

Required: No

### Text

A UTF-8 text string. The maximum string size is 100 KB. If you enter text using this parameter, do not use the Bytes parameter.

Type: String

Length Constraints: Minimum length of 1.

Required: No

## Response Syntax

```
{
  "Blocks": [
    {
      "BlockType": "string",
      "Geometry": {
        "BoundingBox": {
          "Height": number,
          "Left": number,
          "Top": number,
          "Width": number
        },
        "Polygon": [
```

```

        {
            "X": number,
            "Y": number
        }
    ]
},
"Id": "string",
"Page": number,
"Relationships": [
    {
        "Ids": [ "string" ],
        "Type": "string"
    }
],
"Text": "string"
}
],
"DocumentMetadata": {
    "ExtractedCharacters": [
        {
            "Count": number,
            "Page": number
        }
    ],
    "Pages": number
},
"DocumentType": [
    {
        "Page": number,
        "Type": "string"
    }
],
"Entities": [
    {
        "BeginOffset": number,
        "BlockReferences": [
            {
                "BeginOffset": number,
                "BlockId": "string",
                "ChildBlocks": [
                    {
                        "BeginOffset": number,
                        "ChildBlockId": "string",
                        "EndOffset": number
                    }
                ]
            }
        ]
    }
]

```

```

        }
      ],
      "EndOffset": number
    }
  ],
  "EndOffset": number,
  "Score": number,
  "Text": "string",
  "Type": "string"
}
],
"Errors": [
  {
    "ErrorCode": "string",
    "ErrorMessage": "string",
    "Page": number
  }
]
}

```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### Blocks

Information about each block of text in the input document. Blocks are nested. A page block contains a block for each line of text, which contains a block for each word.

The Block content for a Word input document does not include a Geometry field.

The Block field is not present in the response for plain-text inputs.

Type: Array of [Block](#) objects

### DocumentMetadata

Information about the document, discovered during text extraction. This field is present in the response only if your request used the Byte parameter.

Type: [DocumentMetadata](#) object

## DocumentType

The document type for each page in the input document. This field is present in the response only if your request used the `Byte` parameter.

Type: Array of [DocumentTypeListItem](#) objects

## Entities

A collection of entities identified in the input text. For each entity, the response provides the entity text, entity type, where the entity text begins and ends, and the level of confidence that Amazon Comprehend has in the detection.

If your request uses a custom entity recognition model, Amazon Comprehend detects the entities that the model is trained to recognize. Otherwise, it detects the default entity types. For a list of default entity types, see [Entities](#) in the Comprehend Developer Guide.

Type: Array of [Entity](#) objects

## Errors

Page-level errors that the system detected while processing the input document. The field is empty if the system encountered no errors.

Type: Array of [ErrorsListItem](#) objects

## **Errors**

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **ResourceUnavailableException**

The specified resource is not available. Check the resource and try your request again.



HTTP Status Code: 400

### TextSizeLimitExceededException

The size of the input text exceeds the limit. Use a smaller document.

HTTP Status Code: 400

### UnsupportedLanguageException

Amazon Comprehend can't process the language of the input text. For a list of supported languages, [Supported languages](#) in the Comprehend Developer Guide.

HTTP Status Code: 400

## Examples

### Detect entities

If the input text is "Bob ordered two sandwiches and three ice cream cones today from a store in Seattle.", the operation returns the following:

```
{
  "Entities": [
    {
      "Text": "Bob",
      "Score": 1.0,
      "Type": "PERSON",
      "BeginOffset": 0,
      "EndOffset": 3
    },
    {
      "Text": "two",
      "Score": 1.0,
      "Type": "QUANTITY",
      "BeginOffset": 12,
      "EndOffset": 15
    },
    {
      "Text": "three",
      "Score": 1.0,
      "Type": "QUANTITY",
      "BeginOffset": 32,
```

```
        "EndOffset": 37
    },
    {
        "Text": "Today",
        "Score": 1.0,
        "Type": "DATE",
        "BeginOffset": 54,
        "EndOffset": 59
    },
    {
        "Text": "Seattle",
        "Score": 1.0,
        "Type": "LOCATION",
        "BeginOffset": 76,
        "EndOffset": 83
    }
],
}
```

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## DetectKeyPhrases

Detects the key noun phrases found in the text.

### Request Syntax

```
{  
  "LanguageCode": "string",  
  "Text": "string"  
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### LanguageCode

The language of the input documents. You can specify any of the primary languages supported by Amazon Comprehend. All documents must be in the same language.

Type: String

Valid Values: en | es | fr | de | it | pt | ar | hi | ja | ko | zh | zh-TW

Required: Yes

#### Text

A UTF-8 text string. The string must contain less than 100 KB of UTF-8 encoded characters.

Type: String

Length Constraints: Minimum length of 1.

Required: Yes

### Response Syntax

```
{
```

```
"KeyPhrases": [  
  {  
    "BeginOffset": number,  
    "EndOffset": number,  
    "Score": number,  
    "Text": "string"  
  }  
]
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### KeyPhrases

A collection of key phrases that Amazon Comprehend identified in the input text. For each key phrase, the response provides the text of the key phrase, where the key phrase begins and ends, and the level of confidence that Amazon Comprehend has in the accuracy of the detection.

Type: Array of [KeyPhrase](#) objects

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **TextSizeLimitExceededException**

The size of the input text exceeds the limit. Use a smaller document.

HTTP Status Code: 400

## UnsupportedLanguageException

Amazon Comprehend can't process the language of the input text. For a list of supported languages, [Supported languages](#) in the Comprehend Developer Guide.

HTTP Status Code: 400

## Examples

### Detect phrases

If the input text is "Bob lives in Seattle. He is a software engineer at Amazon.", the API returns the following:

```
{
  "KeyPhrases": [
    {
      "Text": "Bob",
      "Score": 1.0,
      "BeginOffset": 0,
      "EndOffset": 3
    },
    {
      "Text": "Seattle",
      "Score": 1.0,
      "BeginOffset": 13,
      "EndOffset": 20
    },
    {
      "Text": "a software engineer",
      "Score": 1.0,
      "BeginOffset": 28,
      "EndOffset": 39
    },
    {
      "Text": "Amazon",
      "Score": 1.0,
      "BeginOffset": 43,
      "EndOffset": 49
    }
  ]
}
```

}}

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## DetectPiiEntities

Inspects the input text for entities that contain personally identifiable information (PII) and returns information about them.

### Request Syntax

```
{  
  "LanguageCode": "string",  
  "Text": "string"  
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### LanguageCode

The language of the input text. Enter the language code for English (en) or Spanish (es).

Type: String

Valid Values: en | es

Required: Yes

#### Text

A UTF-8 text string. The maximum string size is 100 KB.

Type: String

Length Constraints: Minimum length of 1.

Required: Yes

### Response Syntax

```
{  
  "Entities": [  
    ...  
  ]  
}
```

```
{
  "BeginOffset": number,
  "EndOffset": number,
  "Score": number,
  "Type": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### Entities

A collection of PII entities identified in the input text. For each entity, the response provides the entity type, where the entity text begins and ends, and the level of confidence that Amazon Comprehend has in the detection.

Type: Array of [PiiEntity](#) objects

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **TextSizeLimitExceededException**

The size of the input text exceeds the limit. Use a smaller document.

HTTP Status Code: 400



## UnsupportedLanguageException

Amazon Comprehend can't process the language of the input text. For a list of supported languages, [Supported languages](#) in the Comprehend Developer Guide.

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## DetectSentiment

Inspects text and returns an inference of the prevailing sentiment (POSITIVE, NEUTRAL, MIXED, or NEGATIVE).

### Request Syntax

```
{  
  "LanguageCode": "string",  
  "Text": "string"  
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### LanguageCode

The language of the input documents. You can specify any of the primary languages supported by Amazon Comprehend. All documents must be in the same language.

Type: String

Valid Values: en | es | fr | de | it | pt | ar | hi | ja | ko | zh | zh-TW

Required: Yes

#### Text

A UTF-8 text string. The maximum string size is 5 KB.

Type: String

Length Constraints: Minimum length of 1.

Required: Yes

### Response Syntax

```
{
```

```
"Sentiment": "string",  
"SentimentScore": {  
  "Mixed": number,  
  "Negative": number,  
  "Neutral": number,  
  "Positive": number  
}  
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### Sentiment

The inferred sentiment that Amazon Comprehend has the highest level of confidence in.

Type: String

Valid Values: POSITIVE | NEGATIVE | NEUTRAL | MIXED

### SentimentScore

An object that lists the sentiments, and their corresponding confidence levels.

Type: [SentimentScore](#) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

## TextSizeLimitExceededException

The size of the input text exceeds the limit. Use a smaller document.

HTTP Status Code: 400

## UnsupportedLanguageException

Amazon Comprehend can't process the language of the input text. For a list of supported languages, [Supported languages](#) in the Comprehend Developer Guide.

HTTP Status Code: 400

## Examples

### Detect sentiment

If the input text is "Today is my birthday, I am so happy.", the operation returns the following response:

```
{
  "SentimentScore": {
    "Mixed": 0.0033542951568961143,
    "Positive": 0.9869875907897949,
    "Neutral": 0.008563132025301456,
    "Negative": 0.0010949420975521207
  },
  "Sentiment": "POSITIVE",
}
```

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)

- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## DetectSyntax

Inspects text for syntax and the part of speech of words in the document. For more information, see [Syntax](#) in the Comprehend Developer Guide.

### Request Syntax

```
{  
  "LanguageCode": "string",  
  "Text": "string"  
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### LanguageCode

The language code of the input documents. You can specify any of the following languages supported by Amazon Comprehend: German ("de"), English ("en"), Spanish ("es"), French ("fr"), Italian ("it"), or Portuguese ("pt").

Type: String

Valid Values: en | es | fr | de | it | pt

Required: Yes

#### Text

A UTF-8 string. The maximum string size is 5 KB.

Type: String

Length Constraints: Minimum length of 1.

Required: Yes

### Response Syntax

```
{
```

```

    "SyntaxTokens": [
      {
        "BeginOffset": number,
        "EndOffset": number,
        "PartOfSpeech": {
          "Score": number,
          "Tag": "string"
        },
        "Text": "string",
        "TokenId": number
      }
    ]
  }

```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### [SyntaxTokens](#)

A collection of syntax tokens describing the text. For each token, the response provides the text, the token type, where the text begins and ends, and the level of confidence that Amazon Comprehend has that the token is correct. For a list of token types, see [Syntax](#) in the Comprehend Developer Guide.

Type: Array of [SyntaxToken](#) objects

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### InternalServerError

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### InvalidRequestException

The request is invalid.

HTTP Status Code: 400

## TextSizeLimitExceededException

The size of the input text exceeds the limit. Use a smaller document.

HTTP Status Code: 400

## UnsupportedLanguageException

Amazon Comprehend can't process the language of the input text. For a list of supported languages, [Supported languages](#) in the Comprehend Developer Guide.

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)



## DetectTargetedSentiment

Inspects the input text and returns a sentiment analysis for each entity identified in the text.

For more information about targeted sentiment, see [Targeted sentiment](#) in the *Amazon Comprehend Developer Guide*.

### Request Syntax

```
{
  "LanguageCode": "string",
  "Text": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### [LanguageCode](#)

The language of the input documents. Currently, English is the only supported language.

Type: String

Valid Values: en

Required: Yes

#### [Text](#)

A UTF-8 text string. The maximum string length is 5 KB.

Type: String

Length Constraints: Minimum length of 1.

Required: Yes

### Response Syntax

```
{
  "Entities": [
```

```

{
  "DescriptiveMentionIndex": [ number ],
  "Mentions": [
    {
      "BeginOffset": number,
      "EndOffset": number,
      "GroupScore": number,
      "MentionSentiment": {
        "Sentiment": "string",
        "SentimentScore": {
          "Mixed": number,
          "Negative": number,
          "Neutral": number,
          "Positive": number
        }
      }
    },
    {
      "Score": number,
      "Text": "string",
      "Type": "string"
    }
  ]
}

```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### Entities

Targeted sentiment analysis for each of the entities identified in the input text.

Type: Array of [TargetedSentimentEntity](#) objects

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### InternalServerErrorException

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **TextSizeLimitExceededException**

The size of the input text exceeds the limit. Use a smaller document.

HTTP Status Code: 400

### **UnsupportedLanguageException**

Amazon Comprehend can't process the language of the input text. For a list of supported languages, [Supported languages](#) in the Comprehend Developer Guide.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## DetectToxicContent

Performs toxicity analysis on the list of text strings that you provide as input. The API response contains a results list that matches the size of the input list. For more information about toxicity detection, see [Toxicity detection](#) in the *Amazon Comprehend Developer Guide*.

### Request Syntax

```
{
  "LanguageCode": "string",
  "TextSegments": [
    {
      "Text": "string"
    }
  ]
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### [LanguageCode](#)

The language of the input text. Currently, English is the only supported language.

Type: String

Valid Values: en

Required: Yes

#### [TextSegments](#)

A list of up to 10 text strings. Each string has a maximum size of 1 KB, and the maximum size of the list is 10 KB.

Type: Array of [TextSegment](#) objects

Array Members: Minimum number of 1 item.

Required: Yes

## Response Syntax

```
{
  "ResultList": [
    {
      "Labels": [
        {
          "Name": "string",
          "Score": number
        }
      ],
      "Toxicity": number
    }
  ]
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### ResultList

Results of the content moderation analysis. Each entry in the results list contains a list of toxic content types identified in the text, along with a confidence score for each content type. The results list also includes a toxicity score for each entry in the results list.

Type: Array of [ToxicLabels](#) objects

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **TextSizeLimitExceededException**

The size of the input text exceeds the limit. Use a smaller document.

HTTP Status Code: 400

### **UnsupportedLanguageException**

Amazon Comprehend can't process the language of the input text. For a list of supported languages, [Supported languages](#) in the Comprehend Developer Guide.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## ImportModel

Creates a new custom model that replicates a source custom model that you import. The source model can be in your AWS account or another one.

If the source model is in another AWS account, then it must have a resource-based policy that authorizes you to import it.

The source model must be in the same AWS Region that you're using when you import. You can't import a model that's in a different Region.

### Request Syntax

```
{
  "DataAccessRoleArn": "string",
  "ModelKmsKeyId": "string",
  "ModelName": "string",
  "SourceModelArn": "string",
  "Tags": [
    {
      "Key": "string",
      "Value": "string"
    }
  ],
  "VersionName": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### [DataAccessRoleArn](#)

The Amazon Resource Name (ARN) of the IAM role that grants Amazon Comprehend permission to use Amazon Key Management Service (KMS) to encrypt or decrypt the custom model.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: arn:aws(-[^\:]+)?:iam::[0-9]{12}:role/.+

Required: No

### ModelKmsKeyId

ID for the AWS KMS key that Amazon Comprehend uses to encrypt trained custom models. The ModelKmsKeyId can be either of the following formats:

- KMS Key ID: "1234abcd-12ab-34cd-56ef-1234567890ab"
- Amazon Resource Name (ARN) of a KMS Key: "arn:aws:kms:us-west-2:111122223333:key/1234abcd-12ab-34cd-56ef-1234567890ab"

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^\p{ASCII}+$`

Required: No

### ModelName

The name to assign to the custom model that is created in Amazon Comprehend by this import.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[a-zA-Z0-9](-*[a-zA-Z0-9])*$`

Required: No

### SourceModelArn

The Amazon Resource Name (ARN) of the custom model to import.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[:]+)?:comprehend:[a-zA-Z0-9-]*:[0-9]{12}:(document-classifier|entity-recognizer)/[a-zA-Z0-9](-*[a-zA-Z0-9])*/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

Required: Yes



## Tags

Tags to associate with the custom model that is created by this import. A tag is a key-value pair that adds as a metadata to a resource used by Amazon Comprehend. For example, a tag with "Sales" as the key might be added to a resource to indicate its use by the sales department.

Type: Array of [Tag](#) objects

Required: No

## VersionName

The version name given to the custom model that is created by this import. Version names can have a maximum of 256 characters. Alphanumeric characters, hyphens (-) and underscores (\_) are allowed. The version name must be unique among all models with the same classifier name in the account/Region.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[a-zA-Z0-9](-*[a-zA-Z0-9])*$`

Required: No

## Response Syntax

```
{
  "ModelArn": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### [ModelArn](#)

The Amazon Resource Name (ARN) of the custom model being imported.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9-]*:[0-9]{12}:(document-classifier|entity-recognizer)/[a-zA-Z0-9](-*[a-zA-Z0-9])*(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*)?`

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### InternalServerErrorException

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### InvalidRequestException

The request is invalid.

HTTP Status Code: 400

### KmsKeyValidationException

The KMS customer managed key (CMK) entered cannot be validated. Verify the key and re-enter it.

HTTP Status Code: 400

### ResourceInUseException

The specified resource name is already in use. Use a different name and try your request again.

HTTP Status Code: 400

### ResourceLimitExceededException

The maximum number of resources per account has been exceeded. Review the resources, and then try your request again.

HTTP Status Code: 400

### ResourceNotFoundException

The specified resource ARN was not found. Check the ARN and try your request again.

HTTP Status Code: 400

### **ResourceUnavailableException**

The specified resource is not available. Check the resource and try your request again.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

### **TooManyTagsException**

The request contains more tags than can be associated with a resource (50 tags per resource). The maximum number of tags includes both existing tags and those included in your current request.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## ListDatasets

List the datasets that you have configured in this Region. For more information about datasets, see [Flywheel overview](#) in the *Amazon Comprehend Developer Guide*.

### Request Syntax

```
{
  "Filter": {
    "CreationTimeAfter": number,
    "CreationTimeBefore": number,
    "DatasetType": "string",
    "Status": "string"
  },
  "FlywheelArn": "string",
  "MaxResults": number,
  "NextToken": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### Filter

Filters the datasets to be returned in the response.

Type: [DatasetFilter](#) object

Required: No

#### FlywheelArn

The Amazon Resource Number (ARN) of the flywheel.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9-]*:[0-9]{12}:flywheel/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

Required: No

### MaxResults

Maximum number of results to return in a response. The default is 100.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 500.

Required: No

### NextToken

Identifies the next page of results to return.

Type: String

Length Constraints: Minimum length of 1.

Required: No

## Response Syntax

```
{
  "DatasetPropertiesList": [
    {
      "CreationTime": number,
      "DatasetArn": "string",
      "DatasetName": "string",
      "DatasetS3Uri": "string",
      "DatasetType": "string",
      "Description": "string",
      "EndTime": number,
      "Message": "string",
      "NumberOfDocuments": number,
      "Status": "string"
    }
  ],
  "NextToken": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### **DatasetPropertiesList**

The dataset properties list.

Type: Array of [DatasetProperties](#) objects

### **NextToken**

Identifies the next page of results to return.

Type: String

Length Constraints: Minimum length of 1.

## **Errors**

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidFilterException**

The filter specified for the operation is invalid. Specify a different filter.

HTTP Status Code: 400

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **ResourceNotFoundException**

The specified resource ARN was not found. Check the ARN and try your request again.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

## HTTP Status Code: 400

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## ListDocumentClassificationJobs

Gets a list of the documentation classification jobs that you have submitted.

### Request Syntax

```
{
  "Filter": {
    "JobName": "string",
    "JobStatus": "string",
    "SubmitTimeAfter": number,
    "SubmitTimeBefore": number
  },
  "MaxResults": number,
  "NextToken": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### Filter

Filters the jobs that are returned. You can filter jobs on their names, status, or the date and time that they were submitted. You can only set one filter at a time.

Type: [DocumentClassificationJobFilter](#) object

Required: No

#### MaxResults

The maximum number of results to return in each page. The default is 100.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 500.

Required: No

#### NextToken

Identifies the next page of results to return.



Type: String

Length Constraints: Minimum length of 1.

Required: No

## Response Syntax

```
{
  "DocumentClassificationJobPropertiesList": [
    {
      "DataAccessRoleArn": "string",
      "DocumentClassifierArn": "string",
      "EndTime": number,
      "FlywheelArn": "string",
      "InputDataConfig": {
        "DocumentReaderConfig": {
          "DocumentReadAction": "string",
          "DocumentReadMode": "string",
          "FeatureTypes": [ "string" ]
        },
        "InputFormat": "string",
        "S3Uri": "string"
      },
      "JobArn": "string",
      "JobId": "string",
      "JobName": "string",
      "JobStatus": "string",
      "Message": "string",
      "OutputDataConfig": {
        "KmsKeyId": "string",
        "S3Uri": "string"
      },
      "SubmitTime": number,
      "VolumeKmsKeyId": "string",
      "VpcConfig": {
        "SecurityGroupIds": [ "string" ],
        "Subnets": [ "string" ]
      }
    }
  ],
  "NextToken": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### DocumentClassificationJobPropertiesList

A list containing the properties of each job returned.

Type: Array of [DocumentClassificationJobProperties](#) objects

### NextToken

Identifies the next page of results to return.

Type: String

Length Constraints: Minimum length of 1.

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidFilterException**

The filter specified for the operation is invalid. Specify a different filter.

HTTP Status Code: 400

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

## HTTP Status Code: 400

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## ListDocumentClassifiers

Gets a list of the document classifiers that you have created.

### Request Syntax

```
{
  "Filter": {
    "DocumentClassifierName": "string",
    "Status": "string",
    "SubmitTimeAfter": number,
    "SubmitTimeBefore": number
  },
  "MaxResults": number,
  "NextToken": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### Filter

Filters the jobs that are returned. You can filter jobs on their name, status, or the date and time that they were submitted. You can only set one filter at a time.

Type: [DocumentClassifierFilter](#) object

Required: No

#### MaxResults

The maximum number of results to return in each page. The default is 100.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 500.

Required: No

#### NextToken

Identifies the next page of results to return.

Type: String

Length Constraints: Minimum length of 1.

Required: No

## Response Syntax

```
{
  "DocumentClassifierPropertiesList": [
    {
      "ClassifierMetadata": {
        "EvaluationMetrics": {
          "Accuracy": number,
          "F1Score": number,
          "HammingLoss": number,
          "MicroF1Score": number,
          "MicroPrecision": number,
          "MicroRecall": number,
          "Precision": number,
          "Recall": number
        },
        "NumberOfLabels": number,
        "NumberOfTestDocuments": number,
        "NumberOfTrainedDocuments": number
      },
      "DataAccessRoleArn": "string",
      "DocumentClassifierArn": "string",
      "EndTime": number,
      "FlywheelArn": "string",
      "InputDataConfig": {
        "AugmentedManifests": [
          {
            "AnnotationDataS3Uri": "string",
            "AttributeNames": [ "string" ],
            "DocumentType": "string",
            "S3Uri": "string",
            "SourceDocumentsS3Uri": "string",
            "Split": "string"
          }
        ]
      },
      "DataFormat": "string",
      "DocumentReaderConfig": {
```

```

        "DocumentReadAction": "string",
        "DocumentReadMode": "string",
        "FeatureTypes": [ "string" ]
    },
    "Documents": {
        "S3Uri": "string",
        "TestS3Uri": "string"
    },
    "DocumentType": "string",
    "LabelDelimiter": "string",
    "S3Uri": "string",
    "TestS3Uri": "string"
},
"LanguageCode": "string",
"Message": "string",
"Mode": "string",
"ModelKmsKeyId": "string",
"OutputDataConfig": {
    "FlywheelStatsS3Prefix": "string",
    "KmsKeyId": "string",
    "S3Uri": "string"
},
"SourceModelArn": "string",
"Status": "string",
"SubmitTime": number,
"TrainingEndTime": number,
"TrainingStartTime": number,
"VersionName": "string",
"VolumeKmsKeyId": "string",
"VpcConfig": {
    "SecurityGroupIds": [ "string" ],
    "Subnets": [ "string" ]
}
}
],
"NextToken": "string"
}

```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

## [DocumentClassifierPropertiesList](#)

A list containing the properties of each job returned.

Type: Array of [DocumentClassifierProperties](#) objects

## [NextToken](#)

Identifies the next page of results to return.

Type: String

Length Constraints: Minimum length of 1.

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerError**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidFilterException**

The filter specified for the operation is invalid. Specify a different filter.

HTTP Status Code: 400

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)



## ListDocumentClassifierSummaries

Gets a list of summaries of the document classifiers that you have created

### Request Syntax

```
{
  "MaxResults": number,
  "NextToken": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### MaxResults

The maximum number of results to return on each page. The default is 100.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 500.

Required: No

#### NextToken

Identifies the next page of results to return.

Type: String

Length Constraints: Minimum length of 1.

Required: No

### Response Syntax

```
{
  "DocumentClassifierSummariesList": [
    {
      "DocumentClassifierName": "string",

```

```

    "LatestVersionCreatedAt": number,
    "LatestVersionName": "string",
    "LatestVersionStatus": "string",
    "NumberOfVersions": number
  }
],
"NextToken": "string"
}

```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### DocumentClassifierSummariesList

The list of summaries of document classifiers.

Type: Array of [DocumentClassifierSummary](#) objects

### NextToken

Identifies the next page of results to return.

Type: String

Length Constraints: Minimum length of 1.

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

## TooManyRequestsException

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## ListDominantLanguageDetectionJobs

Gets a list of the dominant language detection jobs that you have submitted.

### Request Syntax

```
{
  "Filter": {
    "JobName": "string",
    "JobStatus": "string",
    "SubmitTimeAfter": number,
    "SubmitTimeBefore": number
  },
  "MaxResults": number,
  "NextToken": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### Filter

Filters that jobs that are returned. You can filter jobs on their name, status, or the date and time that they were submitted. You can only set one filter at a time.

Type: [DominantLanguageDetectionJobFilter](#) object

Required: No

#### MaxResults

The maximum number of results to return in each page. The default is 100.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 500.

Required: No

#### NextToken

Identifies the next page of results to return.

Type: String

Length Constraints: Minimum length of 1.

Required: No

## Response Syntax

```
{
  "DominantLanguageDetectionJobPropertiesList": [
    {
      "DataAccessRoleArn": "string",
      "EndTime": number,
      "InputDataConfig": {
        "DocumentReaderConfig": {
          "DocumentReadAction": "string",
          "DocumentReadMode": "string",
          "FeatureTypes": [ "string" ]
        },
        "InputFormat": "string",
        "S3Uri": "string"
      },
      "JobArn": "string",
      "JobId": "string",
      "JobName": "string",
      "JobStatus": "string",
      "Message": "string",
      "OutputDataConfig": {
        "KmsKeyId": "string",
        "S3Uri": "string"
      },
      "SubmitTime": number,
      "VolumeKmsKeyId": "string",
      "VpcConfig": {
        "SecurityGroupIds": [ "string" ],
        "Subnets": [ "string" ]
      }
    }
  ],
  "NextToken": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### [DominantLanguageDetectionJobPropertiesList](#)

A list containing the properties of each job that is returned.

Type: Array of [DominantLanguageDetectionJobProperties](#) objects

### [NextToken](#)

Identifies the next page of results to return.

Type: String

Length Constraints: Minimum length of 1.

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidFilterException**

The filter specified for the operation is invalid. Specify a different filter.

HTTP Status Code: 400

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

## HTTP Status Code: 400

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## ListEndpoints

Gets a list of all existing endpoints that you've created. For information about endpoints, see [Managing endpoints](#).

### Request Syntax

```
{
  "Filter": {
    "CreationTimeAfter": number,
    "CreationTimeBefore": number,
    "ModelArn": "string",
    "Status": "string"
  },
  "MaxResults": number,
  "NextToken": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### Filter

Filters the endpoints that are returned. You can filter endpoints on their name, model, status, or the date and time that they were created. You can only set one filter at a time.

Type: [EndpointFilter](#) object

Required: No

#### MaxResults

The maximum number of results to return in each page. The default is 100.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 500.

Required: No



## [NextToken](#)

Identifies the next page of results to return.

Type: String

Length Constraints: Minimum length of 1.

Required: No

## Response Syntax

```
{
  "EndpointPropertiesList": [
    {
      "CreationTime": number,
      "CurrentInferenceUnits": number,
      "DataAccessRoleArn": "string",
      "DesiredDataAccessRoleArn": "string",
      "DesiredInferenceUnits": number,
      "DesiredModelArn": "string",
      "EndpointArn": "string",
      "FlywheelArn": "string",
      "LastModifiedTime": number,
      "Message": "string",
      "ModelArn": "string",
      "Status": "string"
    }
  ],
  "NextToken": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### [EndpointPropertiesList](#)

Displays a list of endpoint properties being retrieved by the service in response to the request.

Type: Array of [EndpointProperties](#) objects

## **NextToken**

Identifies the next page of results to return.

Type: String

Length Constraints: Minimum length of 1.

## **Errors**

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)

- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## ListEntitiesDetectionJobs

Gets a list of the entity detection jobs that you have submitted.

### Request Syntax

```
{
  "Filter": {
    "JobName": "string",
    "JobStatus": "string",
    "SubmitTimeAfter": number,
    "SubmitTimeBefore": number
  },
  "MaxResults": number,
  "NextToken": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### Filter

Filters the jobs that are returned. You can filter jobs on their name, status, or the date and time that they were submitted. You can only set one filter at a time.

Type: [EntitiesDetectionJobFilter](#) object

Required: No

#### MaxResults

The maximum number of results to return in each page. The default is 100.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 500.

Required: No

#### NextToken

Identifies the next page of results to return.

Type: String

Length Constraints: Minimum length of 1.

Required: No

## Response Syntax

```
{
  "EntitiesDetectionJobPropertiesList": [
    {
      "DataAccessRoleArn": "string",
      "EndTime": number,
      "EntityRecognizerArn": "string",
      "FlywheelArn": "string",
      "InputDataConfig": {
        "DocumentReaderConfig": {
          "DocumentReadAction": "string",
          "DocumentReadMode": "string",
          "FeatureTypes": [ "string" ]
        },
        "InputFormat": "string",
        "S3Uri": "string"
      },
      "JobArn": "string",
      "JobId": "string",
      "JobName": "string",
      "JobStatus": "string",
      "LanguageCode": "string",
      "Message": "string",
      "OutputDataConfig": {
        "KmsKeyId": "string",
        "S3Uri": "string"
      },
      "SubmitTime": number,
      "VolumeKmsKeyId": "string",
      "VpcConfig": {
        "SecurityGroupIds": [ "string" ],
        "Subnets": [ "string" ]
      }
    }
  ],
  "NextToken": "string"
}
```

```
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### EntitiesDetectionJobPropertiesList

A list containing the properties of each job that is returned.

Type: Array of [EntitiesDetectionJobProperties](#) objects

### NextToken

Identifies the next page of results to return.

Type: String

Length Constraints: Minimum length of 1.

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerError**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidFilterException**

The filter specified for the operation is invalid. Specify a different filter.

HTTP Status Code: 400

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

## TooManyRequestsException

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## ListEntityRecognizers

Gets a list of the properties of all entity recognizers that you created, including recognizers currently in training. Allows you to filter the list of recognizers based on criteria such as status and submission time. This call returns up to 500 entity recognizers in the list, with a default number of 100 recognizers in the list.

The results of this list are not in any particular order. Please get the list and sort locally if needed.

### Request Syntax

```
{
  "Filter": {
    "RecognizerName": "string",
    "Status": "string",
    "SubmitTimeAfter": number,
    "SubmitTimeBefore": number
  },
  "MaxResults": number,
  "NextToken": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### Filter

Filters the list of entities returned. You can filter on `Status`, `SubmitTimeBefore`, or `SubmitTimeAfter`. You can only set one filter at a time.

Type: [EntityRecognizerFilter](#) object

Required: No

#### MaxResults

The maximum number of results to return on each page. The default is 100.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 500.



Required: No

### NextToken

Identifies the next page of results to return.

Type: String

Length Constraints: Minimum length of 1.

Required: No

## Response Syntax

```
{
  "EntityRecognizerPropertiesList": [
    {
      "DataAccessRoleArn": "string",
      "EndTime": number,
      "EntityRecognizerArn": "string",
      "FlywheelArn": "string",
      "InputDataConfig": {
        "Annotations": {
          "S3Uri": "string",
          "TestS3Uri": "string"
        },
        "AugmentedManifests": [
          {
            "AnnotationDataS3Uri": "string",
            "AttributeNames": [ "string" ],
            "DocumentType": "string",
            "S3Uri": "string",
            "SourceDocumentsS3Uri": "string",
            "Split": "string"
          }
        ],
        "DataFormat": "string",
        "Documents": {
          "InputFormat": "string",
          "S3Uri": "string",
          "TestS3Uri": "string"
        },
        "EntityList": {
          "S3Uri": "string"
        }
      }
    }
  ]
}
```

```

    },
    "EntityTypes": [
      {
        "Type": "string"
      }
    ]
  },
  "LanguageCode": "string",
  "Message": "string",
  "ModelKmsKeyId": "string",
  "OutputDataConfig": {
    "FlywheelStatsS3Prefix": "string"
  },
  "RecognizerMetadata": {
    "EntityTypes": [
      {
        "EvaluationMetrics": {
          "F1Score": number,
          "Precision": number,
          "Recall": number
        },
        "NumberOfTrainMentions": number,
        "Type": "string"
      }
    ],
    "EvaluationMetrics": {
      "F1Score": number,
      "Precision": number,
      "Recall": number
    },
    "NumberOfTestDocuments": number,
    "NumberOfTrainedDocuments": number
  },
  "SourceModelArn": "string",
  "Status": "string",
  "SubmitTime": number,
  "TrainingEndTime": number,
  "TrainingStartTime": number,
  "VersionName": "string",
  "VolumeKmsKeyId": "string",
  "VpcConfig": {
    "SecurityGroupIds": [ "string" ],
    "Subnets": [ "string" ]
  }
}

```

```
    }  
  ],  
  "NextToken": "string"  
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### EntityRecognizerPropertiesList

The list of properties of an entity recognizer.

Type: Array of [EntityRecognizerProperties](#) objects

### NextToken

Identifies the next page of results to return.

Type: String

Length Constraints: Minimum length of 1.

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerError**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidFilterException**

The filter specified for the operation is invalid. Specify a different filter.

HTTP Status Code: 400

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

### **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## ListEntityRecognizerSummaries

Gets a list of summaries for the entity recognizers that you have created.

### Request Syntax

```
{  
  "MaxResults": number,  
  "NextToken": "string"  
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### MaxResults

The maximum number of results to return on each page. The default is 100.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 500.

Required: No

#### NextToken

Identifies the next page of results to return.

Type: String

Length Constraints: Minimum length of 1.

Required: No

### Response Syntax

```
{  
  "EntityRecognizerSummariesList": [  
    {  
      "LatestVersionCreatedAt": number,    }  
  ]  
}
```

```
    "LatestVersionName": "string",  
    "LatestVersionStatus": "string",  
    "NumberOfVersions": number,  
    "RecognizerName": "string"  
  }  
],  
"NextToken": "string"  
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### EntityRecognizerSummariesList

The list entity recognizer summaries.

Type: Array of [EntityRecognizerSummary](#) objects

### NextToken

Identifies the next page of results to return.

Type: String

Length Constraints: Minimum length of 1.

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

## TooManyRequestsException

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## ListEventsDetectionJobs

Gets a list of the events detection jobs that you have submitted.

### Request Syntax

```
{
  "Filter": {
    "JobName": "string",
    "JobStatus": "string",
    "SubmitTimeAfter": number,
    "SubmitTimeBefore": number
  },
  "MaxResults": number,
  "NextToken": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### Filter

Filters the jobs that are returned. You can filter jobs on their name, status, or the date and time that they were submitted. You can only set one filter at a time.

Type: [EventsDetectionJobFilter](#) object

Required: No

#### MaxResults

The maximum number of results to return in each page.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 500.

Required: No

#### NextToken

Identifies the next page of results to return.



Type: String

Length Constraints: Minimum length of 1.

Required: No

## Response Syntax

```
{
  "EventsDetectionJobPropertiesList": [
    {
      "DataAccessRoleArn": "string",
      "EndTime": number,
      "InputDataConfig": {
        "DocumentReaderConfig": {
          "DocumentReadAction": "string",
          "DocumentReadMode": "string",
          "FeatureTypes": [ "string" ]
        },
        "InputFormat": "string",
        "S3Uri": "string"
      },
      "JobArn": "string",
      "JobId": "string",
      "JobName": "string",
      "JobStatus": "string",
      "LanguageCode": "string",
      "Message": "string",
      "OutputDataConfig": {
        "KmsKeyId": "string",
        "S3Uri": "string"
      },
      "SubmitTime": number,
      "TargetEventTypes": [ "string" ]
    }
  ],
  "NextToken": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### **EventsDetectionJobPropertiesList**

A list containing the properties of each job that is returned.

Type: Array of [EventsDetectionJobProperties](#) objects

### **NextToken**

Identifies the next page of results to return.

Type: String

Length Constraints: Minimum length of 1.

## **Errors**

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidFilterException**

The filter specified for the operation is invalid. Specify a different filter.

HTTP Status Code: 400

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## ListFlywheelIterationHistory

Information about the history of a flywheel iteration. For more information about flywheels, see [Flywheel overview](#) in the *Amazon Comprehend Developer Guide*.

### Request Syntax

```
{
  "Filter": {
    "CreationTimeAfter": number,
    "CreationTimeBefore": number
  },
  "FlywheelArn": "string",
  "MaxResults": number,
  "NextToken": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### [Filter](#)

Filter the flywheel iteration history based on creation time.

Type: [FlywheelIterationFilter](#) object

Required: No

#### [FlywheelArn](#)

The ARN of the flywheel.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9-]*:[0-9]{12}:flywheel/[a-zA-Z0-9](-*[a-zA-Z0-9-])*`

Required: Yes

## MaxResults

Maximum number of iteration history results to return

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 500.

Required: No

## NextToken

Next token

Type: String

Length Constraints: Minimum length of 1.

Required: No

## Response Syntax

```
{
  "FlywheelIterationPropertiesList": [
    {
      "CreationTime": number,
      "EndTime": number,
      "EvaluatedModelArn": "string",
      "EvaluatedModelMetrics": {
        "AverageAccuracy": number,
        "AverageF1Score": number,
        "AveragePrecision": number,
        "AverageRecall": number
      },
      "EvaluationManifestS3Prefix": "string",
      "FlywheelArn": "string",
      "FlywheelIterationId": "string",
      "Message": "string",
      "Status": "string",
      "TrainedModelArn": "string",
      "TrainedModelMetrics": {
        "AverageAccuracy": number,
        "AverageF1Score": number,
        "AveragePrecision": number,

```

```
        "AverageRecall": number
      }
    }
  ],
  "NextToken": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### FlywheelIterationPropertiesList

List of flywheel iteration properties

Type: Array of [FlywheelIterationProperties](#) objects

### NextToken

Next token

Type: String

Length Constraints: Minimum length of 1.

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidFilterException**

The filter specified for the operation is invalid. Specify a different filter.

HTTP Status Code: 400

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **ResourceNotFoundException**

The specified resource ARN was not found. Check the ARN and try your request again.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# ListFlywheels

Gets a list of the flywheels that you have created.

## Request Syntax

```
{
  "Filter": {
    "CreationTimeAfter": number,
    "CreationTimeBefore": number,
    "Status": "string"
  },
  "MaxResults": number,
  "NextToken": "string"
}
```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

### Filter

Filters the flywheels that are returned. You can filter flywheels on their status, or the date and time that they were submitted. You can only set one filter at a time.

Type: [FlywheelFilter](#) object

Required: No

### MaxResults

Maximum number of results to return in a response. The default is 100.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 500.

Required: No

### NextToken

Identifies the next page of results to return.



Type: String

Length Constraints: Minimum length of 1.

Required: No

## Response Syntax

```
{
  "FlywheelSummaryList": [
    {
      "ActiveModelArn": "string",
      "CreationTime": number,
      "DataLakeS3Uri": "string",
      "FlywheelArn": "string",
      "LastModifiedTime": number,
      "LatestFlywheelIteration": "string",
      "Message": "string",
      "ModelType": "string",
      "Status": "string"
    }
  ],
  "NextToken": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### FlywheelSummaryList

A list of flywheel properties retrieved by the service in response to the request.

Type: Array of [FlywheelSummary](#) objects

### NextToken

Identifies the next page of results to return.

Type: String

Length Constraints: Minimum length of 1.

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### InternalServerErrorException

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### InvalidFilterException

The filter specified for the operation is invalid. Specify a different filter.

HTTP Status Code: 400

### InvalidRequestException

The request is invalid.

HTTP Status Code: 400

### TooManyRequestsException

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)

- [AWS SDK for Ruby V3](#)

## ListKeyPhrasesDetectionJobs

Get a list of key phrase detection jobs that you have submitted.

### Request Syntax

```
{
  "Filter": {
    "JobName": "string",
    "JobStatus": "string",
    "SubmitTimeAfter": number,
    "SubmitTimeBefore": number
  },
  "MaxResults": number,
  "NextToken": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### Filter

Filters the jobs that are returned. You can filter jobs on their name, status, or the date and time that they were submitted. You can only set one filter at a time.

Type: [KeyPhrasesDetectionJobFilter](#) object

Required: No

#### MaxResults

The maximum number of results to return in each page. The default is 100.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 500.

Required: No

#### NextToken

Identifies the next page of results to return.

Type: String

Length Constraints: Minimum length of 1.

Required: No

## Response Syntax

```
{
  "KeyPhrasesDetectionJobPropertiesList": [
    {
      "DataAccessRoleArn": "string",
      "EndTime": number,
      "InputDataConfig": {
        "DocumentReaderConfig": {
          "DocumentReadAction": "string",
          "DocumentReadMode": "string",
          "FeatureTypes": [ "string" ]
        },
        "InputFormat": "string",
        "S3Uri": "string"
      },
      "JobArn": "string",
      "JobId": "string",
      "JobName": "string",
      "JobStatus": "string",
      "LanguageCode": "string",
      "Message": "string",
      "OutputDataConfig": {
        "KmsKeyId": "string",
        "S3Uri": "string"
      },
      "SubmitTime": number,
      "VolumeKmsKeyId": "string",
      "VpcConfig": {
        "SecurityGroupIds": [ "string" ],
        "Subnets": [ "string" ]
      }
    }
  ],
  "NextToken": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### [KeyPhrasesDetectionJobPropertiesList](#)

A list containing the properties of each job that is returned.

Type: Array of [KeyPhrasesDetectionJobProperties](#) objects

### [NextToken](#)

Identifies the next page of results to return.

Type: String

Length Constraints: Minimum length of 1.

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidFilterException**

The filter specified for the operation is invalid. Specify a different filter.

HTTP Status Code: 400

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

## HTTP Status Code: 400

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## ListPiiEntitiesDetectionJobs

Gets a list of the PII entity detection jobs that you have submitted.

### Request Syntax

```
{
  "Filter": {
    "JobName": "string",
    "JobStatus": "string",
    "SubmitTimeAfter": number,
    "SubmitTimeBefore": number
  },
  "MaxResults": number,
  "NextToken": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### Filter

Filters the jobs that are returned. You can filter jobs on their name, status, or the date and time that they were submitted. You can only set one filter at a time.

Type: [PiiEntitiesDetectionJobFilter](#) object

Required: No

#### MaxResults

The maximum number of results to return in each page.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 500.

Required: No

#### NextToken

Identifies the next page of results to return.



Type: String

Length Constraints: Minimum length of 1.

Required: No

## Response Syntax

```
{
  "NextToken": "string",
  "PiiEntitiesDetectionJobPropertiesList": [
    {
      "DataAccessRoleArn": "string",
      "EndTime": number,
      "InputDataConfig": {
        "DocumentReaderConfig": {
          "DocumentReadAction": "string",
          "DocumentReadMode": "string",
          "FeatureTypes": [ "string" ]
        },
        "InputFormat": "string",
        "S3Uri": "string"
      },
      "JobArn": "string",
      "JobId": "string",
      "JobName": "string",
      "JobStatus": "string",
      "LanguageCode": "string",
      "Message": "string",
      "Mode": "string",
      "OutputDataConfig": {
        "KmsKeyId": "string",
        "S3Uri": "string"
      },
      "RedactionConfig": {
        "MaskCharacter": "string",
        "MaskMode": "string",
        "PiiEntityTypeTypes": [ "string" ]
      },
      "SubmitTime": number
    }
  ]
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### NextToken

Identifies the next page of results to return.

Type: String

Length Constraints: Minimum length of 1.

### PiiEntitiesDetectionJobPropertiesList

A list containing the properties of each job that is returned.

Type: Array of [PiiEntitiesDetectionJobProperties](#) objects

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidFilterException**

The filter specified for the operation is invalid. Specify a different filter.

HTTP Status Code: 400

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

## HTTP Status Code: 400

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## ListSentimentDetectionJobs

Gets a list of sentiment detection jobs that you have submitted.

### Request Syntax

```
{
  "Filter": {
    "JobName": "string",
    "JobStatus": "string",
    "SubmitTimeAfter": number,
    "SubmitTimeBefore": number
  },
  "MaxResults": number,
  "NextToken": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### Filter

Filters the jobs that are returned. You can filter jobs on their name, status, or the date and time that they were submitted. You can only set one filter at a time.

Type: [SentimentDetectionJobFilter](#) object

Required: No

#### MaxResults

The maximum number of results to return in each page. The default is 100.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 500.

Required: No

#### NextToken

Identifies the next page of results to return.

Type: String

Length Constraints: Minimum length of 1.

Required: No

## Response Syntax

```
{
  "NextToken": "string",
  "SentimentDetectionJobPropertiesList": [
    {
      "DataAccessRoleArn": "string",
      "EndTime": number,
      "InputDataConfig": {
        "DocumentReaderConfig": {
          "DocumentReadAction": "string",
          "DocumentReadMode": "string",
          "FeatureTypes": [ "string" ]
        },
        "InputFormat": "string",
        "S3Uri": "string"
      },
      "JobArn": "string",
      "JobId": "string",
      "JobName": "string",
      "JobStatus": "string",
      "LanguageCode": "string",
      "Message": "string",
      "OutputDataConfig": {
        "KmsKeyId": "string",
        "S3Uri": "string"
      },
      "SubmitTime": number,
      "VolumeKmsKeyId": "string",
      "VpcConfig": {
        "SecurityGroupIds": [ "string" ],
        "Subnets": [ "string" ]
      }
    }
  ]
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### NextToken

Identifies the next page of results to return.

Type: String

Length Constraints: Minimum length of 1.

### SentimentDetectionJobPropertiesList

A list containing the properties of each job that is returned.

Type: Array of [SentimentDetectionJobProperties](#) objects

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidFilterException**

The filter specified for the operation is invalid. Specify a different filter.

HTTP Status Code: 400

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

## HTTP Status Code: 400

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## ListTagsForResource

Lists all tags associated with a given Amazon Comprehend resource.

### Request Syntax

```
{  
  "ResourceArn": "string"  
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### ResourceArn

The Amazon Resource Name (ARN) of the given Amazon Comprehend resource you are querying.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9-]*:[0-9]{12}:[a-zA-Z0-9-]{1,64}/[a-zA-Z0-9](-*[a-zA-Z0-9])*((/dataset/[a-zA-Z0-9](-*[a-zA-Z0-9])*)|(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*))?`

Required: Yes

### Response Syntax

```
{  
  "ResourceArn": "string",  
  "Tags": [  
    {  
      "Key": "string",  
      "Value": "string"  
    }  
  ]  
}
```



```
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### ResourceArn

The Amazon Resource Name (ARN) of the given Amazon Comprehend resource you are querying.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9-]*:[0-9]{12}:[a-zA-Z0-9-]{1,64}/[a-zA-Z0-9](-*[a-zA-Z0-9])*((/dataset/[a-zA-Z0-9](-*[a-zA-Z0-9])*)|(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*))?`

### Tags

Tags associated with the Amazon Comprehend resource being queried. A tag is a key-value pair that adds as a metadata to a resource used by Amazon Comprehend. For example, a tag with "Sales" as the key might be added to a resource to indicate its use by the sales department.

Type: Array of [Tag](#) objects

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerError**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

## ResourceNotFoundException

The specified resource ARN was not found. Check the ARN and try your request again.

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## ListTargetedSentimentDetectionJobs

Gets a list of targeted sentiment detection jobs that you have submitted.

### Request Syntax

```
{
  "Filter": {
    "JobName": "string",
    "JobStatus": "string",
    "SubmitTimeAfter": number,
    "SubmitTimeBefore": number
  },
  "MaxResults": number,
  "NextToken": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### Filter

Filters the jobs that are returned. You can filter jobs on their name, status, or the date and time that they were submitted. You can only set one filter at a time.

Type: [TargetedSentimentDetectionJobFilter](#) object

Required: No

#### MaxResults

The maximum number of results to return in each page. The default is 100.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 500.

Required: No

#### NextToken

Identifies the next page of results to return.

Type: String

Length Constraints: Minimum length of 1.

Required: No

## Response Syntax

```
{
  "NextToken": "string",
  "TargetedSentimentDetectionJobPropertiesList": [
    {
      "DataAccessRoleArn": "string",
      "EndTime": number,
      "InputDataConfig": {
        "DocumentReaderConfig": {
          "DocumentReadAction": "string",
          "DocumentReadMode": "string",
          "FeatureTypes": [ "string" ]
        },
        "InputFormat": "string",
        "S3Uri": "string"
      },
      "JobArn": "string",
      "JobId": "string",
      "JobName": "string",
      "JobStatus": "string",
      "LanguageCode": "string",
      "Message": "string",
      "OutputDataConfig": {
        "KmsKeyId": "string",
        "S3Uri": "string"
      },
      "SubmitTime": number,
      "VolumeKmsKeyId": "string",
      "VpcConfig": {
        "SecurityGroupIds": [ "string" ],
        "Subnets": [ "string" ]
      }
    }
  ]
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### NextToken

Identifies the next page of results to return.

Type: String

Length Constraints: Minimum length of 1.

### TargetedSentimentDetectionJobPropertiesList

A list containing the properties of each job that is returned.

Type: Array of [TargetedSentimentDetectionJobProperties](#) objects

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidFilterException**

The filter specified for the operation is invalid. Specify a different filter.

HTTP Status Code: 400

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

## HTTP Status Code: 400

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## ListTopicsDetectionJobs

Gets a list of the topic detection jobs that you have submitted.

### Request Syntax

```
{
  "Filter": {
    "JobName": "string",
    "JobStatus": "string",
    "SubmitTimeAfter": number,
    "SubmitTimeBefore": number
  },
  "MaxResults": number,
  "NextToken": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### Filter

Filters the jobs that are returned. Jobs can be filtered on their name, status, or the date and time that they were submitted. You can set only one filter at a time.

Type: [TopicsDetectionJobFilter](#) object

Required: No

#### MaxResults

The maximum number of results to return in each page. The default is 100.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 500.

Required: No

#### NextToken

Identifies the next page of results to return.

Type: String

Length Constraints: Minimum length of 1.

Required: No

## Response Syntax

```
{
  "NextToken": "string",
  "TopicsDetectionJobPropertiesList": [
    {
      "DataAccessRoleArn": "string",
      "EndTime": number,
      "InputDataConfig": {
        "DocumentReaderConfig": {
          "DocumentReadAction": "string",
          "DocumentReadMode": "string",
          "FeatureTypes": [ "string" ]
        },
        "InputFormat": "string",
        "S3Uri": "string"
      },
      "JobArn": "string",
      "JobId": "string",
      "JobName": "string",
      "JobStatus": "string",
      "Message": "string",
      "NumberOfTopics": number,
      "OutputDataConfig": {
        "KmsKeyId": "string",
        "S3Uri": "string"
      },
      "SubmitTime": number,
      "VolumeKmsKeyId": "string",
      "VpcConfig": {
        "SecurityGroupIds": [ "string" ],
        "Subnets": [ "string" ]
      }
    }
  ]
}
```



## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### NextToken

Identifies the next page of results to return.

Type: String

Length Constraints: Minimum length of 1.

### TopicsDetectionJobPropertiesList

A list containing the properties of each job that is returned.

Type: Array of [TopicsDetectionJobProperties](#) objects

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidFilterException**

The filter specified for the operation is invalid. Specify a different filter.

HTTP Status Code: 400

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

## HTTP Status Code: 400

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## PutResourcePolicy

Attaches a resource-based policy to a custom model. You can use this policy to authorize an entity in another AWS account to import the custom model, which replicates it in Amazon Comprehend in their account.

### Request Syntax

```
{
  "PolicyRevisionId": "string",
  "ResourceArn": "string",
  "ResourcePolicy": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### [PolicyRevisionId](#)

The revision ID that Amazon Comprehend assigned to the policy that you are updating. If you are creating a new policy that has no prior version, don't use this parameter. Amazon Comprehend creates the revision ID for you.

Type: String

Length Constraints: Maximum length of 64.

Pattern: `[0-9A-Fa-f]+`

Required: No

#### [ResourceArn](#)

The Amazon Resource Name (ARN) of the custom model to attach the policy to.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:(document-classifier|entity-recognizer)/[a-zA-Z0-9](-*[a-zA-Z0-9])*/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*`?

Required: Yes

## ResourcePolicy

The JSON resource-based policy to attach to your custom model. Provide your JSON as a UTF-8 encoded string without line breaks. To provide valid JSON for your policy, enclose the attribute names and values in double quotes. If the JSON body is also enclosed in double quotes, then you must escape the double quotes that are inside the policy:

```
"{"attribute\": \"value\", \"attribute\": [\"value\"]}"
```

To avoid escaping quotes, you can use single quotes to enclose the policy and double quotes to enclose the JSON names and values:

```
'{"attribute": "value", "attribute": ["value"]}'
```

Type: String

Length Constraints: Minimum length of 1. Maximum length of 20000.

Pattern: `[\u0009\u000A\u000D\u0020-\u00FF]+`

Required: Yes

## Response Syntax

```
{
  "PolicyRevisionId": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

## **PolicyRevisionId**

The revision ID of the policy. Each time you modify a policy, Amazon Comprehend assigns a new revision ID, and it deletes the prior version of the policy.

Type: String

Length Constraints: Maximum length of 64.

Pattern: [0-9A-Za-f]+

## **Errors**

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **ResourceNotFoundException**

The specified resource ARN was not found. Check the ARN and try your request again.

HTTP Status Code: 400

## **Examples**

### **Example resource-based policy for a custom model**

The following example shows a resource-based policy for a custom model in Amazon Comprehend. The policy allows an entity in another AWS account to import the model that the policy is attached to. The policy specifies the authorized entity for the `Principal` attribute, and it specifies the ARN of the model version for the `Resource` attribute.

```
{
```

```
"Version": "2017-01-01",
"Statement": [
  {
    "Effect": "Allow",
    "Action": "comprehend:ImportModel",
    "Resource": [
      "arn:aws:comprehend:us-west-2:111122223333:document-classifier/foo/version/*"
    ],
    "Principal": {
      "AWS": "arn:aws:iam::444455556666:root"
    }
  }
]
```

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## StartDocumentClassificationJob

Starts an asynchronous document classification job using a custom classification model. Use the `DescribeDocumentClassificationJob` operation to track the progress of the job.

### Request Syntax

```
{
  "ClientRequestToken": "string",
  "DataAccessRoleArn": "string",
  "DocumentClassifierArn": "string",
  "FlywheelArn": "string",
  "InputDataConfig": {
    "DocumentReaderConfig": {
      "DocumentReadAction": "string",
      "DocumentReadMode": "string",
      "FeatureTypes": [ "string" ]
    },
    "InputFormat": "string",
    "S3Uri": "string"
  },
  "JobName": "string",
  "OutputDataConfig": {
    "KmsKeyId": "string",
    "S3Uri": "string"
  },
  "Tags": [
    {
      "Key": "string",
      "Value": "string"
    }
  ],
  "VolumeKmsKeyId": "string",
  "VpcConfig": {
    "SecurityGroupIds": [ "string" ],
    "Subnets": [ "string" ]
  }
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

### ClientRequestToken

A unique identifier for the request. If you do not set the client request token, Amazon Comprehend generates one.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[a-zA-Z0-9-]+$`

Required: No

### DataAccessRoleArn

The Amazon Resource Name (ARN) of the IAM role that grants Amazon Comprehend read access to your input data.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:aws(-[[:^:]]+)?:iam::[0-9]{12}:role/.+`

Required: Yes

### DocumentClassifierArn

The Amazon Resource Name (ARN) of the document classifier to use to process the job.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[[:^:]]+)?:comprehend:[a-zA-Z0-9-]*:[0-9]{12}:document-classifier/[a-zA-Z0-9](-*[a-zA-Z0-9])*(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*)?`

Required: No

### FlywheelArn

The Amazon Resource Number (ARN) of the flywheel associated with the model to use.



Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:flywheel/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

Required: No

### [InputDataConfig](#)

Specifies the format and location of the input data for the job.

Type: [InputDataConfig](#) object

Required: Yes

### [JobName](#)

The identifier of the job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^([\p{L}\p{Z}\p{N}_ . : / = + \ - % @ ] *)$`

Required: No

### [OutputDataConfig](#)

Specifies where to send the output files.

Type: [OutputDataConfig](#) object

Required: Yes

### [Tags](#)

Tags to associate with the document classification job. A tag is a key-value pair that adds metadata to a resource used by Amazon Comprehend. For example, a tag with "Sales" as the key might be added to a resource to indicate its use by the sales department.

Type: Array of [Tag](#) objects

Required: No

## VolumeKmsKeyId

ID for the AWS Key Management Service (KMS) key that Amazon Comprehend uses to encrypt data on the storage volume attached to the ML compute instance(s) that process the analysis job. The VolumeKmsKeyId can be either of the following formats:

- KMS Key ID: "1234abcd-12ab-34cd-56ef-1234567890ab"
- Amazon Resource Name (ARN) of a KMS Key: "arn:aws:kms:us-west-2:111122223333:key/1234abcd-12ab-34cd-56ef-1234567890ab"

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^\p{ASCII}+$`

Required: No

## VpcConfig

Configuration parameters for an optional private Virtual Private Cloud (VPC) containing the resources you are using for your document classification job. For more information, see [Amazon VPC](#).

Type: [VpcConfig](#) object

Required: No

## Response Syntax

```
{
  "DocumentClassifierArn": "string",
  "JobArn": "string",
  "JobId": "string",
  "JobStatus": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

## DocumentClassifierArn

The ARN of the custom classification model.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:document-classifier/[a-zA-Z0-9](-*[a-zA-Z0-9])*(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*)?`

## JobArn

The Amazon Resource Name (ARN) of the document classification job. It is a unique, fully qualified identifier for the job. It includes the AWS account, AWS Region, and the job ID. The format of the ARN is as follows:

```
arn:<partition>:comprehend:<region>:<account-id>:document-classification-job/<job-id>
```

The following is an example job ARN:

```
arn:aws:comprehend:us-west-2:111122223333:document-classification-job/1234abcd12ab34cd56ef1234567890ab
```

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:[a-zA-Z0-9]{1,64}/[a-zA-Z0-9](-*[a-zA-Z0-9])*((/dataset/[a-zA-Z0-9](-*[a-zA-Z0-9])*)|(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*)?)`

## JobId

The identifier generated for the job. To get the status of the job, use this identifier with the `DescribeDocumentClassificationJob` operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^([\p{L}\p{Z}\p{N}_.:/+\\-%@]*)$`

## **JobStatus**

The status of the job:

- SUBMITTED - The job has been received and queued for processing.
- IN\_PROGRESS - Amazon Comprehend is processing the job.
- COMPLETED - The job was successfully completed and the output is available.
- FAILED - The job did not complete. For details, use the `DescribeDocumentClassificationJob` operation.
- STOP\_REQUESTED - Amazon Comprehend has received a stop request for the job and is processing the request.
- STOPPED - The job was successfully stopped without completing.

Type: String

Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED  
| STOPPED

## **Errors**

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **KmsKeyValidationException**

The KMS customer managed key (CMK) entered cannot be validated. Verify the key and re-enter it.

HTTP Status Code: 400

### **ResourceInUseException**

The specified resource name is already in use. Use a different name and try your request again.

HTTP Status Code: 400

### **ResourceNotFoundException**

The specified resource ARN was not found. Check the ARN and try your request again.

HTTP Status Code: 400

### **ResourceUnavailableException**

The specified resource is not available. Check the resource and try your request again.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

### **TooManyTagsException**

The request contains more tags than can be associated with a resource (50 tags per resource). The maximum number of tags includes both existing tags and those included in your current request.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)



## StartDominantLanguageDetectionJob

Starts an asynchronous dominant language detection job for a collection of documents. Use the [DescribeDominantLanguageDetectionJob](#) operation to track the status of a job.

### Request Syntax

```
{
  "ClientRequestToken": "string",
  "DataAccessRoleArn": "string",
  "InputDataConfig": {
    "DocumentReaderConfig": {
      "DocumentReadAction": "string",
      "DocumentReadMode": "string",
      "FeatureTypes": [ "string" ]
    },
    "InputFormat": "string",
    "S3Uri": "string"
  },
  "JobName": "string",
  "OutputDataConfig": {
    "KmsKeyId": "string",
    "S3Uri": "string"
  },
  "Tags": [
    {
      "Key": "string",
      "Value": "string"
    }
  ],
  "VolumeKmsKeyId": "string",
  "VpcConfig": {
    "SecurityGroupIds": [ "string" ],
    "Subnets": [ "string" ]
  }
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

## ClientRequestToken

A unique identifier for the request. If you do not set the client request token, Amazon Comprehend generates one.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[a-zA-Z0-9-]+$`

Required: No

## DataAccessRoleArn

The Amazon Resource Name (ARN) of the IAM role that grants Amazon Comprehend read access to your input data. For more information, see [Role-based permissions](#).

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:aws(-[^\:]+)?:iam::[0-9]{12}:role/.+`

Required: Yes

## InputDataConfig

Specifies the format and location of the input data for the job.

Type: [InputDataConfig](#) object

Required: Yes

## JobName

An identifier for the job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^([\p{L}\p{Z}\p{N}_\.:/=+\-%@]*)$`

Required: No



## OutputDataConfig

Specifies where to send the output files.

Type: [OutputDataConfig](#) object

Required: Yes

## Tags

Tags to associate with the dominant language detection job. A tag is a key-value pair that adds metadata to a resource used by Amazon Comprehend. For example, a tag with "Sales" as the key might be added to a resource to indicate its use by the sales department.

Type: Array of [Tag](#) objects

Required: No

## VolumeKmsKeyId

ID for the AWS Key Management Service (KMS) key that Amazon Comprehend uses to encrypt data on the storage volume attached to the ML compute instance(s) that process the analysis job. The VolumeKmsKeyId can be either of the following formats:

- KMS Key ID: "1234abcd-12ab-34cd-56ef-1234567890ab"
- Amazon Resource Name (ARN) of a KMS Key: "arn:aws:kms:us-west-2:111122223333:key/1234abcd-12ab-34cd-56ef-1234567890ab"

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^\p{ASCII}+$`

Required: No

## VpcConfig

Configuration parameters for an optional private Virtual Private Cloud (VPC) containing the resources you are using for your dominant language detection job. For more information, see [Amazon VPC](#).

Type: [VpcConfig](#) object

Required: No

## Response Syntax

```
{
  "JobArn": "string",
  "JobId": "string",
  "JobStatus": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### JobArn

The Amazon Resource Name (ARN) of the dominant language detection job. It is a unique, fully qualified identifier for the job. It includes the AWS account, AWS Region, and the job ID. The format of the ARN is as follows:

```
arn:<partition>:comprehend:<region>:<account-id>:dominant-language-
detection-job/<job-id>
```

The following is an example job ARN:

```
arn:aws:comprehend:us-west-2:111122223333:dominant-language-detection-
job/1234abcd12ab34cd56ef1234567890ab
```

Type: String

Length Constraints: Maximum length of 256.

```
Pattern: arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:[a-zA-Z0-9-]
{1,64}/[a-zA-Z0-9](-*[a-zA-Z0-9])*((/dataset/[a-zA-Z0-9](-*[a-zA-
Z0-9])*)|(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*)?)?
```

### JobId

The identifier generated for the job. To get the status of a job, use this identifier with the [DescribeDominantLanguageDetectionJob](#) operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^([\p{L}\p{Z}\p{N}_.:/=+\-%@]*)$`

## JobStatus

The status of the job.

- SUBMITTED - The job has been received and is queued for processing.
- IN\_PROGRESS - Amazon Comprehend is processing the job.
- COMPLETED - The job was successfully completed and the output is available.
- FAILED - The job did not complete. To get details, use the [DescribeDominantLanguageDetectionJob](#) operation.

Type: String

Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED  
| STOPPED

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **KmsKeyValidationException**

The KMS customer managed key (CMK) entered cannot be validated. Verify the key and re-enter it.

HTTP Status Code: 400

### **ResourceInUseException**

The specified resource name is already in use. Use a different name and try your request again.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

### **TooManyTagsException**

The request contains more tags than can be associated with a resource (50 tags per resource). The maximum number of tags includes both existing tags and those included in your current request.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## StartEntitiesDetectionJob

Starts an asynchronous entity detection job for a collection of documents. Use the [DescribeEntitiesDetectionJob](#) operation to track the status of a job.

This API can be used for either standard entity detection or custom entity recognition. In order to be used for custom entity recognition, the optional `EntityRecognizerArn` must be used in order to provide access to the recognizer being used to detect the custom entity.

### Request Syntax

```
{
  "ClientRequestToken": "string",
  "DataAccessRoleArn": "string",
  "EntityRecognizerArn": "string",
  "FlywheelArn": "string",
  "InputDataConfig": {
    "DocumentReaderConfig": {
      "DocumentReadAction": "string",
      "DocumentReadMode": "string",
      "FeatureTypes": [ "string" ]
    },
    "InputFormat": "string",
    "S3Uri": "string"
  },
  "JobName": "string",
  "LanguageCode": "string",
  "OutputDataConfig": {
    "KmsKeyId": "string",
    "S3Uri": "string"
  },
  "Tags": [
    {
      "Key": "string",
      "Value": "string"
    }
  ],
  "VolumeKmsKeyId": "string",
  "VpcConfig": {
    "SecurityGroupIds": [ "string" ],
    "Subnets": [ "string" ]
  }
}
```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

### ClientRequestToken

A unique identifier for the request. If you don't set the client request token, Amazon Comprehend generates one.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[a-zA-Z0-9-]+$`

Required: No

### DataAccessRoleArn

The Amazon Resource Name (ARN) of the IAM role that grants Amazon Comprehend read access to your input data. For more information, see [Role-based permissions](#).

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:aws(-[^\:]+)?:iam::[0-9]{12}:role/.+`

Required: Yes

### EntityRecognizerArn

The Amazon Resource Name (ARN) that identifies the specific entity recognizer to be used by the `StartEntitiesDetectionJob`. This ARN is optional and is only used for a custom entity recognition job.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9-]*:[0-9]{12}:entity-recognizer/[a-zA-Z0-9](-*[a-zA-Z0-9])*(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*)?`

Required: No

### FlywheelArn

The Amazon Resource Number (ARN) of the flywheel associated with the model to use.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:flywheel/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

Required: No

### InputDataConfig

Specifies the format and location of the input data for the job.

Type: [InputDataConfig](#) object

Required: Yes

### JobName

The identifier of the job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^([\p{L}\p{Z}\p{N}_ . : / = + \ - % @ ]*)$`

Required: No

### LanguageCode

The language of the input documents. All documents must be in the same language. You can specify any of the languages supported by Amazon Comprehend. If custom entities recognition is used, this parameter is ignored and the language used for training the model is used instead.

Type: String

Valid Values: `en | es | fr | de | it | pt | ar | hi | ja | ko | zh | zh-TW`

Required: Yes

## OutputDataConfig

Specifies where to send the output files.

Type: [OutputDataConfig](#) object

Required: Yes

## Tags

Tags to associate with the entities detection job. A tag is a key-value pair that adds metadata to a resource used by Amazon Comprehend. For example, a tag with "Sales" as the key might be added to a resource to indicate its use by the sales department.

Type: Array of [Tag](#) objects

Required: No

## VolumeKmsKeyId

ID for the AWS Key Management Service (KMS) key that Amazon Comprehend uses to encrypt data on the storage volume attached to the ML compute instance(s) that process the analysis job. The VolumeKmsKeyId can be either of the following formats:

- KMS Key ID: "1234abcd-12ab-34cd-56ef-1234567890ab"
- Amazon Resource Name (ARN) of a KMS Key: "arn:aws:kms:us-west-2:111122223333:key/1234abcd-12ab-34cd-56ef-1234567890ab"

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^\p{ASCII}+$`

Required: No

## VpcConfig

Configuration parameters for an optional private Virtual Private Cloud (VPC) containing the resources you are using for your entity detection job. For more information, see [Amazon VPC](#).

Type: [VpcConfig](#) object

Required: No



## Response Syntax

```
{
  "EntityRecognizerArn": "string",
  "JobArn": "string",
  "JobId": "string",
  "JobStatus": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### EntityRecognizerArn

The ARN of the custom entity recognition model.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:entity-recognizer/[a-zA-Z0-9](-*[a-zA-Z0-9])*(/version/[a-zA-Z0-9](-*[a-zA-Z0-9]))*?)`

### JobArn

The Amazon Resource Name (ARN) of the entities detection job. It is a unique, fully qualified identifier for the job. It includes the AWS account, AWS Region, and the job ID. The format of the ARN is as follows:

```
arn:<partition>:comprehend:<region>:<account-id>:entities-detection-job/<job-id>
```

The following is an example job ARN:

```
arn:aws:comprehend:us-west-2:111122223333:entities-detection-job/1234abcd12ab34cd56ef1234567890ab
```

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9-]*:[0-9]{12}:[a-zA-Z0-9-]{1,64}/[a-zA-Z0-9](-*[a-zA-Z0-9])*((/dataset/[a-zA-Z0-9](-*[a-zA-Z0-9])*)|(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*))?`

### JobId

The identifier generated for the job. To get the status of job, use this identifier with the [DescribeEntitiesDetectionJob](#) operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^([\p{L}\p{Z}\p{N}_.:/+\\-\\%@]*)$`

### JobStatus

The status of the job.

- SUBMITTED - The job has been received and is queued for processing.
- IN\_PROGRESS - Amazon Comprehend is processing the job.
- COMPLETED - The job was successfully completed and the output is available.
- FAILED - The job did not complete. To get details, use the [DescribeEntitiesDetectionJob](#) operation.
- STOP\_REQUESTED - Amazon Comprehend has received a stop request for the job and is processing the request.
- STOPPED - The job was successfully stopped without completing.

Type: String

Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED | STOPPED

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### InternalServerErrorException

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **KmsKeyValidationException**

The KMS customer managed key (CMK) entered cannot be validated. Verify the key and re-enter it.

HTTP Status Code: 400

### **ResourceInUseException**

The specified resource name is already in use. Use a different name and try your request again.

HTTP Status Code: 400

### **ResourceNotFoundException**

The specified resource ARN was not found. Check the ARN and try your request again.

HTTP Status Code: 400

### **ResourceUnavailableException**

The specified resource is not available. Check the resource and try your request again.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

### **TooManyTagsException**

The request contains more tags than can be associated with a resource (50 tags per resource). The maximum number of tags includes both existing tags and those included in your current request.

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# StartEventsDetectionJob

Starts an asynchronous event detection job for a collection of documents.

## Request Syntax

```
{
  "ClientRequestToken": "string",
  "DataAccessRoleArn": "string",
  "InputDataConfig": {
    "DocumentReaderConfig": {
      "DocumentReadAction": "string",
      "DocumentReadMode": "string",
      "FeatureTypes": [ "string" ]
    },
    "InputFormat": "string",
    "S3Uri": "string"
  },
  "JobName": "string",
  "LanguageCode": "string",
  "OutputDataConfig": {
    "KmsKeyId": "string",
    "S3Uri": "string"
  },
  "Tags": [
    {
      "Key": "string",
      "Value": "string"
    }
  ],
  "TargetEventTypes": [ "string" ]
}
```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

### ClientRequestToken

An unique identifier for the request. If you don't set the client request token, Amazon Comprehend generates one.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[a-zA-Z0-9-]+$`

Required: No

### DataAccessRoleArn

The Amazon Resource Name (ARN) of the IAM role that grants Amazon Comprehend read access to your input data.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:aws(-[:]+)?:iam::[0-9]{12}:role/.+`

Required: Yes

### InputDataConfig

Specifies the format and location of the input data for the job.

Type: [InputDataConfig](#) object

Required: Yes

### JobName

The identifier of the events detection job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^([\p{L}\p{Z}\p{N}_ . : / = + \ - % @ ] *)$`

Required: No

### LanguageCode

The language code of the input documents.

Type: String

Valid Values: en

Required: Yes

### OutputDataConfig

Specifies where to send the output files.

Type: [OutputDataConfig](#) object

Required: Yes

### Tags

Tags to associate with the events detection job. A tag is a key-value pair that adds metadata to a resource used by Amazon Comprehend. For example, a tag with "Sales" as the key might be added to a resource to indicate its use by the sales department.

Type: Array of [Tag](#) objects

Required: No

### TargetEventTypes

The types of events to detect in the input documents.

Type: Array of strings

Array Members: Minimum number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 40.

Pattern: [A-Z\_]\*

Required: Yes

## Response Syntax

```
{
  "JobArn": "string",
  "JobId": "string",
  "JobStatus": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### JobArn

The Amazon Resource Name (ARN) of the events detection job. It is a unique, fully qualified identifier for the job. It includes the AWS account, AWS Region, and the job ID. The format of the ARN is as follows:

```
arn:<partition>:comprehend:<region>:<account-id>:events-detection-job/
<job-id>
```

The following is an example job ARN:

```
arn:aws:comprehend:us-west-2:111122223333:events-detection-
job/1234abcd12ab34cd56ef1234567890ab
```

Type: String

Length Constraints: Maximum length of 256.

```
Pattern: arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9-]*:[0-9]{12}: [a-zA-Z0-9-]
{1,64}/[a-zA-Z0-9](-*[a-zA-Z0-9])*((/dataset/[a-zA-Z0-9](-*[a-zA-
Z0-9])*)|(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*))?)
```

### JobId

An unique identifier for the request. If you don't set the client request token, Amazon Comprehend generates one.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

```
Pattern: ^([\p{L}\p{Z}\p{N}_ . :/=+\-%@]*)$
```

### JobStatus

The status of the events detection job.

Type: String



Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED  
| STOPPED

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### InternalServerError

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### InvalidRequestException

The request is invalid.

HTTP Status Code: 400

### KmsKeyValidationException

The KMS customer managed key (CMK) entered cannot be validated. Verify the key and re-enter it.

HTTP Status Code: 400

### ResourceInUseException

The specified resource name is already in use. Use a different name and try your request again.

HTTP Status Code: 400

### TooManyRequestsException

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

### TooManyTagsException

The request contains more tags than can be associated with a resource (50 tags per resource). The maximum number of tags includes both existing tags and those included in your current request.

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## StartFlywheelIteration

Start the flywheel iteration. This operation uses any new datasets to train a new model version. For more information about flywheels, see [Flywheel overview](#) in the *Amazon Comprehend Developer Guide*.

### Request Syntax

```
{
  "ClientRequestToken": "string",
  "FlywheelArn": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### ClientRequestToken

A unique identifier for the request. If you don't set the client request token, Amazon Comprehend generates one.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[a-zA-Z0-9-]+$`

Required: No

#### FlywheelArn

The ARN of the flywheel.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[:]+)?:comprehend:[a-zA-Z0-9-]*:[0-9]{12}:flywheel/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

Required: Yes

## Response Syntax

```
{
  "FlywheelArn": "string",
  "FlywheelIterationId": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### FlywheelArn

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9-]*:[0-9]{12}:flywheel/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

### FlywheelIterationId

Type: String

Length Constraints: Maximum length of 63.

Pattern: `[0-9]{8}T[0-9]{6}Z`

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### InternalServerErrorException

An internal server error occurred. Retry your request.

HTTP Status Code: 500

## **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

## **ResourceInUseException**

The specified resource name is already in use. Use a different name and try your request again.

HTTP Status Code: 400

## **ResourceNotFoundException**

The specified resource ARN was not found. Check the ARN and try your request again.

HTTP Status Code: 400

## **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## StartKeyPhrasesDetectionJob

Starts an asynchronous key phrase detection job for a collection of documents. Use the [DescribeKeyPhrasesDetectionJob](#) operation to track the status of a job.

### Request Syntax

```
{
  "ClientRequestToken": "string",
  "DataAccessRoleArn": "string",
  "InputDataConfig": {
    "DocumentReaderConfig": {
      "DocumentReadAction": "string",
      "DocumentReadMode": "string",
      "FeatureTypes": [ "string" ]
    },
    "InputFormat": "string",
    "S3Uri": "string"
  },
  "JobName": "string",
  "LanguageCode": "string",
  "OutputDataConfig": {
    "KmsKeyId": "string",
    "S3Uri": "string"
  },
  "Tags": [
    {
      "Key": "string",
      "Value": "string"
    }
  ],
  "VolumeKmsKeyId": "string",
  "VpcConfig": {
    "SecurityGroupIds": [ "string" ],
    "Subnets": [ "string" ]
  }
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

## ClientRequestToken

A unique identifier for the request. If you don't set the client request token, Amazon Comprehend generates one.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[a-zA-Z0-9-]+$`

Required: No

## DataAccessRoleArn

The Amazon Resource Name (ARN) of the IAM role that grants Amazon Comprehend read access to your input data. For more information, see [Role-based permissions](#).

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:aws(-[^\:]+)?:iam::[0-9]{12}:role/.+`

Required: Yes

## InputDataConfig

Specifies the format and location of the input data for the job.

Type: [InputDataConfig](#) object

Required: Yes

## JobName

The identifier of the job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^([\p{L}\p{Z}\p{N}_ . : / = + \ - % @] *)$`

Required: No

## LanguageCode

The language of the input documents. You can specify any of the primary languages supported by Amazon Comprehend. All documents must be in the same language.

Type: String

Valid Values: en | es | fr | de | it | pt | ar | hi | ja | ko | zh | zh-TW

Required: Yes

## OutputDataConfig

Specifies where to send the output files.

Type: [OutputDataConfig](#) object

Required: Yes

## Tags

Tags to associate with the key phrases detection job. A tag is a key-value pair that adds metadata to a resource used by Amazon Comprehend. For example, a tag with "Sales" as the key might be added to a resource to indicate its use by the sales department.

Type: Array of [Tag](#) objects

Required: No

## VolumeKmsKeyId

ID for the AWS Key Management Service (KMS) key that Amazon Comprehend uses to encrypt data on the storage volume attached to the ML compute instance(s) that process the analysis job. The VolumeKmsKeyId can be either of the following formats:

- KMS Key ID: "1234abcd-12ab-34cd-56ef-1234567890ab"
- Amazon Resource Name (ARN) of a KMS Key: "arn:aws:kms:us-west-2:111122223333:key/1234abcd-12ab-34cd-56ef-1234567890ab"

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^\p{ASCII}+$`

Required: No



## VpcConfig

Configuration parameters for an optional private Virtual Private Cloud (VPC) containing the resources you are using for your key phrases detection job. For more information, see [Amazon VPC](#).

Type: [VpcConfig](#) object

Required: No

## Response Syntax

```
{
  "JobArn": "string",
  "JobId": "string",
  "JobStatus": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### JobArn

The Amazon Resource Name (ARN) of the key phrase detection job. It is a unique, fully qualified identifier for the job. It includes the AWS account, AWS Region, and the job ID. The format of the ARN is as follows:

```
arn:<partition>:comprehend:<region>:<account-id>:key-phrases-detection-
job/<job-id>
```

The following is an example job ARN:

```
arn:aws:comprehend:us-west-2:111122223333:key-phrases-detection-
job/1234abcd12ab34cd56ef1234567890ab
```

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:[a-zA-Z0-9-]{1,64}/[a-zA-Z0-9](-*[a-zA-Z0-9])*((/dataset/[a-zA-Z0-9](-*[a-zA-Z0-9])*)|(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*))?`

## JobId

The identifier generated for the job. To get the status of a job, use this identifier with the [DescribeKeyPhrasesDetectionJob](#) operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^([\p{L}\p{Z}\p{N}_ . : / = + \ - % @ ] *)$`

## JobStatus

The status of the job.

- SUBMITTED - The job has been received and is queued for processing.
- IN\_PROGRESS - Amazon Comprehend is processing the job.
- COMPLETED - The job was successfully completed and the output is available.
- FAILED - The job did not complete. To get details, use the [DescribeKeyPhrasesDetectionJob](#) operation.

Type: String

Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED | STOPPED

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### InternalServerError

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### InvalidRequestException

The request is invalid.

HTTP Status Code: 400

### **KmsKeyValidationException**

The KMS customer managed key (CMK) entered cannot be validated. Verify the key and re-enter it.

HTTP Status Code: 400

### **ResourceInUseException**

The specified resource name is already in use. Use a different name and try your request again.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

### **TooManyTagsException**

The request contains more tags than can be associated with a resource (50 tags per resource). The maximum number of tags includes both existing tags and those included in your current request.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)

- [AWS SDK for Ruby V3](#)

## StartPiiEntitiesDetectionJob

Starts an asynchronous PII entity detection job for a collection of documents.

### Request Syntax

```
{
  "ClientRequestToken": "string",
  "DataAccessRoleArn": "string",
  "InputDataConfig": {
    "DocumentReaderConfig": {
      "DocumentReadAction": "string",
      "DocumentReadMode": "string",
      "FeatureTypes": [ "string" ]
    },
    "InputFormat": "string",
    "S3Uri": "string"
  },
  "JobName": "string",
  "LanguageCode": "string",
  "Mode": "string",
  "OutputDataConfig": {
    "KmsKeyId": "string",
    "S3Uri": "string"
  },
  "RedactionConfig": {
    "MaskCharacter": "string",
    "MaskMode": "string",
    "PiiEntityTypes": [ "string" ]
  },
  "Tags": [
    {
      "Key": "string",
      "Value": "string"
    }
  ]
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

## ClientRequestToken

A unique identifier for the request. If you don't set the client request token, Amazon Comprehend generates one.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[a-zA-Z0-9-]+$`

Required: No

## DataAccessRoleArn

The Amazon Resource Name (ARN) of the IAM role that grants Amazon Comprehend read access to your input data.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:aws(-[^\:]+)?:iam::[0-9]{12}:role/.+`

Required: Yes

## InputDataConfig

The input properties for a PII entities detection job.

Type: [InputDataConfig](#) object

Required: Yes

## JobName

The identifier of the job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^([\p{L}\p{Z}\p{N}_ . : / = + \ - % @] *)$`

Required: No

### LanguageCode

The language of the input documents. Enter the language code for English (en) or Spanish (es).

Type: String

Valid Values: en | es

Required: Yes

### Mode

Specifies whether the output provides the locations (offsets) of PII entities or a file in which PII entities are redacted.

Type: String

Valid Values: ONLY\_REDACTION | ONLY\_OFFSETS

Required: Yes

### OutputDataConfig

Provides configuration parameters for the output of PII entity detection jobs.

Type: [OutputDataConfig](#) object

Required: Yes

### RedactionConfig

Provides configuration parameters for PII entity redaction.

This parameter is required if you set the Mode parameter to ONLY\_REDACTION. In that case, you must provide a RedactionConfig definition that includes the PiiEntityType parameter.

Type: [RedactionConfig](#) object

Required: No

### Tags

Tags to associate with the PII entities detection job. A tag is a key-value pair that adds metadata to a resource used by Amazon Comprehend. For example, a tag with "Sales" as the key might be added to a resource to indicate its use by the sales department.

Type: Array of [Tag](#) objects

Required: No

## Response Syntax

```
{
  "JobArn": "string",
  "JobId": "string",
  "JobStatus": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### JobArn

The Amazon Resource Name (ARN) of the PII entity detection job. It is a unique, fully qualified identifier for the job. It includes the AWS account, AWS Region, and the job ID. The format of the ARN is as follows:

```
arn:<partition>:comprehend:<region>:<account-id>:pii-entities-detection-
job/<job-id>
```

The following is an example job ARN:

```
arn:aws:comprehend:us-west-2:111122223333:pii-entities-detection-
job/1234abcd12ab34cd56ef1234567890ab
```

Type: String

Length Constraints: Maximum length of 256.

```
Pattern: arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:[a-zA-Z0-9-]
{1,64}/[a-zA-Z0-9](-*[a-zA-Z0-9])*((/dataset/[a-zA-Z0-9](-*[a-zA-
Z0-9])*)|(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*))?)
```

### JobId

The identifier generated for the job.



Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^([\p{L}\p{Z}\p{N}_.:/+\\-%@]*)$`

### **JobStatus**

The status of the job.

Type: String

Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED  
| STOPPED

## **Errors**

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **KmsKeyValidationException**

The KMS customer managed key (CMK) entered cannot be validated. Verify the key and re-enter it.

HTTP Status Code: 400

### **ResourceInUseException**

The specified resource name is already in use. Use a different name and try your request again.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

### **TooManyTagsException**

The request contains more tags than can be associated with a resource (50 tags per resource). The maximum number of tags includes both existing tags and those included in your current request.

HTTP Status Code: 400

### **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## StartSentimentDetectionJob

Starts an asynchronous sentiment detection job for a collection of documents. Use the [DescribeSentimentDetectionJob](#) operation to track the status of a job.

### Request Syntax

```
{
  "ClientRequestToken": "string",
  "DataAccessRoleArn": "string",
  "InputDataConfig": {
    "DocumentReaderConfig": {
      "DocumentReadAction": "string",
      "DocumentReadMode": "string",
      "FeatureTypes": [ "string" ]
    },
    "InputFormat": "string",
    "S3Uri": "string"
  },
  "JobName": "string",
  "LanguageCode": "string",
  "OutputDataConfig": {
    "KmsKeyId": "string",
    "S3Uri": "string"
  },
  "Tags": [
    {
      "Key": "string",
      "Value": "string"
    }
  ],
  "VolumeKmsKeyId": "string",
  "VpcConfig": {
    "SecurityGroupIds": [ "string" ],
    "Subnets": [ "string" ]
  }
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

### ClientRequestToken

A unique identifier for the request. If you don't set the client request token, Amazon Comprehend generates one.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[a-zA-Z0-9-]+$`

Required: No

### DataAccessRoleArn

The Amazon Resource Name (ARN) of the IAM role that grants Amazon Comprehend read access to your input data. For more information, see [Role-based permissions](#).

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:aws(-[^\:]+)?:iam::[0-9]{12}:role/.+`

Required: Yes

### InputDataConfig

Specifies the format and location of the input data for the job.

Type: [InputDataConfig](#) object

Required: Yes

### JobName

The identifier of the job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^([\p{L}\p{Z}\p{N}_ . : / = + \ - % @] *)$`

Required: No

## LanguageCode

The language of the input documents. You can specify any of the primary languages supported by Amazon Comprehend. All documents must be in the same language.

Type: String

Valid Values: en | es | fr | de | it | pt | ar | hi | ja | ko | zh | zh-TW

Required: Yes

## OutputDataConfig

Specifies where to send the output files.

Type: [OutputDataConfig](#) object

Required: Yes

## Tags

Tags to associate with the sentiment detection job. A tag is a key-value pair that adds metadata to a resource used by Amazon Comprehend. For example, a tag with "Sales" as the key might be added to a resource to indicate its use by the sales department.

Type: Array of [Tag](#) objects

Required: No

## VolumeKmsKeyId

ID for the AWS Key Management Service (KMS) key that Amazon Comprehend uses to encrypt data on the storage volume attached to the ML compute instance(s) that process the analysis job. The VolumeKmsKeyId can be either of the following formats:

- KMS Key ID: "1234abcd-12ab-34cd-56ef-1234567890ab"
- Amazon Resource Name (ARN) of a KMS Key: "arn:aws:kms:us-west-2:111122223333:key/1234abcd-12ab-34cd-56ef-1234567890ab"

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^\p{ASCII}+$`

Required: No

## VpcConfig

Configuration parameters for an optional private Virtual Private Cloud (VPC) containing the resources you are using for your sentiment detection job. For more information, see [Amazon VPC](#).

Type: [VpcConfig](#) object

Required: No

## Response Syntax

```
{
  "JobArn": "string",
  "JobId": "string",
  "JobStatus": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### JobArn

The Amazon Resource Name (ARN) of the sentiment detection job. It is a unique, fully qualified identifier for the job. It includes the AWS account, AWS Region, and the job ID. The format of the ARN is as follows:

```
arn:<partition>:comprehend:<region>:<account-id>:sentiment-detection-
job/<job-id>
```

The following is an example job ARN:

```
arn:aws:comprehend:us-west-2:111122223333:sentiment-detection-
job/1234abcd12ab34cd56ef1234567890ab
```

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:[a-zA-Z0-9-]{1,64}/[a-zA-Z0-9](-*[a-zA-Z0-9])*((/dataset/[a-zA-Z0-9](-*[a-zA-Z0-9])*)|(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*))?`

## JobId

The identifier generated for the job. To get the status of a job, use this identifier with the [DescribeSentimentDetectionJob](#) operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^([\p{L}\p{Z}\p{N}_.:/=+\-%@]*)$`

## JobStatus

The status of the job.

- SUBMITTED - The job has been received and is queued for processing.
- IN\_PROGRESS - Amazon Comprehend is processing the job.
- COMPLETED - The job was successfully completed and the output is available.
- FAILED - The job did not complete. To get details, use the [DescribeSentimentDetectionJob](#) operation.

Type: String

Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED | STOPPED

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### InternalServerError

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### InvalidRequestException

The request is invalid.

HTTP Status Code: 400

### **KmsKeyValidationException**

The KMS customer managed key (CMK) entered cannot be validated. Verify the key and re-enter it.

HTTP Status Code: 400

### **ResourceInUseException**

The specified resource name is already in use. Use a different name and try your request again.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

### **TooManyTagsException**

The request contains more tags than can be associated with a resource (50 tags per resource). The maximum number of tags includes both existing tags and those included in your current request.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)



- [AWS SDK for Ruby V3](#)

## StartTargetedSentimentDetectionJob

Starts an asynchronous targeted sentiment detection job for a collection of documents. Use the `DescribeTargetedSentimentDetectionJob` operation to track the status of a job.

### Request Syntax

```
{
  "ClientRequestToken": "string",
  "DataAccessRoleArn": "string",
  "InputDataConfig": {
    "DocumentReaderConfig": {
      "DocumentReadAction": "string",
      "DocumentReadMode": "string",
      "FeatureTypes": [ "string" ]
    },
    "InputFormat": "string",
    "S3Uri": "string"
  },
  "JobName": "string",
  "LanguageCode": "string",
  "OutputDataConfig": {
    "KmsKeyId": "string",
    "S3Uri": "string"
  },
  "Tags": [
    {
      "Key": "string",
      "Value": "string"
    }
  ],
  "VolumeKmsKeyId": "string",
  "VpcConfig": {
    "SecurityGroupIds": [ "string" ],
    "Subnets": [ "string" ]
  }
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

## ClientRequestToken

A unique identifier for the request. If you don't set the client request token, Amazon Comprehend generates one.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[a-zA-Z0-9-]+$`

Required: No

## DataAccessRoleArn

The Amazon Resource Name (ARN) of the IAM role that grants Amazon Comprehend read access to your input data. For more information, see [Role-based permissions](#).

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:aws(-[^\:]+)?:iam::[0-9]{12}:role/.+`

Required: Yes

## InputDataConfig

The input properties for an inference job. The document reader config field applies only to non-text inputs for custom analysis.

Type: [InputDataConfig](#) object

Required: Yes

## JobName

The identifier of the job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^([\p{L}\p{Z}\p{N}_ . : / = + \ - % @ ]*)$`

Required: No

### LanguageCode

The language of the input documents. Currently, English is the only supported language.

Type: String

Valid Values: en

Required: Yes

### OutputDataConfig

Specifies where to send the output files.

Type: [OutputDataConfig](#) object

Required: Yes

### Tags

Tags to associate with the targeted sentiment detection job. A tag is a key-value pair that adds metadata to a resource used by Amazon Comprehend. For example, a tag with "Sales" as the key might be added to a resource to indicate its use by the sales department.

Type: Array of [Tag](#) objects

Required: No

### VolumeKmsKeyId

ID for the AWS KMS key that Amazon Comprehend uses to encrypt data on the storage volume attached to the ML compute instance(s) that process the analysis job. The VolumeKmsKeyId can be either of the following formats:

- KMS Key ID: "1234abcd-12ab-34cd-56ef-1234567890ab"
- Amazon Resource Name (ARN) of a KMS Key: "arn:aws:kms:us-west-2:111122223333:key/1234abcd-12ab-34cd-56ef-1234567890ab"

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^\p{ASCII}+$`

Required: No

## VpcConfig

Configuration parameters for an optional private Virtual Private Cloud (VPC) containing the resources you are using for the job. For more information, see [Amazon VPC](#).

Type: [VpcConfig](#) object

Required: No

## Response Syntax

```
{
  "JobArn": "string",
  "JobId": "string",
  "JobStatus": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### JobArn

The Amazon Resource Name (ARN) of the targeted sentiment detection job. It is a unique, fully qualified identifier for the job. It includes the AWS account, AWS Region, and the job ID. The format of the ARN is as follows:

```
arn:<partition>:comprehend:<region>:<account-id>:targeted-sentiment-  
detection-job/<job-id>
```

The following is an example job ARN:

```
arn:aws:comprehend:us-west-2:111122223333:targeted-sentiment-detection-  
job/1234abcd12ab34cd56ef1234567890ab
```

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:[a-zA-Z0-9-]{1,64}/[a-zA-Z0-9](-*[a-zA-Z0-9])*((/dataset/[a-zA-Z0-9](-*[a-zA-Z0-9])*)|(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*))?`

## JobId

The identifier generated for the job. To get the status of a job, use this identifier with the `DescribeTargetedSentimentDetectionJob` operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^([\p{L}\p{Z}\p{N}_ . : / = + \ - % @ ]*)$`

## JobStatus

The status of the job.

- `SUBMITTED` - The job has been received and is queued for processing.
- `IN_PROGRESS` - Amazon Comprehend is processing the job.
- `COMPLETED` - The job was successfully completed and the output is available.
- `FAILED` - The job did not complete. To get details, use the `DescribeTargetedSentimentDetectionJob` operation.

Type: String

Valid Values: `SUBMITTED` | `IN_PROGRESS` | `COMPLETED` | `FAILED` | `STOP_REQUESTED` | `STOPPED`

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **KmsKeyValidationException**

The KMS customer managed key (CMK) entered cannot be validated. Verify the key and re-enter it.

HTTP Status Code: 400

### **ResourceInUseException**

The specified resource name is already in use. Use a different name and try your request again.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

### **TooManyTagsException**

The request contains more tags than can be associated with a resource (50 tags per resource). The maximum number of tags includes both existing tags and those included in your current request.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)

- [AWS SDK for Ruby V3](#)



## StartTopicsDetectionJob

Starts an asynchronous topic detection job. Use the DescribeTopicDetectionJob operation to track the status of a job.

### Request Syntax

```
{
  "ClientRequestToken": "string",
  "DataAccessRoleArn": "string",
  "InputDataConfig": {
    "DocumentReaderConfig": {
      "DocumentReadAction": "string",
      "DocumentReadMode": "string",
      "FeatureTypes": [ "string" ]
    },
    "InputFormat": "string",
    "S3Uri": "string"
  },
  "JobName": "string",
  "NumberOfTopics": number,
  "OutputDataConfig": {
    "KmsKeyId": "string",
    "S3Uri": "string"
  },
  "Tags": [
    {
      "Key": "string",
      "Value": "string"
    }
  ],
  "VolumeKmsKeyId": "string",
  "VpcConfig": {
    "SecurityGroupIds": [ "string" ],
    "Subnets": [ "string" ]
  }
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

### ClientRequestToken

A unique identifier for the request. If you do not set the client request token, Amazon Comprehend generates one.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[a-zA-Z0-9-]+$`

Required: No

### DataAccessRoleArn

The Amazon Resource Name (ARN) of the IAM role that grants Amazon Comprehend read access to your input data. For more information, see [Role-based permissions](#).

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:aws(-[^\:]+)?:iam::[0-9]{12}:role/.+`

Required: Yes

### InputDataConfig

Specifies the format and location of the input data for the job.

Type: [InputDataConfig](#) object

Required: Yes

### JobName

The identifier of the job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^([\p{L}\p{Z}\p{N}_\.:/=+\-%@]*)$`

Required: No

## NumberOfTopics

The number of topics to detect.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

## OutputDataConfig

Specifies where to send the output files. The output is a compressed archive with two files, `topic-terms.csv` that lists the terms associated with each topic, and `doc-topics.csv` that lists the documents associated with each topic

Type: [OutputDataConfig](#) object

Required: Yes

## Tags

Tags to associate with the topics detection job. A tag is a key-value pair that adds metadata to a resource used by Amazon Comprehend. For example, a tag with "Sales" as the key might be added to a resource to indicate its use by the sales department.

Type: Array of [Tag](#) objects

Required: No

## VolumeKmsKeyId

ID for the AWS Key Management Service (KMS) key that Amazon Comprehend uses to encrypt data on the storage volume attached to the ML compute instance(s) that process the analysis job. The VolumeKmsKeyId can be either of the following formats:

- KMS Key ID: "1234abcd-12ab-34cd-56ef-1234567890ab"
- Amazon Resource Name (ARN) of a KMS Key: "arn:aws:kms:us-west-2:111122223333:key/1234abcd-12ab-34cd-56ef-1234567890ab"

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^\p{ASCII}+$`

Required: No

### VpcConfig

Configuration parameters for an optional private Virtual Private Cloud (VPC) containing the resources you are using for your topic detection job. For more information, see [Amazon VPC](#).

Type: [VpcConfig](#) object

Required: No

## Response Syntax

```
{
  "JobArn": "string",
  "JobId": "string",
  "JobStatus": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### JobArn

The Amazon Resource Name (ARN) of the topics detection job. It is a unique, fully qualified identifier for the job. It includes the AWS account, AWS Region, and the job ID. The format of the ARN is as follows:

```
arn:<partition>:comprehend:<region>:<account-id>:topics-detection-job/
<job-id>
```

The following is an example job ARN:

```
arn:aws:comprehend:us-west-2:111122223333:document-classification-
job/1234abcd12ab34cd56ef1234567890ab
```

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:[a-zA-Z0-9-]{1,64}/[a-zA-Z0-9](-*[a-zA-Z0-9])*((/dataset/[a-zA-Z0-9](-*[a-zA-Z0-9])*)|(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*))?`

## JobId

The identifier generated for the job. To get the status of the job, use this identifier with the `DescribeTopicDetectionJob` operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^([\p{L}\p{Z}\p{N}_.:/=+\-%@]*)$`

## JobStatus

The status of the job:

- `SUBMITTED` - The job has been received and is queued for processing.
- `IN_PROGRESS` - Amazon Comprehend is processing the job.
- `COMPLETED` - The job was successfully completed and the output is available.
- `FAILED` - The job did not complete. To get details, use the `DescribeTopicDetectionJob` operation.

Type: String

Valid Values: `SUBMITTED` | `IN_PROGRESS` | `COMPLETED` | `FAILED` | `STOP_REQUESTED` | `STOPPED`

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **KmsKeyValidationException**

The KMS customer managed key (CMK) entered cannot be validated. Verify the key and re-enter it.

HTTP Status Code: 400

### **ResourceInUseException**

The specified resource name is already in use. Use a different name and try your request again.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

### **TooManyTagsException**

The request contains more tags than can be associated with a resource (50 tags per resource). The maximum number of tags includes both existing tags and those included in your current request.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)

- [AWS SDK for Ruby V3](#)

## StopDominantLanguageDetectionJob

Stops a dominant language detection job in progress.

If the job state is `IN_PROGRESS` the job is marked for termination and put into the `STOP_REQUESTED` state. If the job completes before it can be stopped, it is put into the `COMPLETED` state; otherwise the job is stopped and put into the `STOPPED` state.

If the job is in the `COMPLETED` or `FAILED` state when you call the `StopDominantLanguageDetectionJob` operation, the operation returns a 400 Internal Request Exception.

When a job is stopped, any documents already processed are written to the output location.

### Request Syntax

```
{
  "JobId": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### JobId

The identifier of the dominant language detection job to stop.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^([\p{L}\p{Z}\p{N}_ . :/=+\-%@]*)$`

Required: Yes

### Response Syntax

```
{
```



```
"JobId": "string",  
"JobStatus": "string"  
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### JobId

The identifier of the dominant language detection job to stop.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^([\p{L}\p{Z}\p{N}_ . : / = + \ - % @ ] * )$`

### JobStatus

Either STOP\_REQUESTED if the job is currently running, or STOPPED if the job was previously stopped with the StopDominantLanguageDetectionJob operation.

Type: String

Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED  
| STOPPED

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **JobNotFoundException**

The specified job was not found. Check the job ID and try again.

HTTP Status Code: 400

### **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## StopEntitiesDetectionJob

Stops an entities detection job in progress.

If the job state is IN\_PROGRESS the job is marked for termination and put into the STOP\_REQUESTED state. If the job completes before it can be stopped, it is put into the COMPLETED state; otherwise the job is stopped and put into the STOPPED state.

If the job is in the COMPLETED or FAILED state when you call the StopDominantLanguageDetectionJob operation, the operation returns a 400 Internal Request Exception.

When a job is stopped, any documents already processed are written to the output location.

### Request Syntax

```
{  
  "JobId": "string"  
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### JobId

The identifier of the entities detection job to stop.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern:  $^([\p{L}\p{Z}\p{N}_\cdot :/=+\-%@]^*)\$$

Required: Yes

### Response Syntax

```
{
```

```
"JobId": "string",  
"JobStatus": "string"  
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### JobId

The identifier of the entities detection job to stop.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^([\p{L}\p{Z}\p{N}_ . : / = + \ - % @ ] * ) $`

### JobStatus

Either STOP\_REQUESTED if the job is currently running, or STOPPED if the job was previously stopped with the StopEntitiesDetectionJob operation.

Type: String

Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED  
| STOPPED

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerError**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **JobNotFoundException**

The specified job was not found. Check the job ID and try again.

HTTP Status Code: 400

### **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## StopEventsDetectionJob

Stops an events detection job in progress.

### Request Syntax

```
{  
  "JobId": "string"  
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### JobId

The identifier of the events detection job to stop.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern:  $^([\p{L}\p{Z}\p{N}_\cdot:/=+\-%@]*)\$$

Required: Yes

### Response Syntax

```
{  
  "JobId": "string",  
  "JobStatus": "string"  
}
```

### Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

## **JobId**

The identifier of the events detection job to stop.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^([\p{L}\p{Z}\p{N}_.: /+=\-%@]*)$`

## **JobStatus**

The status of the events detection job.

Type: String

Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED  
| STOPPED

## **Errors**

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **JobNotFoundException**

The specified job was not found. Check the job ID and try again.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)



## StopKeyPhrasesDetectionJob

Stops a key phrases detection job in progress.

If the job state is `IN_PROGRESS` the job is marked for termination and put into the `STOP_REQUESTED` state. If the job completes before it can be stopped, it is put into the `COMPLETED` state; otherwise the job is stopped and put into the `STOPPED` state.

If the job is in the `COMPLETED` or `FAILED` state when you call the `StopDominantLanguageDetectionJob` operation, the operation returns a 400 Internal Request Exception.

When a job is stopped, any documents already processed are written to the output location.

### Request Syntax

```
{
  "JobId": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### JobId

The identifier of the key phrases detection job to stop.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^([\p{L}\p{Z}\p{N}_ . :/=+\-%@]*)$`

Required: Yes

### Response Syntax

```
{
```

```
"JobId": "string",  
"JobStatus": "string"  
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### JobId

The identifier of the key phrases detection job to stop.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern:  $^([\p{L}\p{Z}\p{N}_\cdot :/=+\-\%@]*)\$$

### JobStatus

Either STOP\_REQUESTED if the job is currently running, or STOPPED if the job was previously stopped with the StopKeyPhrasesDetectionJob operation.

Type: String

Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED  
| STOPPED

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **JobNotFoundException**

The specified job was not found. Check the job ID and try again.

HTTP Status Code: 400

### **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# StopPiiEntitiesDetectionJob

Stops a PII entities detection job in progress.

## Request Syntax

```
{  
  "JobId": "string"  
}
```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

### JobId

The identifier of the PII entities detection job to stop.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^([\p{L}\p{Z}\p{N}_.:/+\\-%@]*)$`

Required: Yes

## Response Syntax

```
{  
  "JobId": "string",  
  "JobStatus": "string"  
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

## **JobId**

The identifier of the PII entities detection job to stop.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^([\p{L}\p{Z}\p{N}_.: /+=\-%@]*)$`

## **JobStatus**

The status of the PII entities detection job.

Type: String

Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED  
| STOPPED

## **Errors**

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **JobNotFoundException**

The specified job was not found. Check the job ID and try again.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## StopSentimentDetectionJob

Stops a sentiment detection job in progress.

If the job state is `IN_PROGRESS`, the job is marked for termination and put into the `STOP_REQUESTED` state. If the job completes before it can be stopped, it is put into the `COMPLETED` state; otherwise the job is be stopped and put into the `STOPPED` state.

If the job is in the `COMPLETED` or `FAILED` state when you call the `StopDominantLanguageDetectionJob` operation, the operation returns a 400 Internal Request Exception.

When a job is stopped, any documents already processed are written to the output location.

### Request Syntax

```
{
  "JobId": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### JobId

The identifier of the sentiment detection job to stop.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^([\p{L}\p{Z}\p{N}_ . :/=+\-%@]*)$`

Required: Yes

### Response Syntax

```
{
```

```
"JobId": "string",  
"JobStatus": "string"  
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### JobId

The identifier of the sentiment detection job to stop.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^([\p{L}\p{Z}\p{N}_ . : / = + \ - % @ ] * )$`

### JobStatus

Either STOP\_REQUESTED if the job is currently running, or STOPPED if the job was previously stopped with the StopSentimentDetectionJob operation.

Type: String

Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED  
| STOPPED

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.



HTTP Status Code: 400

### **JobNotFoundException**

The specified job was not found. Check the job ID and try again.

HTTP Status Code: 400

### **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## StopTargetedSentimentDetectionJob

Stops a targeted sentiment detection job in progress.

If the job state is `IN_PROGRESS`, the job is marked for termination and put into the `STOP_REQUESTED` state. If the job completes before it can be stopped, it is put into the `COMPLETED` state; otherwise the job is be stopped and put into the `STOPPED` state.

If the job is in the `COMPLETED` or `FAILED` state when you call the `StopDominantLanguageDetectionJob` operation, the operation returns a 400 Internal Request Exception.

When a job is stopped, any documents already processed are written to the output location.

### Request Syntax

```
{
  "JobId": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### JobId

The identifier of the targeted sentiment detection job to stop.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^([\p{L}\p{Z}\p{N}_ . : / = + \ - % @ ] *)$`

Required: Yes

### Response Syntax

```
{
```

```
"JobId": "string",  
"JobStatus": "string"  
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### JobId

The identifier of the targeted sentiment detection job to stop.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^([\p{L}\p{Z}\p{N}_ . : / = + \ - % @ ] * )$`

### JobStatus

Either STOP\_REQUESTED if the job is currently running, or STOPPED if the job was previously stopped with the StopSentimentDetectionJob operation.

Type: String

Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED  
| STOPPED

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **JobNotFoundException**

The specified job was not found. Check the job ID and try again.

HTTP Status Code: 400

### **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# StopTrainingDocumentClassifier

Stops a document classifier training job while in progress.

If the training job state is TRAINING, the job is marked for termination and put into the STOP\_REQUESTED state. If the training job completes before it can be stopped, it is put into the TRAINED; otherwise the training job is stopped and put into the STOPPED state and the service sends back an HTTP 200 response with an empty HTTP body.

## Request Syntax

```
{
  "DocumentClassifierArn": "string"
}
```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

### DocumentClassifierArn

The Amazon Resource Name (ARN) that identifies the document classifier currently being trained.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:document-classifier/[a-zA-Z0-9](-*[a-zA-Z0-9])*(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*)?`

Required: Yes

## Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### InternalServerErrorException

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### InvalidRequestException

The request is invalid.

HTTP Status Code: 400

### ResourceNotFoundException

The specified resource ARN was not found. Check the ARN and try your request again.

HTTP Status Code: 400

### TooManyRequestsException

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)

- [AWS SDK for Ruby V3](#)

# StopTrainingEntityRecognizer

Stops an entity recognizer training job while in progress.

If the training job state is TRAINING, the job is marked for termination and put into the STOP\_REQUESTED state. If the training job completes before it can be stopped, it is put into the TRAINED; otherwise the training job is stopped and putted into the STOPPED state and the service sends back an HTTP 200 response with an empty HTTP body.

## Request Syntax

```
{
  "EntityRecognizerArn": "string"
}
```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

### [EntityRecognizerArn](#)

The Amazon Resource Name (ARN) that identifies the entity recognizer currently being trained.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:entity-recognizer/[a-zA-Z0-9](-*[a-zA-Z0-9])*(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*)?`

Required: Yes

## Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).



## **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

## **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

## **ResourceNotFoundException**

The specified resource ARN was not found. Check the ARN and try your request again.

HTTP Status Code: 400

## **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## TagResource

Associates a specific tag with an Amazon Comprehend resource. A tag is a key-value pair that adds as a metadata to a resource used by Amazon Comprehend. For example, a tag with "Sales" as the key might be added to a resource to indicate its use by the sales department.

### Request Syntax

```
{
  "ResourceArn": "string",
  "Tags": [
    {
      "Key": "string",
      "Value": "string"
    }
  ]
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### [ResourceArn](#)

The Amazon Resource Name (ARN) of the given Amazon Comprehend resource to which you want to associate the tags.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:[a-zA-Z0-9-]{1,64}/[a-zA-Z0-9](-*[a-zA-Z0-9])*((/dataset/[a-zA-Z0-9](-*[a-zA-Z0-9])*)|(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*))?`

Required: Yes

#### [Tags](#)

Tags being associated with a specific Amazon Comprehend resource. There can be a maximum of 50 tags (both existing and pending) associated with a specific resource.

Type: Array of [Tag](#) objects

Required: Yes

## Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **ConcurrentModificationException**

Concurrent modification of the tags associated with an Amazon Comprehend resource is not supported.

HTTP Status Code: 400

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **ResourceNotFoundException**

The specified resource ARN was not found. Check the ARN and try your request again.

HTTP Status Code: 400

### **TooManyTagsException**

The request contains more tags than can be associated with a resource (50 tags per resource). The maximum number of tags includes both existing tags and those included in your current request.

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# UntagResource

Removes a specific tag associated with an Amazon Comprehend resource.

## Request Syntax

```
{  
  "ResourceArn": "string",  
  "TagKeys": [ "string" ]  
}
```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

### ResourceArn

The Amazon Resource Name (ARN) of the given Amazon Comprehend resource from which you want to remove the tags.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:[a-zA-Z0-9-]{1,64}/[a-zA-Z0-9](-*[a-zA-Z0-9])*((/dataset/[a-zA-Z0-9](-*[a-zA-Z0-9])*)|(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*))?`

Required: Yes

### TagKeys

The initial part of a key-value pair that forms a tag being removed from a given resource. For example, a tag with "Sales" as the key might be added to a resource to indicate its use by the sales department. Keys must be unique and cannot be duplicated for a particular resource.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 128.

Required: Yes

## Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **ConcurrentModificationException**

Concurrent modification of the tags associated with an Amazon Comprehend resource is not supported.

HTTP Status Code: 400

### **InternalServerErrorException**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **ResourceNotFoundException**

The specified resource ARN was not found. Check the ARN and try your request again.

HTTP Status Code: 400

### **TooManyTagKeysException**

The request contains more tag keys than can be associated with a resource (50 tag keys per resource).

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## UpdateEndpoint

Updates information about the specified endpoint. For information about endpoints, see [Managing endpoints](#).

### Request Syntax

```
{
  "DesiredDataAccessRoleArn": "string",
  "DesiredInferenceUnits": number,
  "DesiredModelArn": "string",
  "EndpointArn": "string",
  "FlywheelArn": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

#### DesiredDataAccessRoleArn

Data access role ARN to use in case the new model is encrypted with a customer CMK.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:aws(-[^\:]+)?:iam::[0-9]{12}:role/.+`

Required: No

#### DesiredInferenceUnits

The desired number of inference units to be used by the model using this endpoint. Each inference unit represents of a throughput of 100 characters per second.

Type: Integer

Valid Range: Minimum value of 1.

Required: No



## DesiredModelArn

The ARN of the new model to use when updating an existing endpoint.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:(document-classifier|entity-recognizer)/[a-zA-Z0-9](-*[a-zA-Z0-9])*(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*)?`

Required: No

## EndpointArn

The Amazon Resource Number (ARN) of the endpoint being updated.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:(document-classifier-endpoint|entity-recognizer-endpoint)/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

Required: Yes

## FlywheelArn

The Amazon Resource Number (ARN) of the flywheel

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:flywheel/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

Required: No

## Response Syntax

```
{
```

```
"DesiredModelArn": "string"  
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### DesiredModelArn

The Amazon Resource Number (ARN) of the new model.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:(document-classifier|entity-recognizer)/[a-zA-Z0-9](-*[a-zA-Z0-9])*/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*`?

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerError**

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **ResourceInUseException**

The specified resource name is already in use. Use a different name and try your request again.

HTTP Status Code: 400

## **ResourceLimitExceededException**

The maximum number of resources per account has been exceeded. Review the resources, and then try your request again.

HTTP Status Code: 400

## **ResourceNotFoundException**

The specified resource ARN was not found. Check the ARN and try your request again.

HTTP Status Code: 400

## **ResourceUnavailableException**

The specified resource is not available. Check the resource and try your request again.

HTTP Status Code: 400

## **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# UpdateFlywheel

Update the configuration information for an existing flywheel.

## Request Syntax

```
{
  "ActiveModelArn": "string",
  "DataAccessRoleArn": "string",
  "DataSecurityConfig": {
    "ModelKmsKeyId": "string",
    "VolumeKmsKeyId": "string",
    "VpcConfig": {
      "SecurityGroupIds": [ "string" ],
      "Subnets": [ "string" ]
    }
  },
  "FlywheelArn": "string"
}
```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

### [ActiveModelArn](#)

The Amazon Resource Number (ARN) of the active model version.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9-]*:[0-9]{12}:(document-classifier|entity-recognizer)/[a-zA-Z0-9](-*[a-zA-Z0-9])*(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*)?`

Required: No

### [DataAccessRoleArn](#)

The Amazon Resource Name (ARN) of the IAM role that grants Amazon Comprehend permission to access the flywheel data.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:aws(-[:]+)?:iam::[0-9]{12}:role/.+`

Required: No

### DataSecurityConfig

Flywheel data security configuration.

Type: [UpdateDataSecurityConfig](#) object

Required: No

### FlywheelArn

The Amazon Resource Number (ARN) of the flywheel to update.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:flywheel/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

Required: Yes

## Response Syntax

```
{
  "FlywheelProperties": {
    "ActiveModelArn": "string",
    "CreationTime": number,
    "DataAccessRoleArn": "string",
    "DataLakeS3Uri": "string",
    "DataSecurityConfig": {
      "DataLakeKmsKeyId": "string",
      "ModelKmsKeyId": "string",
      "VolumeKmsKeyId": "string",
      "VpcConfig": {
        "SecurityGroupIds": [ "string" ],
        "Subnets": [ "string" ]
      }
    }
  }
}
```

```

    },
    "FlywheelArn": "string",
    "LastModifiedTime": number,
    "LatestFlywheelIteration": "string",
    "Message": "string",
    "ModelType": "string",
    "Status": "string",
    "TaskConfig": {
      "DocumentClassificationConfig": {
        "Labels": [ "string" ],
        "Mode": "string"
      },
      "EntityRecognitionConfig": {
        "EntityTypes": [
          {
            "Type": "string"
          }
        ]
      },
      "LanguageCode": "string"
    }
  }
}

```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### FlywheelProperties

The flywheel properties.

Type: [FlywheelProperties](#) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### InternalServerError

An internal server error occurred. Retry your request.

HTTP Status Code: 500

### **InvalidRequestException**

The request is invalid.

HTTP Status Code: 400

### **KmsKeyValidationException**

The KMS customer managed key (CMK) entered cannot be validated. Verify the key and re-enter it.

HTTP Status Code: 400

### **ResourceNotFoundException**

The specified resource ARN was not found. Check the ARN and try your request again.

HTTP Status Code: 400

### **TooManyRequestsException**

The number of requests exceeds the limit. Resubmit your request later.

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# Data Types

The following data types are supported:

- [AugmentedManifestsListItem](#)
- [BatchDetectDominantLanguageItemResult](#)
- [BatchDetectEntitiesItemResult](#)
- [BatchDetectKeyPhrasesItemResult](#)
- [BatchDetectSentimentItemResult](#)
- [BatchDetectSyntaxItemResult](#)
- [BatchDetectTargetedSentimentItemResult](#)
- [BatchItemError](#)
- [Block](#)
- [BlockReference](#)
- [BoundingBox](#)
- [ChildBlock](#)
- [ClassifierEvaluationMetrics](#)
- [ClassifierMetadata](#)
- [DataSecurityConfig](#)
- [DatasetAugmentedManifestsListItem](#)
- [DatasetDocumentClassifierInputDataConfig](#)
- [DatasetEntityRecognizerAnnotations](#)
- [DatasetEntityRecognizerDocuments](#)
- [DatasetEntityRecognizerEntityList](#)
- [DatasetEntityRecognizerInputDataConfig](#)
- [DatasetFilter](#)
- [DatasetInputDataConfig](#)
- [DatasetProperties](#)
- [DocumentClass](#)
- [DocumentClassificationConfig](#)
- [DocumentClassificationJobFilter](#)
- [DocumentClassificationJobProperties](#)



- [DocumentClassifierDocuments](#)
- [DocumentClassifierFilter](#)
- [DocumentClassifierInputDataConfig](#)
- [DocumentClassifierOutputDataConfig](#)
- [DocumentClassifierProperties](#)
- [DocumentClassifierSummary](#)
- [DocumentLabel](#)
- [DocumentMetadata](#)
- [DocumentReaderConfig](#)
- [DocumentTypeListItem](#)
- [DominantLanguage](#)
- [DominantLanguageDetectionJobFilter](#)
- [DominantLanguageDetectionJobProperties](#)
- [EndpointFilter](#)
- [EndpointProperties](#)
- [EntitiesDetectionJobFilter](#)
- [EntitiesDetectionJobProperties](#)
- [Entity](#)
- [EntityLabel](#)
- [EntityRecognitionConfig](#)
- [EntityRecognizerAnnotations](#)
- [EntityRecognizerDocuments](#)
- [EntityRecognizerEntityList](#)
- [EntityRecognizerEvaluationMetrics](#)
- [EntityRecognizerFilter](#)
- [EntityRecognizerInputDataConfig](#)
- [EntityRecognizerMetadata](#)
- [EntityRecognizerMetadataEntityTypesListItem](#)
- [EntityRecognizerOutputDataConfig](#)
- [EntityRecognizerProperties](#)
- [EntityRecognizerSummary](#)

- [EntityTypesEvaluationMetrics](#)
- [EntityTypesListItem](#)
- [ErrorsListItem](#)
- [EventsDetectionJobFilter](#)
- [EventsDetectionJobProperties](#)
- [ExtractedCharactersListItem](#)
- [FlywheelFilter](#)
- [FlywheelIterationFilter](#)
- [FlywheelIterationProperties](#)
- [FlywheelModelEvaluationMetrics](#)
- [FlywheelProperties](#)
- [FlywheelSummary](#)
- [Geometry](#)
- [InputDataConfig](#)
- [InvalidRequestDetail](#)
- [KeyPhrase](#)
- [KeyPhrasesDetectionJobFilter](#)
- [KeyPhrasesDetectionJobProperties](#)
- [MentionSentiment](#)
- [OutputDataConfig](#)
- [PartOfSpeechTag](#)
- [PiiEntitiesDetectionJobFilter](#)
- [PiiEntitiesDetectionJobProperties](#)
- [PiiEntity](#)
- [PiiOutputDataConfig](#)
- [Point](#)
- [RedactionConfig](#)
- [RelationshipsListItem](#)
- [SentimentDetectionJobFilter](#)
- [SentimentDetectionJobProperties](#)
- [SentimentScore](#)

- [SyntaxToken](#)
- [Tag](#)
- [TargetedSentimentDetectionJobFilter](#)
- [TargetedSentimentDetectionJobProperties](#)
- [TargetedSentimentEntity](#)
- [TargetedSentimentMention](#)
- [TaskConfig](#)
- [TextSegment](#)
- [TopicsDetectionJobFilter](#)
- [TopicsDetectionJobProperties](#)
- [ToxicContent](#)
- [ToxicLabels](#)
- [UpdateDataSecurityConfig](#)
- [VpcConfig](#)
- [WarningsListItem](#)

## AugmentedManifestsListItem

An augmented manifest file that provides training data for your custom model. An augmented manifest file is a labeled dataset that is produced by Amazon SageMaker Ground Truth.

### Contents

#### AttributeNames

The JSON attribute that contains the annotations for your training documents. The number of attribute names that you specify depends on whether your augmented manifest file is the output of a single labeling job or a chained labeling job.

If your file is the output of a single labeling job, specify the `LabelAttributeName` key that was used when the job was created in Ground Truth.

If your file is the output of a chained labeling job, specify the `LabelAttributeName` key for one or more jobs in the chain. Each `LabelAttributeName` key provides the annotations from an individual job.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 63.

Pattern: `^[a-zA-Z0-9](-*[a-zA-Z0-9])*`

Required: Yes

#### S3Uri

The Amazon S3 location of the augmented manifest file.

Type: String

Length Constraints: Maximum length of 1024.

Pattern: `s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/*)?`

Required: Yes

#### AnnotationDataS3Uri

The S3 prefix to the annotation files that are referred in the augmented manifest file.

Type: String

Length Constraints: Maximum length of 1024.

Pattern: `s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/*.)?`

Required: No

## DocumentType

The type of augmented manifest. PlainTextDocument or SemiStructuredDocument. If you don't specify, the default is PlainTextDocument.

- `PLAIN_TEXT_DOCUMENT` A document type that represents any unicode text that is encoded in UTF-8.
- `SEMI_STRUCTURED_DOCUMENT` A document type with positional and structural context, like a PDF. For training with Amazon Comprehend, only PDFs are supported. For inference, Amazon Comprehend support PDFs, DOCX and TXT.

Type: String

Valid Values: `PLAIN_TEXT_DOCUMENT` | `SEMI_STRUCTURED_DOCUMENT`

Required: No

## SourceDocumentsS3Uri

The S3 prefix to the source files (PDFs) that are referred to in the augmented manifest file.

Type: String

Length Constraints: Maximum length of 1024.

Pattern: `s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/*.)?`

Required: No

## Split

The purpose of the data you've provided in the augmented manifest. You can either train or test this data. If you don't specify, the default is train.

`TRAIN` - all of the documents in the manifest will be used for training. If no test documents are provided, Amazon Comprehend will automatically reserve a portion of the training documents for testing.

TEST - all of the documents in the manifest will be used for testing.

Type: String

Valid Values: TRAIN | TEST

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## BatchDetectDominantLanguageItemResult

The result of calling the [BatchDetectDominantLanguage](#) operation. The operation returns one object for each document that is successfully processed by the operation.

### Contents

#### Index

The zero-based index of the document in the input list.

Type: Integer

Required: No

#### Languages

One or more [DominantLanguage](#) objects describing the dominant languages in the document.

Type: Array of [DominantLanguage](#) objects

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## BatchDetectEntitiesItemResult

The result of calling the [BatchDetectEntities](#) operation. The operation returns one object for each document that is successfully processed by the operation.

### Contents

#### Entities

One or more [Entity](#) objects, one for each entity detected in the document.

Type: Array of [Entity](#) objects

Required: No

#### Index

The zero-based index of the document in the input list.

Type: Integer

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)



## BatchDetectKeyPhrasesItemResult

The result of calling the [BatchDetectKeyPhrases](#) operation. The operation returns one object for each document that is successfully processed by the operation.

### Contents

#### Index

The zero-based index of the document in the input list.

Type: Integer

Required: No

#### KeyPhrases

One or more [KeyPhrase](#) objects, one for each key phrase detected in the document.

Type: Array of [KeyPhrase](#) objects

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## BatchDetectSentimentItemResult

The result of calling the [BatchDetectSentiment](#) operation. The operation returns one object for each document that is successfully processed by the operation.

### Contents

#### Index

The zero-based index of the document in the input list.

Type: Integer

Required: No

#### Sentiment

The sentiment detected in the document.

Type: String

Valid Values: POSITIVE | NEGATIVE | NEUTRAL | MIXED

Required: No

#### SentimentScore

The level of confidence that Amazon Comprehend has in the accuracy of its sentiment detection.

Type: [SentimentScore](#) object

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)



## BatchDetectSyntaxItemResult

The result of calling the [BatchDetectSyntax](#) operation. The operation returns one object that is successfully processed by the operation.

### Contents

#### Index

The zero-based index of the document in the input list.

Type: Integer

Required: No

#### SyntaxTokens

The syntax tokens for the words in the document, one token for each word.

Type: Array of [SyntaxToken](#) objects

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## BatchDetectTargetedSentimentItemResult

Analysis results for one of the documents in the batch.

### Contents

#### Entities

An array of targeted sentiment entities.

Type: Array of [TargetedSentimentEntity](#) objects

Required: No

#### Index

The zero-based index of this result in the input list.

Type: Integer

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## BatchItemError

Describes an error that occurred while processing a document in a batch. The operation returns on BatchItemError object for each document that contained an error.

### Contents

#### ErrorCode

The numeric error code of the error.

Type: String

Length Constraints: Minimum length of 1.

Required: No

#### ErrorMessage

A text description of the error.

Type: String

Length Constraints: Minimum length of 1.

Required: No

#### Index

The zero-based index of the document in the input list.

Type: Integer

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)



## Block

Information about each word or line of text in the input document.

For additional information, see [Block](#) in the Amazon Textract API reference.

### Contents

#### BlockType

The block represents a line of text or one word of text.

- **WORD** - A word that's detected on a document page. A word is one or more ISO basic Latin script characters that aren't separated by spaces.
- **LINE** - A string of tab-delimited, contiguous words that are detected on a document page

Type: String

Valid Values: LINE | WORD

Required: No

#### Geometry

Co-ordinates of the rectangle or polygon that contains the text.

Type: [Geometry](#) object

Required: No

#### Id

Unique identifier for the block.

Type: String

Length Constraints: Minimum length of 1.

Required: No

#### Page

Page number where the block appears.

Type: Integer



Required: No

## Relationships

A list of child blocks of the current block. For example, a LINE object has child blocks for each WORD block that's part of the line of text.

Type: Array of [RelationshipsListItem](#) objects

Required: No

## Text

The word or line of text extracted from the block.

Type: String

Length Constraints: Minimum length of 1.

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## BlockReference

A reference to a block.

### Contents

#### BeginOffset

Offset of the start of the block within its parent block.

Type: Integer

Required: No

#### BlockId

Unique identifier for the block.

Type: String

Length Constraints: Minimum length of 1.

Required: No

#### ChildBlocks

List of child blocks within this block.

Type: Array of [ChildBlock](#) objects

Required: No

#### EndOffset

Offset of the end of the block within its parent block.

Type: Integer

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## BoundingBox

The bounding box around the detected page or around an element on a document page. The left (x-coordinate) and top (y-coordinate) are coordinates that represent the top and left sides of the bounding box. Note that the upper-left corner of the image is the origin (0,0).

For additional information, see [BoundingBox](#) in the Amazon Textract API reference.

### Contents

#### Height

The height of the bounding box as a ratio of the overall document page height.

Type: Float

Required: No

#### Left

The left coordinate of the bounding box as a ratio of overall document page width.

Type: Float

Required: No

#### Top

The top coordinate of the bounding box as a ratio of overall document page height.

Type: Float

Required: No

#### Width

The width of the bounding box as a ratio of the overall document page width.

Type: Float

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## ChildBlock

Nested block contained within a block.

### Contents

#### BeginOffset

Offset of the start of the child block within its parent block.

Type: Integer

Required: No

#### ChildBlockId

Unique identifier for the child block.

Type: String

Length Constraints: Minimum length of 1.

Required: No

#### EndOffset

Offset of the end of the child block within its parent block.

Type: Integer

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## ClassifierEvaluationMetrics

Describes the result metrics for the test data associated with an documentation classifier.

### Contents

#### Accuracy

The fraction of the labels that were correct recognized. It is computed by dividing the number of labels in the test documents that were correctly recognized by the total number of labels in the test documents.

Type: Double

Required: No

#### F1Score

A measure of how accurate the classifier results are for the test data. It is derived from the Precision and Recall values. The F1Score is the harmonic average of the two scores. The highest score is 1, and the worst score is 0.

Type: Double

Required: No

#### HammingLoss

Indicates the fraction of labels that are incorrectly predicted. Also seen as the fraction of wrong labels compared to the total number of labels. Scores closer to zero are better.

Type: Double

Required: No

#### MicroF1Score

A measure of how accurate the classifier results are for the test data. It is a combination of the Micro Precision and Micro Recall values. The Micro F1Score is the harmonic mean of the two scores. The highest score is 1, and the worst score is 0.

Type: Double

Required: No

**MicroPrecision**

A measure of the usefulness of the recognizer results in the test data. High precision means that the recognizer returned substantially more relevant results than irrelevant ones. Unlike the Precision metric which comes from averaging the precision of all available labels, this is based on the overall score of all precision scores added together.

Type: Double

Required: No

**MicroRecall**

A measure of how complete the classifier results are for the test data. High recall means that the classifier returned most of the relevant results. Specifically, this indicates how many of the correct categories in the text that the model can predict. It is a percentage of correct categories in the text that can found. Instead of averaging the recall scores of all labels (as with Recall), micro Recall is based on the overall score of all recall scores added together.

Type: Double

Required: No

**Precision**

A measure of the usefulness of the classifier results in the test data. High precision means that the classifier returned substantially more relevant results than irrelevant ones.

Type: Double

Required: No

**Recall**

A measure of how complete the classifier results are for the test data. High recall means that the classifier returned most of the relevant results.

Type: Double

Required: No

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:



- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## ClassifierMetadata

Provides information about a document classifier.

### Contents

#### EvaluationMetrics

Describes the result metrics for the test data associated with an documentation classifier.

Type: [ClassifierEvaluationMetrics](#) object

Required: No

#### NumberOfLabels

The number of labels in the input data.

Type: Integer

Required: No

#### NumberOfTestDocuments

The number of documents in the input data that were used to test the classifier. Typically this is 10 to 20 percent of the input documents, up to 10,000 documents.

Type: Integer

Required: No

#### NumberOfTrainedDocuments

The number of documents in the input data that were used to train the classifier. Typically this is 80 to 90 percent of the input documents.

Type: Integer

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# DataSecurityConfig

Data security configuration.

## Contents

### DataLakeKmsKeyId

ID for the AWS KMS key that Amazon Comprehend uses to encrypt the data in the data lake.

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^\p{ASCII}+$`

Required: No

### ModelKmsKeyId

ID for the AWS KMS key that Amazon Comprehend uses to encrypt trained custom models. The ModelKmsKeyId can be either of the following formats:

- KMS Key ID: "1234abcd-12ab-34cd-56ef-1234567890ab"
- Amazon Resource Name (ARN) of a KMS Key: "arn:aws:kms:us-west-2:111122223333:key/1234abcd-12ab-34cd-56ef-1234567890ab"

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^\p{ASCII}+$`

Required: No

### VolumeKmsKeyId

ID for the AWS KMS key that Amazon Comprehend uses to encrypt the volume.

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^\p{ASCII}+$`

Required: No

## VpcConfig

Configuration parameters for an optional private Virtual Private Cloud (VPC) containing the resources you are using for the job. For more information, see [Amazon VPC](#).

Type: [VpcConfig](#) object

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## DatasetAugmentedManifestsListItem

An augmented manifest file that provides training data for your custom model. An augmented manifest file is a labeled dataset that is produced by Amazon SageMaker Ground Truth.

### Contents

#### AttributeNames

The JSON attribute that contains the annotations for your training documents. The number of attribute names that you specify depends on whether your augmented manifest file is the output of a single labeling job or a chained labeling job.

If your file is the output of a single labeling job, specify the `LabelAttributeName` key that was used when the job was created in Ground Truth.

If your file is the output of a chained labeling job, specify the `LabelAttributeName` key for one or more jobs in the chain. Each `LabelAttributeName` key provides the annotations from an individual job.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 63.

Pattern: `^[a-zA-Z0-9](-*[a-zA-Z0-9])*`

Required: Yes

#### S3Uri

The Amazon S3 location of the augmented manifest file.

Type: String

Length Constraints: Maximum length of 1024.

Pattern: `s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/*)?`

Required: Yes

#### AnnotationDataS3Uri

The S3 prefix to the annotation files that are referred in the augmented manifest file.

Type: String

Length Constraints: Maximum length of 1024.

Pattern: `s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/*.)?`

Required: No

## DocumentType

The type of augmented manifest. If you don't specify, the default is PlainTextDocument.

`PLAIN_TEXT_DOCUMENT` A document type that represents any unicode text that is encoded in UTF-8.

Type: String

Valid Values: `PLAIN_TEXT_DOCUMENT` | `SEMI_STRUCTURED_DOCUMENT`

Required: No

## SourceDocumentsS3Uri

The S3 prefix to the source files (PDFs) that are referred to in the augmented manifest file.

Type: String

Length Constraints: Maximum length of 1024.

Pattern: `s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/*.)?`

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# DatasetDocumentClassifierInputDataConfig

Describes the dataset input data configuration for a document classifier model.

For more information on how the input file is formatted, see [Preparing training data](#) in the Comprehend Developer Guide.

## Contents

### S3Uri

The Amazon S3 URI for the input data. The S3 bucket must be in the same Region as the API endpoint that you are calling. The URI can point to a single input file or it can provide the prefix for a collection of input files.

For example, if you use the URI `S3://bucketName/prefix`, if the prefix is a single file, Amazon Comprehend uses that file as input. If more than one file begins with the prefix, Amazon Comprehend uses all of them as input.

This parameter is required if you set `DataFormat` to `COMPREHEND_CSV`.

Type: String

Length Constraints: Maximum length of 1024.

Pattern: `s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/*.)?`

Required: Yes

### LabelDelimiter

Indicates the delimiter used to separate each label for training a multi-label classifier. The default delimiter between labels is a pipe (`|`). You can use a different character as a delimiter (if it's an allowed character) by specifying it under `Delimiter` for labels. If the training documents use a delimiter other than the default or the delimiter you specify, the labels on that line will be combined to make a single unique label, such as `LABELLABELLABEL`.

Type: String

Length Constraints: Fixed length of 1.

Pattern: `^[~!@#$%^*\-_\+=|\\:;\t>?/]$`



Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# DatasetEntityRecognizerAnnotations

Describes the annotations associated with a entity recognizer.

## Contents

### S3Uri

Specifies the Amazon S3 location where the training documents for an entity recognizer are located. The URI must be in the same Region as the API endpoint that you are calling.

Type: String

Length Constraints: Maximum length of 1024.

Pattern: `s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/.*)?`

Required: Yes

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## DatasetEntityRecognizerDocuments

Describes the documents submitted with a dataset for an entity recognizer model.

### Contents

#### S3Uri

Specifies the Amazon S3 location where the documents for the dataset are located.

Type: String

Length Constraints: Maximum length of 1024.

Pattern: `s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/.*)?`

Required: Yes

#### InputFormat

Specifies how the text in an input file should be processed. This is optional, and the default is `ONE_DOC_PER_LINE`. `ONE_DOC_PER_FILE` - Each file is considered a separate document. Use this option when you are processing large documents, such as newspaper articles or scientific papers. `ONE_DOC_PER_LINE` - Each line in a file is considered a separate document. Use this option when you are processing many short documents, such as text messages.

Type: String

Valid Values: `ONE_DOC_PER_FILE` | `ONE_DOC_PER_LINE`

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## DatasetEntityRecognizerEntityList

Describes the dataset entity list for an entity recognizer model.

For more information on how the input file is formatted, see [Preparing training data](#) in the Comprehend Developer Guide.

### Contents

#### S3Uri

Specifies the Amazon S3 location where the entity list is located.

Type: String

Length Constraints: Maximum length of 1024.

Pattern: `s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/.*)?`

Required: Yes

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## DatasetEntityRecognizerInputDataConfig

Specifies the format and location of the input data. You must provide either the `Annotations` parameter or the `EntityList` parameter.

### Contents

#### Documents

The format and location of the training documents for your custom entity recognizer.

Type: [DatasetEntityRecognizerDocuments](#) object

Required: Yes

#### Annotations

The S3 location of the annotation documents for your custom entity recognizer.

Type: [DatasetEntityRecognizerAnnotations](#) object

Required: No

#### EntityList

The S3 location of the entity list for your custom entity recognizer.

Type: [DatasetEntityRecognizerEntityList](#) object

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## DatasetFilter

Filter the datasets based on creation time or dataset status.

### Contents

#### CreationTimeAfter

Filter the datasets to include datasets created after the specified time.

Type: Timestamp

Required: No

#### CreationTimeBefore

Filter the datasets to include datasets created before the specified time.

Type: Timestamp

Required: No

#### DatasetType

Filter the datasets based on the dataset type.

Type: String

Valid Values: TRAIN | TEST

Required: No

#### Status

Filter the datasets based on the dataset status.

Type: String

Valid Values: CREATING | COMPLETED | FAILED

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## DatasetInputDataConfig

Specifies the format and location of the input data for the dataset.

### Contents

#### AugmentedManifests

A list of augmented manifest files that provide training data for your custom model. An augmented manifest file is a labeled dataset that is produced by Amazon SageMaker Ground Truth.

Type: Array of [DatasetAugmentedManifestsListItem](#) objects

Required: No

#### DataFormat

COMPREHEND\_CSV: The data format is a two-column CSV file, where the first column contains labels and the second column contains documents.

AUGMENTED\_MANIFEST: The data format

Type: String

Valid Values: COMPREHEND\_CSV | AUGMENTED\_MANIFEST

Required: No

#### DocumentClassifierInputDataConfig

The input properties for training a document classifier model.

For more information on how the input file is formatted, see [Preparing training data](#) in the Comprehend Developer Guide.

Type: [DatasetDocumentClassifierInputDataConfig](#) object

Required: No

#### EntityRecognizerInputDataConfig

The input properties for training an entity recognizer model.

Type: [DatasetEntityRecognizerInputDataConfig](#) object



Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## DatasetProperties

Properties associated with the dataset.

### Contents

#### CreationTime

Creation time of the dataset.

Type: Timestamp

Required: No

#### DatasetArn

The ARN of the dataset.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[[:^:]]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:flywheel/[a-zA-Z0-9](-*[a-zA-Z0-9])*/dataset/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

Required: No

#### DatasetName

The name of the dataset.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[a-zA-Z0-9](-*[a-zA-Z0-9])*$`

Required: No

#### DatasetS3Uri

The S3 URI where the dataset is stored.

Type: String

Length Constraints: Maximum length of 1024.

Pattern: s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/\*.)?

Required: No

### **DatasetType**

The dataset type (training data or test data).

Type: String

Valid Values: TRAIN | TEST

Required: No

### **Description**

Description of the dataset.

Type: String

Length Constraints: Maximum length of 2048.

Pattern: ^([a-zA-Z0-9\_][\\a-zA-Z0-9\_@#%\*+=:?./!\s-]\*)\*\$

Required: No

### **EndTime**

Time when the data from the dataset becomes available in the data lake.

Type: Timestamp

Required: No

### **Message**

A description of the status of the dataset.

Type: String

Required: No

### **NumberOfDocuments**

The number of documents in the dataset.

Type: Long

Required: No

## Status

The dataset status. While the system creates the dataset, the status is CREATING. When the dataset is ready to use, the status changes to COMPLETED.

Type: String

Valid Values: CREATING | COMPLETED | FAILED

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## DocumentClass

Specifies the class that categorizes the document being analyzed

### Contents

#### Name

The name of the class.

Type: String

Length Constraints: Minimum length of 1.

Required: No

#### Page

Page number in the input document. This field is present in the response only if your request includes the `Byte` parameter.

Type: Integer

Required: No

#### Score

The confidence score that Amazon Comprehend has this class correctly attributed.

Type: Float

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## DocumentClassificationConfig

Configuration required for a document classification model.

### Contents

#### Mode

Classification mode indicates whether the documents are `MULTI_CLASS` or `MULTI_LABEL`.

Type: String

Valid Values: `MULTI_CLASS` | `MULTI_LABEL`

Required: Yes

#### Labels

One or more labels to associate with the custom classifier.

Type: Array of strings

Array Members: Maximum number of 1000 items.

Length Constraints: Maximum length of 5000.

Pattern: `^\P{C}*$`

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## DocumentClassificationJobFilter

Provides information for filtering a list of document classification jobs. For more information, see the [ListDocumentClassificationJobs](#) operation. You can provide only one filter parameter in each request.

### Contents

#### JobName

Filters on the name of the job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^([\p{L}\p{Z}\p{N}_ . : / = + \ - % @ ] *)$`

Required: No

#### JobStatus

Filters the list based on job status. Returns only jobs with the specified status.

Type: String

Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED  
| STOPPED

Required: No

#### SubmitTimeAfter

Filters the list of jobs based on the time that the job was submitted for processing. Returns only jobs submitted after the specified time. Jobs are returned in descending order, newest to oldest.

Type: Timestamp

Required: No

#### SubmitTimeBefore

Filters the list of jobs based on the time that the job was submitted for processing. Returns only jobs submitted before the specified time. Jobs are returned in ascending order, oldest to newest.

Type: Timestamp

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)



## DocumentClassificationJobProperties

Provides information about a document classification job.

### Contents

#### DataAccessRoleArn

The Amazon Resource Name (ARN) of the IAM role that grants Amazon Comprehend read access to your input data.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:aws(-[^:]+)?:iam::[0-9]{12}:role/.+`

Required: No

#### DocumentClassifierArn

The Amazon Resource Name (ARN) that identifies the document classifier.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:document-classifier/[a-zA-Z0-9](-*[a-zA-Z0-9])*(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*)?`

Required: No

#### EndTime

The time that the document classification job completed.

Type: Timestamp

Required: No

#### FlywheelArn

The Amazon Resource Number (ARN) of the flywheel

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:flywheel/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

Required: No

### **InputDataConfig**

The input data configuration that you supplied when you created the document classification job.

Type: [InputDataConfig](#) object

Required: No

### **JobArn**

The Amazon Resource Name (ARN) of the document classification job. It is a unique, fully qualified identifier for the job. It includes the AWS account, AWS Region, and the job ID. The format of the ARN is as follows:

```
arn:<partition>:comprehend:<region>:<account-id>:document-  
classification-job/<job-id>
```

The following is an example job ARN:

```
arn:aws:comprehend:us-west-2:111122223333:document-classification-  
job/1234abcd12ab34cd56ef1234567890ab
```

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:[a-zA-Z0-9]{1,64}/[a-zA-Z0-9](-*[a-zA-Z0-9])*((/dataset/[a-zA-Z0-9](-*[a-zA-Z0-9])*)|(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*))?)`

Required: No

### **JobId**

The identifier assigned to the document classification job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^([\p{L}\p{Z}\p{N}_.:/=+\-%@]*)$`

Required: No

### **JobName**

The name that you assigned to the document classification job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^([\p{L}\p{Z}\p{N}_.:/=+\-%@]*)$`

Required: No

### **JobStatus**

The current status of the document classification job. If the status is FAILED, the Message field shows the reason for the failure.

Type: String

Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED  
| STOPPED

Required: No

### **Message**

A description of the status of the job.

Type: String

Required: No

### **OutputDataConfig**

The output data configuration that you supplied when you created the document classification job.

Type: [OutputDataConfig](#) object

Required: No

## SubmitTime

The time that the document classification job was submitted for processing.

Type: Timestamp

Required: No

## VolumeKmsKeyId

ID for the AWS Key Management Service (KMS) key that Amazon Comprehend uses to encrypt data on the storage volume attached to the ML compute instance(s) that process the analysis job. The VolumeKmsKeyId can be either of the following formats:

- KMS Key ID: "1234abcd-12ab-34cd-56ef-1234567890ab"
- Amazon Resource Name (ARN) of a KMS Key: "arn:aws:kms:us-west-2:111122223333:key/1234abcd-12ab-34cd-56ef-1234567890ab"

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^\p{ASCII}+$`

Required: No

## VpcConfig

Configuration parameters for a private Virtual Private Cloud (VPC) containing the resources you are using for your document classification job. For more information, see [Amazon VPC](#).

Type: [VpcConfig](#) object

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)



## DocumentClassifierDocuments

The location of the training documents. This parameter is required in a request to create a semi-structured document classification model.

### Contents

#### S3Uri

The S3 URI location of the training documents specified in the S3Uri CSV file.

Type: String

Length Constraints: Maximum length of 1024.

Pattern: `s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/.*)?`

Required: Yes

#### TestS3Uri

The S3 URI location of the test documents included in the TestS3Uri CSV file. This field is not required if you do not specify a test CSV file.

Type: String

Length Constraints: Maximum length of 1024.

Pattern: `s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/.*)?`

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## DocumentClassifierFilter

Provides information for filtering a list of document classifiers. You can only specify one filtering parameter in a request. For more information, see the `ListDocumentClassifiers` operation.

### Contents

#### DocumentClassifierName

The name that you assigned to the document classifier

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[a-zA-Z0-9](-*[a-zA-Z0-9])*$`

Required: No

#### Status

Filters the list of classifiers based on status.

Type: String

Valid Values: SUBMITTED | TRAINING | DELETING | STOP\_REQUESTED | STOPPED | IN\_ERROR | TRAINED | TRAINED\_WITH\_WARNING

Required: No

#### SubmitTimeAfter

Filters the list of classifiers based on the time that the classifier was submitted for processing. Returns only classifiers submitted after the specified time. Classifiers are returned in descending order, newest to oldest.

Type: Timestamp

Required: No

#### SubmitTimeBefore

Filters the list of classifiers based on the time that the classifier was submitted for processing. Returns only classifiers submitted before the specified time. Classifiers are returned in ascending order, oldest to newest.

Type: Timestamp

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)



## DocumentClassifierInputDataConfig

The input properties for training a document classifier.

For more information on how the input file is formatted, see [Preparing training data](#) in the Comprehend Developer Guide.

### Contents

#### AugmentedManifests

A list of augmented manifest files that provide training data for your custom model. An augmented manifest file is a labeled dataset that is produced by Amazon SageMaker Ground Truth.

This parameter is required if you set `DataFormat` to `AUGMENTED_MANIFEST`.

Type: Array of [AugmentedManifestsListItem](#) objects

Required: No

#### DataFormat

The format of your training data:

- `COMPREHEND_CSV`: A two-column CSV file, where labels are provided in the first column, and documents are provided in the second. If you use this value, you must provide the `S3Uri` parameter in your request.
- `AUGMENTED_MANIFEST`: A labeled dataset that is produced by Amazon SageMaker Ground Truth. This file is in JSON lines format. Each line is a complete JSON object that contains a training document and its associated labels.

If you use this value, you must provide the `AugmentedManifests` parameter in your request.

If you don't specify a value, Amazon Comprehend uses `COMPREHEND_CSV` as the default.

Type: String

Valid Values: `COMPREHEND_CSV` | `AUGMENTED_MANIFEST`

Required: No

## DocumentReaderConfig

Provides configuration parameters to override the default actions for extracting text from PDF documents and image files.

By default, Amazon Comprehend performs the following actions to extract text from files, based on the input file type:

- **Word files** - Amazon Comprehend parser extracts the text.
- **Digital PDF files** - Amazon Comprehend parser extracts the text.
- **Image files and scanned PDF files** - Amazon Comprehend uses the Amazon Textract DetectDocumentText API to extract the text.

DocumentReaderConfig does not apply to plain text files or Word files.

For image files and PDF documents, you can override these default actions using the fields listed below. For more information, see [Setting text extraction options](#) in the Comprehend Developer Guide.

Type: [DocumentReaderConfig](#) object

Required: No

## Documents

The S3 location of the training documents. This parameter is required in a request to create a native document model.

Type: [DocumentClassifierDocuments](#) object

Required: No

## DocumentType

The type of input documents for training the model. Provide plain-text documents to create a plain-text model, and provide semi-structured documents to create a native document model.

Type: String

Valid Values: PLAIN\_TEXT\_DOCUMENT | SEMI\_STRUCTURED\_DOCUMENT

Required: No

## LabelDelimiter

Indicates the delimiter used to separate each label for training a multi-label classifier. The default delimiter between labels is a pipe (|). You can use a different character as a delimiter (if it's an allowed character) by specifying it under Delimiter for labels. If the training documents use a delimiter other than the default or the delimiter you specify, the labels on that line will be combined to make a single unique label, such as LABELLABELLABEL.

Type: String

Length Constraints: Fixed length of 1.

Pattern: `^[ ~!@#$%^*\-_+=|\\:;\t>?/]$`

Required: No

## S3Uri

The Amazon S3 URI for the input data. The S3 bucket must be in the same Region as the API endpoint that you are calling. The URI can point to a single input file or it can provide the prefix for a collection of input files.

For example, if you use the URI `S3://bucketName/prefix`, if the prefix is a single file, Amazon Comprehend uses that file as input. If more than one file begins with the prefix, Amazon Comprehend uses all of them as input.

This parameter is required if you set `DataFormat` to `COMPREHEND_CSV`.

Type: String

Length Constraints: Maximum length of 1024.

Pattern: `s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/*.)?`

Required: No

## TestS3Uri

This specifies the Amazon S3 location that contains the test annotations for the document classifier. The URI must be in the same AWS Region as the API endpoint that you are calling.

Type: String

Length Constraints: Maximum length of 1024.

Pattern: s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/\*.)?

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## DocumentClassifierOutputDataConfig

Provide the location for output data from a custom classifier job. This field is mandatory if you are training a native document model.

### Contents

#### FlywheelStatsS3Prefix

The Amazon S3 prefix for the data lake location of the flywheel statistics.

Type: String

Length Constraints: Maximum length of 1024.

Pattern: `s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/.*)?`

Required: No

#### KmsKeyId

ID for the AWS Key Management Service (KMS) key that Amazon Comprehend uses to encrypt the output results from an analysis job. The KmsKeyId can be one of the following formats:

- KMS Key ID: "1234abcd-12ab-34cd-56ef-1234567890ab"
- Amazon Resource Name (ARN) of a KMS Key: "arn:aws:kms:us-west-2:111122223333:key/1234abcd-12ab-34cd-56ef-1234567890ab"
- KMS Key Alias: "alias/ExampleAlias"
- ARN of a KMS Key Alias: "arn:aws:kms:us-west-2:111122223333:alias/ExampleAlias"

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^\p{ASCII}+$`

Required: No

#### S3Uri

When you use the OutputDataConfig object while creating a custom classifier, you specify the Amazon S3 location where you want to write the confusion matrix and other output files.

The URI must be in the same Region as the API endpoint that you are calling. The location is used as the prefix for the actual location of this output file.

When the custom classifier job is finished, the service creates the output file in a directory specific to the job. The `S3Uri` field contains the location of the output file, called `output.tar.gz`. It is a compressed archive that contains the confusion matrix.

Type: String

Length Constraints: Maximum length of 1024.

Pattern: `s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/.*)?`

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# DocumentClassifierProperties

Provides information about a document classifier.

## Contents

### ClassifierMetadata

Information about the document classifier, including the number of documents used for training the classifier, the number of documents used for test the classifier, and an accuracy rating.

Type: [ClassifierMetadata](#) object

Required: No

### DataAccessRoleArn

The Amazon Resource Name (ARN) of the IAM role that grants Amazon Comprehend read access to your input data.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:aws(-[^\:]+)?:iam::[0-9]{12}:role/.+`

Required: No

### DocumentClassifierArn

The Amazon Resource Name (ARN) that identifies the document classifier.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9-]*:[0-9]{12}:document-classifier/[a-zA-Z0-9](-*[a-zA-Z0-9])*(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*)?`

Required: No

**EndTime**

The time that training the document classifier completed.

Type: Timestamp

Required: No

**FlywheelArn**

The Amazon Resource Number (ARN) of the flywheel

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:flywheel/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

Required: No

**InputDataConfig**

The input data configuration that you supplied when you created the document classifier for training.

Type: [DocumentClassifierInputDataConfig](#) object

Required: No

**LanguageCode**

The language code for the language of the documents that the classifier was trained on.

Type: String

Valid Values: `en | es | fr | de | it | pt`

Required: No

**Message**

Additional information about the status of the classifier.

Type: String

Required: No



## Mode

Indicates the mode in which the specific classifier was trained. This also indicates the format of input documents and the format of the confusion matrix. Each classifier can only be trained in one mode and this cannot be changed once the classifier is trained.

Type: String

Valid Values: MULTI\_CLASS | MULTI\_LABEL

Required: No

## ModelKmsKeyId

ID for the AWS KMS key that Amazon Comprehend uses to encrypt trained custom models. The ModelKmsKeyId can be either of the following formats:

- KMS Key ID: "1234abcd-12ab-34cd-56ef-1234567890ab"
- Amazon Resource Name (ARN) of a KMS Key: "arn:aws:kms:us-west-2:111122223333:key/1234abcd-12ab-34cd-56ef-1234567890ab"

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^\p{ASCII}+$`

Required: No

## OutputDataConfig

Provides output results configuration parameters for custom classifier jobs.

Type: [DocumentClassifierOutputDataConfig](#) object

Required: No

## SourceModelArn

The Amazon Resource Name (ARN) of the source model. This model was imported from a different AWS account to create the document classifier model in your AWS account.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:document-classifier/[a-zA-Z0-9](-*[a-zA-Z0-9])*(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*)?`

Required: No

### **Status**

The status of the document classifier. If the status is `TRAINED` the classifier is ready to use. If the status is `TRAINED_WITH_WARNINGS` the classifier training succeeded, but you should review the warnings returned in the `CreateDocumentClassifier` response.

If the status is `FAILED` you can see additional information about why the classifier wasn't trained in the `Message` field.

Type: String

Valid Values: `SUBMITTED` | `TRAINING` | `DELETING` | `STOP_REQUESTED` | `STOPPED` | `IN_ERROR` | `TRAINED` | `TRAINED_WITH_WARNING`

Required: No

### **SubmitTime**

The time that the document classifier was submitted for training.

Type: Timestamp

Required: No

### **TrainingEndTime**

The time that training of the document classifier was completed. Indicates the time when the training completes on documentation classifiers. You are billed for the time interval between this time and the value of `TrainingStartTime`.

Type: Timestamp

Required: No

### **TrainingStartTime**

Indicates the time when the training starts on documentation classifiers. You are billed for the time interval between this time and the value of `TrainingEndTime`.

Type: Timestamp

Required: No

### **VersionName**

The version name that you assigned to the document classifier.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[a-zA-Z0-9](-*[a-zA-Z0-9])*$`

Required: No

### **VolumeKmsKeyId**

ID for the AWS Key Management Service (KMS) key that Amazon Comprehend uses to encrypt data on the storage volume attached to the ML compute instance(s) that process the analysis job. The VolumeKmsKeyId can be either of the following formats:

- KMS Key ID: "1234abcd-12ab-34cd-56ef-1234567890ab"
- Amazon Resource Name (ARN) of a KMS Key: "arn:aws:kms:us-west-2:111122223333:key/1234abcd-12ab-34cd-56ef-1234567890ab"

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^\p{ASCII}+$`

Required: No

### **VpcConfig**

Configuration parameters for a private Virtual Private Cloud (VPC) containing the resources you are using for your custom classifier. For more information, see [Amazon VPC](#).

Type: [VpcConfig](#) object

Required: No

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## DocumentClassifierSummary

Describes information about a document classifier and its versions.

### Contents

#### DocumentClassifierName

The name that you assigned the document classifier.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[a-zA-Z0-9](-*[a-zA-Z0-9])*$`

Required: No

#### LatestVersionCreatedAt

The time that the latest document classifier version was submitted for processing.

Type: Timestamp

Required: No

#### LatestVersionName

The version name you assigned to the latest document classifier version.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[a-zA-Z0-9](-*[a-zA-Z0-9])*$`

Required: No

#### LatestVersionStatus

Provides the status of the latest document classifier version.

Type: String

Valid Values: SUBMITTED | TRAINING | DELETING | STOP\_REQUESTED | STOPPED | IN\_ERROR | TRAINED | TRAINED\_WITH\_WARNING

Required: No

### **NumberOfVersions**

The number of versions you created.

Type: Integer

Required: No

### **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## DocumentLabel

Specifies one of the label or labels that categorize the document being analyzed.

### Contents

#### Name

The name of the label.

Type: String

Length Constraints: Minimum length of 1.

Required: No

#### Page

Page number where the label occurs. This field is present in the response only if your request includes the `Byte` parameter.

Type: Integer

Required: No

#### Score

The confidence score that Amazon Comprehend has this label correctly attributed.

Type: Float

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## DocumentMetadata

Information about the document, discovered during text extraction.

### Contents

#### ExtractedCharacters

List of pages in the document, with the number of characters extracted from each page.

Type: Array of [ExtractedCharactersListItem](#) objects

Required: No

#### Pages

Number of pages in the document.

Type: Integer

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)



## DocumentReaderConfig

Provides configuration parameters to override the default actions for extracting text from PDF documents and image files.

By default, Amazon Comprehend performs the following actions to extract text from files, based on the input file type:

- **Word files** - Amazon Comprehend parser extracts the text.
- **Digital PDF files** - Amazon Comprehend parser extracts the text.
- **Image files and scanned PDF files** - Amazon Comprehend uses the Amazon Textract DetectDocumentText API to extract the text.

DocumentReaderConfig does not apply to plain text files or Word files.

For image files and PDF documents, you can override these default actions using the fields listed below. For more information, see [Setting text extraction options](#) in the Comprehend Developer Guide.

### Contents

#### DocumentReadAction

This field defines the Amazon Textract API operation that Amazon Comprehend uses to extract text from PDF files and image files. Enter one of the following values:

- `TEXTRACT_DETECT_DOCUMENT_TEXT` - The Amazon Comprehend service uses the DetectDocumentText API operation.
- `TEXTRACT_ANALYZE_DOCUMENT` - The Amazon Comprehend service uses the AnalyzeDocument API operation.

Type: String

Valid Values: `TEXTRACT_DETECT_DOCUMENT_TEXT` | `TEXTRACT_ANALYZE_DOCUMENT`

Required: Yes

#### DocumentReadMode

Determines the text extraction actions for PDF files. Enter one of the following values:

- `SERVICE_DEFAULT` - use the Amazon Comprehend service defaults for PDF files.

- **FORCE\_DOCUMENT\_READ\_ACTION** - Amazon Comprehend uses the Textract API specified by DocumentReadAction for all PDF files, including digital PDF files.

Type: String

Valid Values: SERVICE\_DEFAULT | FORCE\_DOCUMENT\_READ\_ACTION

Required: No

## FeatureTypes

Specifies the type of Amazon Textract features to apply. If you chose **TEXTRACT\_ANALYZE\_DOCUMENT** as the read action, you must specify one or both of the following values:

- **TABLES** - Returns additional information about any tables that are detected in the input document.
- **FORMS** - Returns additional information about any forms that are detected in the input document.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 2 items.

Valid Values: TABLES | FORMS

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## DocumentTypeListItem

Document type for each page in the document.

### Contents

#### Page

Page number.

Type: Integer

Required: No

#### Type

Document type.

Type: String

Valid Values: NATIVE\_PDF | SCANNED\_PDF | MS\_WORD | IMAGE | PLAIN\_TEXT |  
TEXTTRACT\_DETECT\_DOCUMENT\_TEXT\_JSON | TEXTTRACT\_ANALYZE\_DOCUMENT\_JSON

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## DominantLanguage

Returns the code for the dominant language in the input text and the level of confidence that Amazon Comprehend has in the accuracy of the detection.

### Contents

#### LanguageCode

The RFC 5646 language code for the dominant language. For more information about RFC 5646, see [Tags for Identifying Languages](#) on the *IETF Tools* web site.

Type: String

Length Constraints: Minimum length of 1.

Required: No

#### Score

The level of confidence that Amazon Comprehend has in the accuracy of the detection.

Type: Float

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## DominantLanguageDetectionJobFilter

Provides information for filtering a list of dominant language detection jobs. For more information, see the [ListDominantLanguageDetectionJobs](#) operation.

### Contents

#### JobName

Filters on the name of the job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^([\p{L}\p{Z}\p{N}_ . : / = + \ - % @ ] *)$`

Required: No

#### JobStatus

Filters the list of jobs based on job status. Returns only jobs with the specified status.

Type: String

Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED  
| STOPPED

Required: No

#### SubmitTimeAfter

Filters the list of jobs based on the time that the job was submitted for processing. Returns only jobs submitted after the specified time. Jobs are returned in descending order, newest to oldest.

Type: Timestamp

Required: No

#### SubmitTimeBefore

Filters the list of jobs based on the time that the job was submitted for processing. Returns only jobs submitted before the specified time. Jobs are returned in ascending order, oldest to newest.

Type: Timestamp

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## DominantLanguageDetectionJobProperties

Provides information about a dominant language detection job.

### Contents

#### DataAccessRoleArn

The Amazon Resource Name (ARN) of the IAM role that grants Amazon Comprehend read access to your input data.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:aws(-[^\:]+)?:iam::[0-9]{12}:role/.+`

Required: No

#### EndTime

The time that the dominant language detection job completed.

Type: Timestamp

Required: No

#### InputDataConfig

The input data configuration that you supplied when you created the dominant language detection job.

Type: [InputDataConfig](#) object

Required: No

#### JobArn

The Amazon Resource Name (ARN) of the dominant language detection job. It is a unique, fully qualified identifier for the job. It includes the AWS account, AWS Region, and the job ID. The format of the ARN is as follows:

```
arn:<partition>:comprehend:<region>:<account-id>:dominant-language-  
detection-job/<job-id>
```

The following is an example job ARN:

```
arn:aws:comprehend:us-west-2:111122223333:dominant-language-detection-  
job/1234abcd12ab34cd56ef1234567890ab
```

Type: String

Length Constraints: Maximum length of 256.

```
Pattern: arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:[a-zA-Z0-9-]  
{1,64}/[a-zA-Z0-9](-*[a-zA-Z0-9])*((/dataset/[a-zA-Z0-9](-*[a-zA-  
Z0-9])*)|(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*))?)
```

Required: No

### **JobId**

The identifier assigned to the dominant language detection job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

```
Pattern: ^([\p{L}\p{Z}\p{N}_ . : / = + \ - % @ ] *)$
```

Required: No

### **JobName**

The name that you assigned to the dominant language detection job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

```
Pattern: ^([\p{L}\p{Z}\p{N}_ . : / = + \ - % @ ] *)$
```

Required: No

### **JobStatus**

The current status of the dominant language detection job. If the status is FAILED, the Message field shows the reason for the failure.

Type: String



Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED  
| STOPPED

Required: No

### Message

A description for the status of a job.

Type: String

Required: No

### OutputDataConfig

The output data configuration that you supplied when you created the dominant language detection job.

Type: [OutputDataConfig](#) object

Required: No

### SubmitTime

The time that the dominant language detection job was submitted for processing.

Type: Timestamp

Required: No

### VolumeKmsKeyId

ID for the AWS Key Management Service (KMS) key that Amazon Comprehend uses to encrypt data on the storage volume attached to the ML compute instance(s) that process the analysis job. The VolumeKmsKeyId can be either of the following formats:

- KMS Key ID: "1234abcd-12ab-34cd-56ef-1234567890ab"
- Amazon Resource Name (ARN) of a KMS Key: "arn:aws:kms:us-west-2:111122223333:key/1234abcd-12ab-34cd-56ef-1234567890ab"

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^\p{ASCII}+$`

Required: No

## VpcConfig

Configuration parameters for a private Virtual Private Cloud (VPC) containing the resources you are using for your dominant language detection job. For more information, see [Amazon VPC](#).

Type: [VpcConfig](#) object

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## EndpointFilter

The filter used to determine which endpoints are returned. You can filter jobs on their name, model, status, or the date and time that they were created. You can only set one filter at a time.

### Contents

#### CreationTimeAfter

Specifies a date after which the returned endpoint or endpoints were created.

Type: Timestamp

Required: No

#### CreationTimeBefore

Specifies a date before which the returned endpoint or endpoints were created.

Type: Timestamp

Required: No

#### ModelArn

The Amazon Resource Number (ARN) of the model to which the endpoint is attached.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:(document-classifier|entity-recognizer)/[a-zA-Z0-9](-*[a-zA-Z0-9])*(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*)?`

Required: No

#### Status

Specifies the status of the endpoint being returned. Possible values are: Creating, Ready, Updating, Deleting, Failed.

Type: String

Valid Values: CREATING | DELETING | FAILED | IN\_SERVICE | UPDATING

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## EndpointProperties

Specifies information about the specified endpoint. For information about endpoints, see [Managing endpoints](#).

### Contents

#### CreationTime

The creation date and time of the endpoint.

Type: Timestamp

Required: No

#### CurrentInferenceUnits

The number of inference units currently used by the model using this endpoint.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

#### DataAccessRoleArn

The Amazon Resource Name (ARN) of the IAM role that grants Amazon Comprehend read access to trained custom models encrypted with a customer managed key (ModelKmsKeyId).

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:aws(-[^\:]+)?:iam::[0-9]{12}:role/.+`

Required: No

#### DesiredDataAccessRoleArn

Data access role ARN to use in case the new model is encrypted with a customer KMS key.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:aws(-[^\:]+)?:iam::[0-9]{12}:role/.+`

Required: No

### **DesiredInferenceUnits**

The desired number of inference units to be used by the model using this endpoint. Each inference unit represents of a throughput of 100 characters per second.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

### **DesiredModelArn**

ARN of the new model to use for updating an existing endpoint. This ARN is going to be different from the model ARN when the update is in progress

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:(document-classifier|entity-recognizer)/[a-zA-Z0-9](-*[a-zA-Z0-9])*/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

Required: No

### **EndpointArn**

The Amazon Resource Number (ARN) of the endpoint.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:(document-classifier-endpoint|entity-recognizer-endpoint)/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

Required: No

### **FlywheelArn**

The Amazon Resource Number (ARN) of the flywheel

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:flywheel/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

Required: No

### **LastModifiedTime**

The date and time that the endpoint was last modified.

Type: Timestamp

Required: No

### **Message**

Specifies a reason for failure in cases of Failed status.

Type: String

Required: No

### **ModelArn**

The Amazon Resource Number (ARN) of the model to which the endpoint is attached.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:(document-classifier|entity-recognizer)/[a-zA-Z0-9](-*[a-zA-Z0-9])*(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*)?`

Required: No

### **Status**

Specifies the status of the endpoint. Because the endpoint updates and creation are asynchronous, so customers will need to wait for the endpoint to be Ready status before making inference requests.

Type: String

Valid Values: CREATING | DELETING | FAILED | IN\_SERVICE | UPDATING

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)



## EntitiesDetectionJobFilter

Provides information for filtering a list of dominant language detection jobs. For more information, see the [ListEntitiesDetectionJobs](#) operation.

### Contents

#### JobName

Filters on the name of the job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^([\p{L}\p{Z}\p{N}_ . : / = + \ - % @ ] *)$`

Required: No

#### JobStatus

Filters the list of jobs based on job status. Returns only jobs with the specified status.

Type: String

Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED  
| STOPPED

Required: No

#### SubmitTimeAfter

Filters the list of jobs based on the time that the job was submitted for processing. Returns only jobs submitted after the specified time. Jobs are returned in descending order, newest to oldest.

Type: Timestamp

Required: No

#### SubmitTimeBefore

Filters the list of jobs based on the time that the job was submitted for processing. Returns only jobs submitted before the specified time. Jobs are returned in ascending order, oldest to newest.

Type: Timestamp

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## EntitiesDetectionJobProperties

Provides information about an entities detection job.

### Contents

#### DataAccessRoleArn

The Amazon Resource Name (ARN) of the IAM role that grants Amazon Comprehend read access to your input data.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:aws(-[^\:]+)?:iam::[\0-9]{12}:role/.+`

Required: No

#### EndTime

The time that the entities detection job completed

Type: Timestamp

Required: No

#### EntityRecognizerArn

The Amazon Resource Name (ARN) that identifies the entity recognizer.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9-]*:[\0-9]{12}:entity-recognizer/[a-zA-Z0-9](-*[a-zA-Z0-9])*(/version/[a-zA-Z0-9](-*[a-zA-Z0-9]))*?)`

Required: No

#### FlywheelArn

The Amazon Resource Name (ARN) of the flywheel associated with this job.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:flywheel/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

Required: No

## InputDataConfig

The input data configuration that you supplied when you created the entities detection job.

Type: [InputDataConfig](#) object

Required: No

## JobArn

The Amazon Resource Name (ARN) of the entities detection job. It is a unique, fully qualified identifier for the job. It includes the AWS account, AWS Region, and the job ID. The format of the ARN is as follows:

```
arn:<partition>:comprehend:<region>:<account-id>:entities-detection-job/<job-id>
```

The following is an example job ARN:

```
arn:aws:comprehend:us-west-2:111122223333:entities-detection-job/1234abcd12ab34cd56ef1234567890ab
```

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:[a-zA-Z0-9]{1,64}/[a-zA-Z0-9](-*[a-zA-Z0-9])*((/dataset/[a-zA-Z0-9](-*[a-zA-Z0-9])*)|(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*))?`

Required: No

## JobId

The identifier assigned to the entities detection job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^([\p{L}\p{Z}\p{N}_ . : / = + \ - % @ ] *)$`

Required: No

### **JobName**

The name that you assigned the entities detection job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^([\p{L}\p{Z}\p{N}_ . : / = + \ - % @ ] *)$`

Required: No

### **JobStatus**

The current status of the entities detection job. If the status is FAILED, the Message field shows the reason for the failure.

Type: String

Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED  
| STOPPED

Required: No

### **LanguageCode**

The language code of the input documents.

Type: String

Valid Values: en | es | fr | de | it | pt | ar | hi | ja | ko | zh | zh-TW

Required: No

### **Message**

A description of the status of a job.

Type: String

Required: No

### **OutputDataConfig**

The output data configuration that you supplied when you created the entities detection job.

Type: [OutputDataConfig](#) object

Required: No

### **SubmitTime**

The time that the entities detection job was submitted for processing.

Type: Timestamp

Required: No

### **VolumeKmsKeyId**

ID for the AWS Key Management Service (KMS) key that Amazon Comprehend uses to encrypt data on the storage volume attached to the ML compute instance(s) that process the analysis job. The VolumeKmsKeyId can be either of the following formats:

- KMS Key ID: "1234abcd-12ab-34cd-56ef-1234567890ab"
- Amazon Resource Name (ARN) of a KMS Key: "arn:aws:kms:us-west-2:111122223333:key/1234abcd-12ab-34cd-56ef-1234567890ab"

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^\p{ASCII}+$`

Required: No

### **VpcConfig**

Configuration parameters for a private Virtual Private Cloud (VPC) containing the resources you are using for your entity detection job. For more information, see [Amazon VPC](#).

Type: [VpcConfig](#) object

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# Entity

Provides information about an entity.

## Contents

### BeginOffset

The zero-based offset from the beginning of the source text to the first character in the entity.

This field is empty for non-text input.

Type: Integer

Required: No

### BlockReferences

A reference to each block for this entity. This field is empty for plain-text input.

Type: Array of [BlockReference](#) objects

Required: No

### EndOffset

The zero-based offset from the beginning of the source text to the last character in the entity.

This field is empty for non-text input.

Type: Integer

Required: No

### Score

The level of confidence that Amazon Comprehend has in the accuracy of the detection.

Type: Float

Required: No

### Text

The text of the entity.



Type: String

Length Constraints: Minimum length of 1.

Required: No

## Type

The entity type. For entity detection using the built-in model, this field contains one of the standard entity types listed below.

For custom entity detection, this field contains one of the entity types that you specified when you trained your custom model.

Type: String

Valid Values: PERSON | LOCATION | ORGANIZATION | COMMERCIAL\_ITEM | EVENT | DATE | QUANTITY | TITLE | OTHER

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## EntityLabel

Specifies one of the label or labels that categorize the personally identifiable information (PII) entity being analyzed.

### Contents

#### Name

The name of the label.

Type: String

Valid Values: BANK\_ACCOUNT\_NUMBER | BANK\_ROUTING | CREDIT\_DEBIT\_NUMBER | CREDIT\_DEBIT\_CVV | CREDIT\_DEBIT\_EXPIRY | PIN | EMAIL | ADDRESS | NAME | PHONE | SSN | DATE\_TIME | PASSPORT\_NUMBER | DRIVER\_ID | URL | AGE | USERNAME | PASSWORD | AWS\_ACCESS\_KEY | AWS\_SECRET\_KEY | IP\_ADDRESS | MAC\_ADDRESS

Required: Yes

#### Score

The level of confidence that Amazon Comprehend has in the accuracy of the detection.

Type: Float

Required: Yes

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# EntityRecognitionConfig

Configuration required for an entity recognition model.

## Contents

### EntityTypes

Up to 25 entity types that the model is trained to recognize.

Type: Array of [EntityTypesListItem](#) objects

Required: Yes

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# EntityRecognizerAnnotations

Describes the annotations associated with an entity recognizer.

## Contents

### S3Uri

Specifies the Amazon S3 location where the annotations for an entity recognizer are located. The URI must be in the same Region as the API endpoint that you are calling.

Type: String

Length Constraints: Maximum length of 1024.

Pattern: `s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/*.*)?`

Required: Yes

### TestS3Uri

Specifies the Amazon S3 location where the test annotations for an entity recognizer are located. The URI must be in the same Region as the API endpoint that you are calling.

Type: String

Length Constraints: Maximum length of 1024.

Pattern: `s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/*.*)?`

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## EntityRecognizerDocuments

Describes the training documents submitted with an entity recognizer.

### Contents

#### S3Uri

Specifies the Amazon S3 location where the training documents for an entity recognizer are located. The URI must be in the same Region as the API endpoint that you are calling.

Type: String

Length Constraints: Maximum length of 1024.

Pattern: `s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/*.)?`

Required: Yes

#### InputFormat

Specifies how the text in an input file should be processed. This is optional, and the default is `ONE_DOC_PER_LINE`. `ONE_DOC_PER_FILE` - Each file is considered a separate document. Use this option when you are processing large documents, such as newspaper articles or scientific papers. `ONE_DOC_PER_LINE` - Each line in a file is considered a separate document. Use this option when you are processing many short documents, such as text messages.

Type: String

Valid Values: `ONE_DOC_PER_FILE` | `ONE_DOC_PER_LINE`

Required: No

#### TestS3Uri

Specifies the Amazon S3 location where the test documents for an entity recognizer are located. The URI must be in the same AWS Region as the API endpoint that you are calling.

Type: String

Length Constraints: Maximum length of 1024.

Pattern: `s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/*.)?`

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## EntityRecognizerEntityList

Describes the entity list submitted with an entity recognizer.

### Contents

#### S3Uri

Specifies the Amazon S3 location where the entity list is located. The URI must be in the same Region as the API endpoint that you are calling.

Type: String

Length Constraints: Maximum length of 1024.

Pattern: `s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/*.*)?`

Required: Yes

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# EntityRecognizerEvaluationMetrics

Detailed information about the accuracy of an entity recognizer.

## Contents

### F1Score

A measure of how accurate the recognizer results are for the test data. It is derived from the Precision and Recall values. The F1Score is the harmonic average of the two scores. For plain text entity recognizer models, the range is 0 to 100, where 100 is the best score. For PDF/Word entity recognizer models, the range is 0 to 1, where 1 is the best score.

Type: Double

Required: No

### Precision

A measure of the usefulness of the recognizer results in the test data. High precision means that the recognizer returned substantially more relevant results than irrelevant ones.

Type: Double

Required: No

### Recall

A measure of how complete the recognizer results are for the test data. High recall means that the recognizer returned most of the relevant results.

Type: Double

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)



- [AWS SDK for Ruby V3](#)

## EntityRecognizerFilter

Provides information for filtering a list of entity recognizers. You can only specify one filtering parameter in a request. For more information, see the `ListEntityRecognizers` operation./>

### Contents

#### RecognizerName

The name that you assigned the entity recognizer.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[a-zA-Z0-9](-*[a-zA-Z0-9])*$`

Required: No

#### Status

The status of an entity recognizer.

Type: String

Valid Values: SUBMITTED | TRAINING | DELETING | STOP\_REQUESTED | STOPPED | IN\_ERROR | TRAINED | TRAINED\_WITH\_WARNING

Required: No

#### SubmitTimeAfter

Filters the list of entities based on the time that the list was submitted for processing. Returns only jobs submitted after the specified time. Jobs are returned in ascending order, oldest to newest.

Type: Timestamp

Required: No

#### SubmitTimeBefore

Filters the list of entities based on the time that the list was submitted for processing. Returns only jobs submitted before the specified time. Jobs are returned in descending order, newest to oldest.

Type: Timestamp

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# EntityRecognizerInputDataConfig

Specifies the format and location of the input data.

## Contents

### EntityTypes

The entity types in the labeled training data that Amazon Comprehend uses to train the custom entity recognizer. Any entity types that you don't specify are ignored.

A maximum of 25 entity types can be used at one time to train an entity recognizer. Entity types must not contain the following invalid characters: \n (line break), \\n (escaped line break), \r (carriage return), \\r (escaped carriage return), \t (tab), \\t (escaped tab), space, and , (comma).

Type: Array of [EntityTypesListItem](#) objects

Required: Yes

### Annotations

The S3 location of the CSV file that annotates your training documents.

Type: [EntityRecognizerAnnotations](#) object

Required: No

### AugmentedManifests

A list of augmented manifest files that provide training data for your custom model. An augmented manifest file is a labeled dataset that is produced by Amazon SageMaker Ground Truth.

This parameter is required if you set `DataFormat` to `AUGMENTED_MANIFEST`.

Type: Array of [AugmentedManifestsListItem](#) objects

Required: No

### DataFormat

The format of your training data:

- `COMPREHEND_CSV`: A CSV file that supplements your training documents. The CSV file contains information about the custom entities that your trained model will detect. The

required format of the file depends on whether you are providing annotations or an entity list.

If you use this value, you must provide your CSV file by using either the `Annotations` or `EntityList` parameters. You must provide your training documents by using the `Documents` parameter.

- `AUGMENTED_MANIFEST`: A labeled dataset that is produced by Amazon SageMaker Ground Truth. This file is in JSON lines format. Each line is a complete JSON object that contains a training document and its labels. Each label annotates a named entity in the training document.

If you use this value, you must provide the `AugmentedManifests` parameter in your request.

If you don't specify a value, Amazon Comprehend uses `COMPREHEND_CSV` as the default.

Type: String

Valid Values: `COMPREHEND_CSV` | `AUGMENTED_MANIFEST`

Required: No

## Documents

The S3 location of the folder that contains the training documents for your custom entity recognizer.

This parameter is required if you set `DataFormat` to `COMPREHEND_CSV`.

Type: [EntityRecognizerDocuments](#) object

Required: No

## EntityList

The S3 location of the CSV file that has the entity list for your custom entity recognizer.

Type: [EntityRecognizerEntityList](#) object

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## EntityRecognizerMetadata

Detailed information about an entity recognizer.

### Contents

#### EntityTypes

Entity types from the metadata of an entity recognizer.

Type: Array of [EntityRecognizerMetadataEntityTypesListItem](#) objects

Required: No

#### EvaluationMetrics

Detailed information about the accuracy of an entity recognizer.

Type: [EntityRecognizerEvaluationMetrics](#) object

Required: No

#### NumberOfTestDocuments

The number of documents in the input data that were used to test the entity recognizer. Typically this is 10 to 20 percent of the input documents.

Type: Integer

Required: No

#### NumberOfTrainedDocuments

The number of documents in the input data that were used to train the entity recognizer. Typically this is 80 to 90 percent of the input documents.

Type: Integer

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)



## EntityRecognizerMetadataEntityTypesListItem

Individual item from the list of entity types in the metadata of an entity recognizer.

### Contents

#### EvaluationMetrics

Detailed information about the accuracy of the entity recognizer for a specific item on the list of entity types.

Type: [EntityTypesEvaluationMetrics](#) object

Required: No

#### NumberOfTrainMentions

Indicates the number of times the given entity type was seen in the training data.

Type: Integer

Required: No

#### Type

Type of entity from the list of entity types in the metadata of an entity recognizer.

Type: String

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# EntityRecognizerOutputDataConfig

Output data configuration.

## Contents

### FlywheelStatsS3Prefix

The Amazon S3 prefix for the data lake location of the flywheel statistics.

Type: String

Length Constraints: Maximum length of 1024.

Pattern: `s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/.*)?`

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## EntityRecognizerProperties

Describes information about an entity recognizer.

### Contents

#### DataAccessRoleArn

The Amazon Resource Name (ARN) of the IAM role that grants Amazon Comprehend read access to your input data.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:aws(-[^\:]+)?:iam::[\0-9]{12}:role/.+`

Required: No

#### EndTime

The time that the recognizer creation completed.

Type: Timestamp

Required: No

#### EntityRecognizerArn

The Amazon Resource Name (ARN) that identifies the entity recognizer.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9-]*:[\0-9]{12}:entity-recognizer/[a-zA-Z0-9](-*[a-zA-Z0-9])*(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*)?`

Required: No

#### FlywheelArn

The Amazon Resource Number (ARN) of the flywheel

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:flywheel/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

Required: No

### **InputDataConfig**

The input data properties of an entity recognizer.

Type: [EntityRecognizerInputDataConfig](#) object

Required: No

### **LanguageCode**

The language of the input documents. All documents must be in the same language. Only English ("en") is currently supported.

Type: String

Valid Values: en | es | fr | it | de | pt

Required: No

### **Message**

A description of the status of the recognizer.

Type: String

Required: No

### **ModelKmsKeyId**

ID for the AWS KMS key that Amazon Comprehend uses to encrypt trained custom models. The ModelKmsKeyId can be either of the following formats:

- KMS Key ID: "1234abcd-12ab-34cd-56ef-1234567890ab"
- Amazon Resource Name (ARN) of a KMS Key: "arn:aws:kms:us-west-2:111122223333:key/1234abcd-12ab-34cd-56ef-1234567890ab"

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^\p{ASCII}+$`

Required: No

### **OutputDataConfig**

Output data configuration.

Type: [EntityRecognizerOutputDataConfig](#) object

Required: No

### **RecognizerMetadata**

Provides information about an entity recognizer.

Type: [EntityRecognizerMetadata](#) object

Required: No

### **SourceModelArn**

The Amazon Resource Name (ARN) of the source model. This model was imported from a different AWS account to create the entity recognizer model in your AWS account.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9-]*:[0-9]{12}:entity-recognizer/[a-zA-Z0-9](-*[a-zA-Z0-9])*(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*)?`

Required: No

### **Status**

Provides the status of the entity recognizer.

Type: String

Valid Values: SUBMITTED | TRAINING | DELETING | STOP\_REQUESTED | STOPPED | IN\_ERROR | TRAINED | TRAINED\_WITH\_WARNING

Required: No

### **SubmitTime**

The time that the recognizer was submitted for processing.

Type: Timestamp

Required: No

### **TrainingEndTime**

The time that training of the entity recognizer was completed.

Type: Timestamp

Required: No

### **TrainingStartTime**

The time that training of the entity recognizer started.

Type: Timestamp

Required: No

### **VersionName**

The version name you assigned to the entity recognizer.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[a-zA-Z0-9](-*[a-zA-Z0-9])*$`

Required: No

### **VolumeKmsKeyId**

ID for the AWS Key Management Service (KMS) key that Amazon Comprehend uses to encrypt data on the storage volume attached to the ML compute instance(s) that process the analysis job. The VolumeKmsKeyId can be either of the following formats:

- KMS Key ID: "1234abcd-12ab-34cd-56ef-1234567890ab"
- Amazon Resource Name (ARN) of a KMS Key: "arn:aws:kms:us-west-2:111122223333:key/1234abcd-12ab-34cd-56ef-1234567890ab"

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^\p{ASCII}+$`

Required: No

## VpcConfig

Configuration parameters for a private Virtual Private Cloud (VPC) containing the resources you are using for your custom entity recognizer. For more information, see [Amazon VPC](#).

Type: [VpcConfig](#) object

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## EntityRecognizerSummary

Describes the information about an entity recognizer and its versions.

### Contents

#### LatestVersionCreatedAt

The time that the latest entity recognizer version was submitted for processing.

Type: Timestamp

Required: No

#### LatestVersionName

The version name you assigned to the latest entity recognizer version.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[a-zA-Z0-9](-*[a-zA-Z0-9])*$`

Required: No

#### LatestVersionStatus

Provides the status of the latest entity recognizer version.

Type: String

Valid Values: SUBMITTED | TRAINING | DELETING | STOP\_REQUESTED | STOPPED | IN\_ERROR | TRAINED | TRAINED\_WITH\_WARNING

Required: No

#### NumberOfVersions

The number of versions you created.

Type: Integer

Required: No



## RecognizerName

The name that you assigned the entity recognizer.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[a-zA-Z0-9](-*[a-zA-Z0-9])*$`

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# EntityTypesEvaluationMetrics

Detailed information about the accuracy of an entity recognizer for a specific entity type.

## Contents

### F1Score

A measure of how accurate the recognizer results are for a specific entity type in the test data. It is derived from the `Precision` and `Recall` values. The `F1Score` is the harmonic average of the two scores. The highest score is 1, and the worst score is 0.

Type: Double

Required: No

### Precision

A measure of the usefulness of the recognizer results for a specific entity type in the test data. High precision means that the recognizer returned substantially more relevant results than irrelevant ones.

Type: Double

Required: No

### Recall

A measure of how complete the recognizer results are for a specific entity type in the test data. High recall means that the recognizer returned most of the relevant results.

Type: Double

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)

- [AWS SDK for Ruby V3](#)

## EntityTypesListItem

An entity type within a labeled training dataset that Amazon Comprehend uses to train a custom entity recognizer.

### Contents

#### Type

An entity type within a labeled training dataset that Amazon Comprehend uses to train a custom entity recognizer.

Entity types must not contain the following invalid characters: `\n` (line break), `\\n` (escaped line break, `\r` (carriage return), `\\r` (escaped carriage return), `\t` (tab), `\\t` (escaped tab), and `,` (comma).

Type: String

Length Constraints: Maximum length of 64.

Pattern: `^(?![^\n\r\t,]*\\n|\\r|\\t)[^\n\r\t,]+$`

Required: Yes

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## ErrorsListItem

Text extraction encountered one or more page-level errors in the input document.

The `ErrorCode` contains one of the following values:

- `TEXTACT_BAD_PAGE` - Amazon Textract cannot read the page. For more information about page limits in Amazon Textract, see [Page Quotas in Amazon Textract](#).
- `TEXTACT_PROVISIONED_THROUGHPUT_EXCEEDED` - The number of requests exceeded your throughput limit. For more information about throughput quotas in Amazon Textract, see [Default quotas in Amazon Textract](#).
- `PAGE_CHARACTERS_EXCEEDED` - Too many text characters on the page (10,000 characters maximum).
- `PAGE_SIZE_EXCEEDED` - The maximum page size is 10 MB.
- `INTERNAL_SERVER_ERROR` - The request encountered a service issue. Try the API request again.

## Contents

### ErrorCode

Error code for the cause of the error.

Type: String

Valid Values: `TEXTACT_BAD_PAGE` | `TEXTACT_PROVISIONED_THROUGHPUT_EXCEEDED` | `PAGE_CHARACTERS_EXCEEDED` | `PAGE_SIZE_EXCEEDED` | `INTERNAL_SERVER_ERROR`

Required: No

### ErrorMessage

Text message explaining the reason for the error.

Type: String

Length Constraints: Minimum length of 1.

Required: No

### Page

Page number where the error occurred.

Type: Integer

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## EventsDetectionJobFilter

Provides information for filtering a list of event detection jobs.

### Contents

#### JobName

Filters on the name of the events detection job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^([\p{L}\p{Z}\p{N}_ . :/=+\-%@]*)$`

Required: No

#### JobStatus

Filters the list of jobs based on job status. Returns only jobs with the specified status.

Type: String

Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED  
| STOPPED

Required: No

#### SubmitTimeAfter

Filters the list of jobs based on the time that the job was submitted for processing. Returns only jobs submitted after the specified time. Jobs are returned in descending order, newest to oldest.

Type: Timestamp

Required: No

#### SubmitTimeBefore

Filters the list of jobs based on the time that the job was submitted for processing. Returns only jobs submitted before the specified time. Jobs are returned in ascending order, oldest to newest.

Type: Timestamp

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)



# EventsDetectionJobProperties

Provides information about an events detection job.

## Contents

### DataAccessRoleArn

The Amazon Resource Name (ARN) of the IAM role that grants Amazon Comprehend read access to your input data.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:aws(-[^\:]+)?:iam::[0-9]{12}:role/.+`

Required: No

### EndTime

The time that the events detection job completed.

Type: Timestamp

Required: No

### InputDataConfig

The input data configuration that you supplied when you created the events detection job.

Type: [InputDataConfig](#) object

Required: No

### JobArn

The Amazon Resource Name (ARN) of the events detection job. It is a unique, fully qualified identifier for the job. It includes the AWS account, AWS Region, and the job ID. The format of the ARN is as follows:

```
arn:<partition>:comprehend:<region>:<account-id>:events-detection-job/  
<job-id>
```

The following is an example job ARN:

```
arn:aws:comprehend:us-west-2:111122223333:events-detection-  
job/1234abcd12ab34cd56ef1234567890ab
```

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:[a-zA-Z0-9-]{1,64}/[a-zA-Z0-9](-*[a-zA-Z0-9])*((/dataset/[a-zA-Z0-9](-*[a-zA-Z0-9])*)|(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*))?)`

Required: No

### **JobId**

The identifier assigned to the events detection job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^([\p{L}\p{Z}\p{N}_.:/+\\-%@]*)$`

Required: No

### **JobName**

The name you assigned the events detection job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^([\p{L}\p{Z}\p{N}_.:/+\\-%@]*)$`

Required: No

### **JobStatus**

The current status of the events detection job.

Type: String

Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED  
| STOPPED

Required: No

### **LanguageCode**

The language code of the input documents.

Type: String

Valid Values: en

Required: No

### **Message**

A description of the status of the events detection job.

Type: String

Required: No

### **OutputDataConfig**

The output data configuration that you supplied when you created the events detection job.

Type: [OutputDataConfig](#) object

Required: No

### **SubmitTime**

The time that the events detection job was submitted for processing.

Type: Timestamp

Required: No

### **TargetEventTypes**

The types of events that are detected by the job.

Type: Array of strings

Array Members: Minimum number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 40.

Pattern: [A-Z\_]\*

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## ExtractedCharactersListItem

Array of the number of characters extracted from each page.

### Contents

#### Count

Number of characters extracted from each page.

Type: Integer

Required: No

#### Page

Page number.

Type: Integer

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## FlywheelFilter

Filter the flywheels based on creation time or flywheel status.

### Contents

#### CreationTimeAfter

Filter the flywheels to include flywheels created after the specified time.

Type: Timestamp

Required: No

#### CreationTimeBefore

Filter the flywheels to include flywheels created before the specified time.

Type: Timestamp

Required: No

#### Status

Filter the flywheels based on the flywheel status.

Type: String

Valid Values: CREATING | ACTIVE | UPDATING | DELETING | FAILED

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# FlywheelIterationFilter

Filter the flywheel iterations based on creation time.

## Contents

### CreationTimeAfter

Filter the flywheel iterations to include iterations created after the specified time.

Type: Timestamp

Required: No

### CreationTimeBefore

Filter the flywheel iterations to include iterations created before the specified time.

Type: Timestamp

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# FlywheelIterationProperties

The configuration properties of a flywheel iteration.

## Contents

### CreationTime

The creation start time of the flywheel iteration.

Type: Timestamp

Required: No

### EndTime

The completion time of this flywheel iteration.

Type: Timestamp

Required: No

### EvaluatedModelArn

The ARN of the evaluated model associated with this flywheel iteration.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:(document-classifier|entity-recognizer)/[a-zA-Z0-9](-*[a-zA-Z0-9])*(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*)?`

Required: No

### EvaluatedModelMetrics

The evaluation metrics associated with the evaluated model.

Type: [FlywheelModelEvaluationMetrics](#) object

Required: No

### EvaluationManifestS3Prefix



Type: String

Length Constraints: Maximum length of 1024.

Pattern: s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/\*.)?

Required: No

### **FlywheelArn**

Type: String

Length Constraints: Maximum length of 256.

Pattern: arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]\*:[0-9]{12}:flywheel/[a-zA-Z0-9](-\*[a-zA-Z0-9])\*

Required: No

### **FlywheelIterationId**

Type: String

Length Constraints: Maximum length of 63.

Pattern: [0-9]{8}T[0-9]{6}Z

Required: No

### **Message**

A description of the status of the flywheel iteration.

Type: String

Required: No

### **Status**

The status of the flywheel iteration.

Type: String

Valid Values: TRAINING | EVALUATING | COMPLETED | FAILED | STOP\_REQUESTED | STOPPED

Required: No

### **TrainedModelArn**

The ARN of the trained model associated with this flywheel iteration.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:(document-classifier|entity-recognizer)/[a-zA-Z0-9](-*[a-zA-Z0-9])*/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*`?

Required: No

### **TrainedModelMetrics**

The metrics associated with the trained model.

Type: [FlywheelModelEvaluationMetrics](#) object

Required: No

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# FlywheelModelEvaluationMetrics

The evaluation metrics associated with the evaluated model.

## Contents

### AverageAccuracy

Average accuracy metric for the model.

Type: Double

Required: No

### AverageF1Score

The average F1 score from the evaluation metrics.

Type: Double

Required: No

### AveragePrecision

Average precision metric for the model.

Type: Double

Required: No

### AverageRecall

Average recall metric for the model.

Type: Double

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)

- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## FlywheelProperties

The flywheel properties.

### Contents

#### ActiveModelArn

The Amazon Resource Number (ARN) of the active model version.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:(document-classifier|entity-recognizer)/[a-zA-Z0-9](-*[a-zA-Z0-9])*/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*`?

Required: No

#### CreationTime

Creation time of the flywheel.

Type: Timestamp

Required: No

#### DataAccessRoleArn

The Amazon Resource Name (ARN) of the IAM role that grants Amazon Comprehend permission to access the flywheel data.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:aws(-[^\:]+)?:iam::[0-9]{12}:role/.+`

Required: No

#### DataLakeS3Uri

Amazon S3 URI of the data lake location.

Type: String

Length Constraints: Maximum length of 1024.

Pattern: `s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/.*)?`

Required: No

### **DataSecurityConfig**

Data security configuration.

Type: [DataSecurityConfig](#) object

Required: No

### **FlywheelArn**

The Amazon Resource Number (ARN) of the flywheel.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:flywheel/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

Required: No

### **LastModifiedTime**

Last modified time for the flywheel.

Type: Timestamp

Required: No

### **LatestFlywheelIteration**

The most recent flywheel iteration.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `[0-9]{8}T[0-9]{6}Z`

Required: No

## Message

A description of the status of the flywheel.

Type: String

Required: No

## ModelType

Model type of the flywheel's model.

Type: String

Valid Values: DOCUMENT\_CLASSIFIER | ENTITY\_RECOGNIZER

Required: No

## Status

The status of the flywheel.

Type: String

Valid Values: CREATING | ACTIVE | UPDATING | DELETING | FAILED

Required: No

## TaskConfig

Configuration about the model associated with a flywheel.

Type: [TaskConfig](#) object

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)





# FlywheelSummary

Flywheel summary information.

## Contents

### ActiveModelArn

ARN of the active model version for the flywheel.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:(document-classifier|entity-recognizer)/[a-zA-Z0-9](-*[a-zA-Z0-9])*(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*)?`

Required: No

### CreationTime

Creation time of the flywheel.

Type: Timestamp

Required: No

### DataLakeS3Uri

Amazon S3 URI of the data lake location.

Type: String

Length Constraints: Maximum length of 1024.

Pattern: `s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/.*)?`

Required: No

### FlywheelArn

The Amazon Resource Number (ARN) of the flywheel

Type: String

Length Constraints: Maximum length of 256.

Pattern: `arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9-]*:[0-9]{12}:flywheel/[a-zA-Z0-9](-*[a-zA-Z0-9])*`

Required: No

### **LastModifiedTime**

Last modified time for the flywheel.

Type: Timestamp

Required: No

### **LatestFlywheelIteration**

The most recent flywheel iteration.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `[0-9]{8}T[0-9]{6}Z`

Required: No

### **Message**

A description of the status of the flywheel.

Type: String

Required: No

### **ModelType**

Model type of the flywheel's model.

Type: String

Valid Values: DOCUMENT\_CLASSIFIER | ENTITY\_RECOGNIZER

Required: No

### **Status**

The status of the flywheel.

Type: String

Valid Values: CREATING | ACTIVE | UPDATING | DELETING | FAILED

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## Geometry

Information about the location of items on a document page.

For additional information, see [Geometry](#) in the Amazon Textract API reference.

### Contents

#### BoundingBox

An axis-aligned coarse representation of the location of the recognized item on the document page.

Type: [BoundingBox](#) object

Required: No

#### Polygon

Within the bounding box, a fine-grained polygon around the recognized item.

Type: Array of [Point](#) objects

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## InputDataConfig

The input properties for an inference job. The document reader config field applies only to non-text inputs for custom analysis.

### Contents

#### S3Uri

The Amazon S3 URI for the input data. The URI must be in same Region as the API endpoint that you are calling. The URI can point to a single input file or it can provide the prefix for a collection of data files.

For example, if you use the URI `S3://bucketName/prefix`, if the prefix is a single file, Amazon Comprehend uses that file as input. If more than one file begins with the prefix, Amazon Comprehend uses all of them as input.

Type: String

Length Constraints: Maximum length of 1024.

Pattern: `s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/.*)?`

Required: Yes

#### DocumentReaderConfig

Provides configuration parameters to override the default actions for extracting text from PDF documents and image files.

Type: [DocumentReaderConfig](#) object

Required: No

#### InputFormat

Specifies how the text in an input file should be processed:

- `ONE_DOC_PER_FILE` - Each file is considered a separate document. Use this option when you are processing large documents, such as newspaper articles or scientific papers.
- `ONE_DOC_PER_LINE` - Each line in a file is considered a separate document. Use this option when you are processing many short documents, such as text messages.

Type: String

Valid Values: ONE\_DOC\_PER\_FILE | ONE\_DOC\_PER\_LINE

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# InvalidRequestDetail

Provides additional detail about why the request failed.

## Contents

### Reason

Reason codes include the following values:

- `DOCUMENT_SIZE_EXCEEDED` - Document size is too large. Check the size of your file and resubmit the request.
- `UNSUPPORTED_DOC_TYPE` - Document type is not supported. Check the file type and resubmit the request.
- `PAGE_LIMIT_EXCEEDED` - Too many pages in the document. Check the number of pages in your file and resubmit the request.
- `TEXTTRACT_ACCESS_DENIED` - Access denied to Amazon Textract. Verify that your account has permission to use Amazon Textract API operations and resubmit the request.
- `NOT_TEXTTRACT_JSON` - Document is not Amazon Textract JSON format. Verify the format and resubmit the request.
- `MISMATCHED_TOTAL_PAGE_COUNT` - Check the number of pages in your file and resubmit the request.
- `INVALID_DOCUMENT` - Invalid document. Check the file and resubmit the request.

Type: String

Valid Values: `DOCUMENT_SIZE_EXCEEDED` | `UNSUPPORTED_DOC_TYPE` | `PAGE_LIMIT_EXCEEDED` | `TEXTTRACT_ACCESS_DENIED`

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)

- [AWS SDK for Ruby V3](#)



## KeyPhrase

Describes a key noun phrase.

### Contents

#### BeginOffset

The zero-based offset from the beginning of the source text to the first character in the key phrase.

Type: Integer

Required: No

#### EndOffset

The zero-based offset from the beginning of the source text to the last character in the key phrase.

Type: Integer

Required: No

#### Score

The level of confidence that Amazon Comprehend has in the accuracy of the detection.

Type: Float

Required: No

#### Text

The text of a key noun phrase.

Type: String

Length Constraints: Minimum length of 1.

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## KeyPhrasesDetectionJobFilter

Provides information for filtering a list of dominant language detection jobs. For more information, see the [ListKeyPhrasesDetectionJobs](#) operation.

### Contents

#### JobName

Filters on the name of the job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^([\p{L}\p{Z}\p{N}_ . : / = + \ - % @ ] *)$`

Required: No

#### JobStatus

Filters the list of jobs based on job status. Returns only jobs with the specified status.

Type: String

Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED  
| STOPPED

Required: No

#### SubmitTimeAfter

Filters the list of jobs based on the time that the job was submitted for processing. Returns only jobs submitted after the specified time. Jobs are returned in descending order, newest to oldest.

Type: Timestamp

Required: No

#### SubmitTimeBefore

Filters the list of jobs based on the time that the job was submitted for processing. Returns only jobs submitted before the specified time. Jobs are returned in ascending order, oldest to newest.

Type: Timestamp

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## KeyPhrasesDetectionJobProperties

Provides information about a key phrases detection job.

### Contents

#### DataAccessRoleArn

The Amazon Resource Name (ARN) of the IAM role that grants Amazon Comprehend read access to your input data.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:aws(-[^\:]+)?:iam::[\0-9]{12}:role/.+`

Required: No

#### EndTime

The time that the key phrases detection job completed.

Type: Timestamp

Required: No

#### InputDataConfig

The input data configuration that you supplied when you created the key phrases detection job.

Type: [InputDataConfig](#) object

Required: No

#### JobArn

The Amazon Resource Name (ARN) of the key phrases detection job. It is a unique, fully qualified identifier for the job. It includes the AWS account, AWS Region, and the job ID. The format of the ARN is as follows:

```
arn:<partition>:comprehend:<region>:<account-id>:key-phrases-detection-job/<job-id>
```

The following is an example job ARN:

arn:aws:comprehend:us-west-2:111122223333:key-phrases-detection-job/1234abcd12ab34cd56ef1234567890ab

Type: String

Length Constraints: Maximum length of 256.

Pattern: arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]\*:[0-9]{12}:[a-zA-Z0-9]{1,64}/[a-zA-Z0-9](-\*[a-zA-Z0-9])\*((/dataset/[a-zA-Z0-9](-\*[a-zA-Z0-9])\*)|(/version/[a-zA-Z0-9](-\*[a-zA-Z0-9])\*)\*)?)

Required: No

### JobId

The identifier assigned to the key phrases detection job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: ^([\p{L}\p{Z}\p{N}\_.:/+\\-%@]\*)\$

Required: No

### JobName

The name that you assigned the key phrases detection job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: ^([\p{L}\p{Z}\p{N}\_.:/+\\-%@]\*)\$

Required: No

### JobStatus

The current status of the key phrases detection job. If the status is FAILED, the Message field shows the reason for the failure.

Type: String

Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED | STOPPED

Required: No

### **LanguageCode**

The language code of the input documents.

Type: String

Valid Values: en | es | fr | de | it | pt | ar | hi | ja | ko | zh | zh-TW

Required: No

### **Message**

A description of the status of a job.

Type: String

Required: No

### **OutputDataConfig**

The output data configuration that you supplied when you created the key phrases detection job.

Type: [OutputDataConfig](#) object

Required: No

### **SubmitTime**

The time that the key phrases detection job was submitted for processing.

Type: Timestamp

Required: No

### **VolumeKmsKeyId**

ID for the AWS KMS key that Amazon Comprehend uses to encrypt data on the storage volume attached to the ML compute instance(s) that process the analysis job. The VolumeKmsKeyId can be either of the following formats:

- KMS Key ID: "1234abcd-12ab-34cd-56ef-1234567890ab"
- Amazon Resource Name (ARN) of a KMS Key: "arn:aws:kms:us-west-2:111122223333:key/1234abcd-12ab-34cd-56ef-1234567890ab"

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^\p{ASCII}+$`

Required: No

## VpcConfig

Configuration parameters for a private Virtual Private Cloud (VPC) containing the resources you are using for your key phrases detection job. For more information, see [Amazon VPC](#).

Type: [VpcConfig](#) object

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)



## MentionSentiment

Contains the sentiment and sentiment score for one mention of an entity.

For more information about targeted sentiment, see [Targeted sentiment](#) in the *Amazon Comprehend Developer Guide*.

### Contents

#### Sentiment

The sentiment of the mention.

Type: String

Valid Values: POSITIVE | NEGATIVE | NEUTRAL | MIXED

Required: No

#### SentimentScore

Describes the level of confidence that Amazon Comprehend has in the accuracy of its detection of sentiments.

Type: [SentimentScore](#) object

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# OutputDataConfig

Provides configuration parameters for the output of inference jobs.

## Contents

### S3Uri

When you use the `OutputDataConfig` object with asynchronous operations, you specify the Amazon S3 location where you want to write the output data. The URI must be in the same Region as the API endpoint that you are calling. The location is used as the prefix for the actual location of the output file.

When the topic detection job is finished, the service creates an output file in a directory specific to the job. The `S3Uri` field contains the location of the output file, called `output.tar.gz`. It is a compressed archive that contains the output of the operation.

For a PII entity detection job, the output file is plain text, not a compressed archive. The output file name is the same as the input file, with `.out` appended at the end.

Type: String

Length Constraints: Maximum length of 1024.

Pattern: `s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/*.*)?`

Required: Yes

### KmsKeyId

ID for the AWS Key Management Service (KMS) key that Amazon Comprehend uses to encrypt the output results from an analysis job. Specify the Key Id of a symmetric key, because you cannot use an asymmetric key for uploading data to S3.

The `KmsKeyId` can be one of the following formats:

- KMS Key ID: `"1234abcd-12ab-34cd-56ef-1234567890ab"`
- Amazon Resource Name (ARN) of a KMS Key: `"arn:aws:kms:us-west-2:111122223333:key/1234abcd-12ab-34cd-56ef-1234567890ab"`
- KMS Key Alias: `"alias/ExampleAlias"`
- ARN of a KMS Key Alias: `"arn:aws:kms:us-west-2:111122223333:alias/ExampleAlias"`

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^\p{ASCII}+$`

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## PartOfSpeechTag

Identifies the part of speech represented by the token and gives the confidence that Amazon Comprehend has that the part of speech was correctly identified. For more information about the parts of speech that Amazon Comprehend can identify, see [Syntax](#) in the Comprehend Developer Guide.

### Contents

#### Score

The confidence that Amazon Comprehend has that the part of speech was correctly identified.

Type: Float

Required: No

#### Tag

Identifies the part of speech that the token represents.

Type: String

Valid Values: ADJ | ADP | ADV | AUX | CONJ | CCONJ | DET | INTJ | NOUN | NUM  
| O | PART | PRON | PROPN | PUNCT | SCONJ | SYM | VERB

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## PiiEntitiesDetectionJobFilter

Provides information for filtering a list of PII entity detection jobs.

### Contents

#### JobName

Filters on the name of the job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^([\p{L}\p{Z}\p{N}_ . :/=+\-%@]*)$`

Required: No

#### JobStatus

Filters the list of jobs based on job status. Returns only jobs with the specified status.

Type: String

Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED  
| STOPPED

Required: No

#### SubmitTimeAfter

Filters the list of jobs based on the time that the job was submitted for processing. Returns only jobs submitted after the specified time. Jobs are returned in descending order, newest to oldest.

Type: Timestamp

Required: No

#### SubmitTimeBefore

Filters the list of jobs based on the time that the job was submitted for processing. Returns only jobs submitted before the specified time. Jobs are returned in ascending order, oldest to newest.

Type: Timestamp

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## PiiEntitiesDetectionJobProperties

Provides information about a PII entities detection job.

### Contents

#### DataAccessRoleArn

The Amazon Resource Name (ARN) of the IAM role that grants Amazon Comprehend read access to your input data.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:aws(-[^\:]+)?:iam::[0-9]{12}:role/.+`

Required: No

#### EndTime

The time that the PII entities detection job completed.

Type: Timestamp

Required: No

#### InputDataConfig

The input properties for a PII entities detection job.

Type: [InputDataConfig](#) object

Required: No

#### JobArn

The Amazon Resource Name (ARN) of the PII entities detection job. It is a unique, fully qualified identifier for the job. It includes the AWS account, AWS Region, and the job ID. The format of the ARN is as follows:

```
arn:<partition>:comprehend:<region>:<account-id>:pii-entities-detection-job/<job-id>
```

The following is an example job ARN:

arn:aws:comprehend:us-west-2:111122223333:pii-entities-detection-job/1234abcd12ab34cd56ef1234567890ab

Type: String

Length Constraints: Maximum length of 256.

Pattern: arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]\*:[0-9]{12}:[a-zA-Z0-9]{1,64}/[a-zA-Z0-9](-\*[a-zA-Z0-9])\*((/dataset/[a-zA-Z0-9](-\*[a-zA-Z0-9])\*)|(/version/[a-zA-Z0-9](-\*[a-zA-Z0-9])\*)?)

Required: No

### JobId

The identifier assigned to the PII entities detection job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: ^([\p{L}\p{Z}\p{N}\_.:/+\\-%@]\*)\$

Required: No

### JobName

The name that you assigned the PII entities detection job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: ^([\p{L}\p{Z}\p{N}\_.:/+\\-%@]\*)\$

Required: No

### JobStatus

The current status of the PII entities detection job. If the status is FAILED, the Message field shows the reason for the failure.

Type: String

Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED | STOPPED



Required: No

### **LanguageCode**

The language code of the input documents.

Type: String

Valid Values: en | es

Required: No

### **Message**

A description of the status of a job.

Type: String

Required: No

### **Mode**

Specifies whether the output provides the locations (offsets) of PII entities or a file in which PII entities are redacted.

Type: String

Valid Values: ONLY\_REDACTION | ONLY\_OFFSETS

Required: No

### **OutputDataConfig**

The output data configuration that you supplied when you created the PII entities detection job.

Type: [PiiOutputDataConfig](#) object

Required: No

### **RedactionConfig**

Provides configuration parameters for PII entity redaction.

This parameter is required if you set the Mode parameter to ONLY\_REDACTION. In that case, you must provide a RedactionConfig definition that includes the PiiEntityTypeTypes parameter.

Type: [RedactionConfig](#) object

Required: No

### **SubmitTime**

The time that the PII entities detection job was submitted for processing.

Type: Timestamp

Required: No

### **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## PiiEntity

Provides information about a PII entity.

### Contents

#### BeginOffset

The zero-based offset from the beginning of the source text to the first character in the entity.

Type: Integer

Required: No

#### EndOffset

The zero-based offset from the beginning of the source text to the last character in the entity.

Type: Integer

Required: No

#### Score

The level of confidence that Amazon Comprehend has in the accuracy of the detection.

Type: Float

Required: No

#### Type

The entity's type.

Type: String

Valid Values: BANK\_ACCOUNT\_NUMBER | BANK\_ROUTING | CREDIT\_DEBIT\_NUMBER | CREDIT\_DEBIT\_CVV | CREDIT\_DEBIT\_EXPIRY | PIN | EMAIL | ADDRESS | NAME | PHONE | SSN | DATE\_TIME | PASSPORT\_NUMBER | DRIVER\_ID | URL | AGE | USERNAME | PASSWORD | AWS\_ACCESS\_KEY | AWS\_SECRET\_KEY | IP\_ADDRESS | MAC\_ADDRESS | ALL | LICENSE\_PLATE | VEHICLE\_IDENTIFICATION\_NUMBER | UK\_NATIONAL\_INSURANCE\_NUMBER | CA\_SOCIAL\_INSURANCE\_NUMBER | US\_INDIVIDUAL\_TAX\_IDENTIFICATION\_NUMBER | UK\_UNIQUE\_TAXPAYER\_REFERENCE\_NUMBER | IN\_PERMANENT\_ACCOUNT\_NUMBER

| IN\_NREGA | INTERNATIONAL\_BANK\_ACCOUNT\_NUMBER | SWIFT\_CODE |  
UK\_NATIONAL\_HEALTH\_SERVICE\_NUMBER | CA\_HEALTH\_NUMBER | IN\_AADHAAR |  
IN\_VOTER\_NUMBER

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# PiiOutputDataConfig

Provides configuration parameters for the output of PII entity detection jobs.

## Contents

### S3Uri

When you use the `PiiOutputDataConfig` object with asynchronous operations, you specify the Amazon S3 location where you want to write the output data.

For a PII entity detection job, the output file is plain text, not a compressed archive. The output file name is the same as the input file, with `.out` appended at the end.

Type: String

Length Constraints: Maximum length of 1024.

Pattern: `s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/.* )?`

Required: Yes

### KmsKeyId

ID for the AWS Key Management Service (KMS) key that Amazon Comprehend uses to encrypt the output results from an analysis job.

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^\p{ASCII}+$`

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)

- [AWS SDK for Ruby V3](#)

## Point

The X and Y coordinates of a point on a document page.

For additional information, see [Point](#) in the Amazon Textract API reference.

### Contents

#### X

The value of the X coordinate for a point on a polygon

Type: Float

Required: No

#### Y

The value of the Y coordinate for a point on a polygon

Type: Float

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# RedactionConfig

Provides configuration parameters for PII entity redaction.

## Contents

### MaskCharacter

A character that replaces each character in the redacted PII entity.

Type: String

Length Constraints: Fixed length of 1.

Pattern: [!@#\$\$%&\*]

Required: No

### MaskMode

Specifies whether the PII entity is redacted with the mask character or the entity type.

Type: String

Valid Values: MASK | REPLACE\_WITH\_PII\_ENTITY\_TYPE

Required: No

### PiiEntityTypes

An array of the types of PII entities that Amazon Comprehend detects in the input text for your request.

Type: Array of strings

Valid Values: BANK\_ACCOUNT\_NUMBER | BANK\_ROUTING | CREDIT\_DEBIT\_NUMBER | CREDIT\_DEBIT\_CVV | CREDIT\_DEBIT\_EXPIRY | PIN | EMAIL | ADDRESS | NAME | PHONE | SSN | DATE\_TIME | PASSPORT\_NUMBER | DRIVER\_ID | URL | AGE | USERNAME | PASSWORD | AWS\_ACCESS\_KEY | AWS\_SECRET\_KEY | IP\_ADDRESS | MAC\_ADDRESS | ALL | LICENSE\_PLATE | VEHICLE\_IDENTIFICATION\_NUMBER | UK\_NATIONAL\_INSURANCE\_NUMBER | CA\_SOCIAL\_INSURANCE\_NUMBER | US\_INDIVIDUAL\_TAX\_IDENTIFICATION\_NUMBER | UK\_UNIQUE\_TAXPAYER\_REFERENCE\_NUMBER | IN\_PERMANENT\_ACCOUNT\_NUMBER



| IN\_NREGA | INTERNATIONAL\_BANK\_ACCOUNT\_NUMBER | SWIFT\_CODE |  
UK\_NATIONAL\_HEALTH\_SERVICE\_NUMBER | CA\_HEALTH\_NUMBER | IN\_AADHAAR |  
IN\_VOTER\_NUMBER

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## RelationshipsListItem

List of child blocks for the current block.

### Contents

#### Ids

Identifiers of the child blocks.

Type: Array of strings

Length Constraints: Minimum length of 1.

Required: No

#### Type

Only supported relationship is a child relationship.

Type: String

Valid Values: CHILD

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## SentimentDetectionJobFilter

Provides information for filtering a list of dominant language detection jobs. For more information, see the [ListSentimentDetectionJobs](#) operation.

### Contents

#### JobName

Filters on the name of the job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^([\p{L}\p{Z}\p{N}_ . : / = + \ - % @ ] *)$`

Required: No

#### JobStatus

Filters the list of jobs based on job status. Returns only jobs with the specified status.

Type: String

Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED  
| STOPPED

Required: No

#### SubmitTimeAfter

Filters the list of jobs based on the time that the job was submitted for processing. Returns only jobs submitted after the specified time. Jobs are returned in descending order, newest to oldest.

Type: Timestamp

Required: No

#### SubmitTimeBefore

Filters the list of jobs based on the time that the job was submitted for processing. Returns only jobs submitted before the specified time. Jobs are returned in ascending order, oldest to newest.

Type: Timestamp

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# SentimentDetectionJobProperties

Provides information about a sentiment detection job.

## Contents

### DataAccessRoleArn

The Amazon Resource Name (ARN) of the IAM role that grants Amazon Comprehend read access to your input data.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:aws(-[^\:]+)?:iam::[\0-9]{12}:role/.+`

Required: No

### EndTime

The time that the sentiment detection job ended.

Type: Timestamp

Required: No

### InputDataConfig

The input data configuration that you supplied when you created the sentiment detection job.

Type: [InputDataConfig](#) object

Required: No

### JobArn

The Amazon Resource Name (ARN) of the sentiment detection job. It is a unique, fully qualified identifier for the job. It includes the AWS account, AWS Region, and the job ID. The format of the ARN is as follows:

```
arn:<partition>:comprehend:<region>:<account-id>:sentiment-detection-  
job/<job-id>
```

The following is an example job ARN:

```
arn:aws:comprehend:us-west-2:111122223333:sentiment-detection-  
job/1234abcd12ab34cd56ef1234567890ab
```

Type: String

Length Constraints: Maximum length of 256.

```
Pattern: arn:aws(-[^\:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:[a-zA-Z0-9-]  
{1,64}/[a-zA-Z0-9](-*[a-zA-Z0-9])*((/dataset/[a-zA-Z0-9](-*[a-zA-  
Z0-9])*)|(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*))?)
```

Required: No

### **JobId**

The identifier assigned to the sentiment detection job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

```
Pattern: ^([\p{L}\p{Z}\p{N}_.:/+\\-%@]*)$
```

Required: No

### **JobName**

The name that you assigned to the sentiment detection job

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

```
Pattern: ^([\p{L}\p{Z}\p{N}_.:/+\\-%@]*)$
```

Required: No

### **JobStatus**

The current status of the sentiment detection job. If the status is FAILED, the Messages field shows the reason for the failure.

Type: String

Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED  
| STOPPED

Required: No

### **LanguageCode**

The language code of the input documents.

Type: String

Valid Values: en | es | fr | de | it | pt | ar | hi | ja | ko | zh | zh-TW

Required: No

### **Message**

A description of the status of a job.

Type: String

Required: No

### **OutputDataConfig**

The output data configuration that you supplied when you created the sentiment detection job.

Type: [OutputDataConfig](#) object

Required: No

### **SubmitTime**

The time that the sentiment detection job was submitted for processing.

Type: Timestamp

Required: No

### **VolumeKmsKeyId**

ID for the AWS Key Management Service (KMS) key that Amazon Comprehend uses to encrypt data on the storage volume attached to the ML compute instance(s) that process the analysis job. The VolumeKmsKeyId can be either of the following formats:

- KMS Key ID: "1234abcd-12ab-34cd-56ef-1234567890ab"
- Amazon Resource Name (ARN) of a KMS Key: "arn:aws:kms:us-west-2:111122223333:key/1234abcd-12ab-34cd-56ef-1234567890ab"

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^\p{ASCII}+$`

Required: No

### **VpcConfig**

Configuration parameters for a private Virtual Private Cloud (VPC) containing the resources you are using for your sentiment detection job. For more information, see [Amazon VPC](#).

Type: [VpcConfig](#) object

Required: No

### **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)



## SentimentScore

Describes the level of confidence that Amazon Comprehend has in the accuracy of its detection of sentiments.

### Contents

#### Mixed

The level of confidence that Amazon Comprehend has in the accuracy of its detection of the MIXED sentiment.

Type: Float

Required: No

#### Negative

The level of confidence that Amazon Comprehend has in the accuracy of its detection of the NEGATIVE sentiment.

Type: Float

Required: No

#### Neutral

The level of confidence that Amazon Comprehend has in the accuracy of its detection of the NEUTRAL sentiment.

Type: Float

Required: No

#### Positive

The level of confidence that Amazon Comprehend has in the accuracy of its detection of the POSITIVE sentiment.

Type: Float

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# SyntaxToken

Represents a work in the input text that was recognized and assigned a part of speech. There is one syntax token record for each word in the source text.

## Contents

### BeginOffset

The zero-based offset from the beginning of the source text to the first character in the word.

Type: Integer

Required: No

### EndOffset

The zero-based offset from the beginning of the source text to the last character in the word.

Type: Integer

Required: No

### PartOfSpeech

Provides the part of speech label and the confidence level that Amazon Comprehend has that the part of speech was correctly identified. For more information, see [Syntax](#) in the Comprehend Developer Guide.

Type: [PartOfSpeechTag](#) object

Required: No

### Text

The word that was recognized in the source text.

Type: String

Length Constraints: Minimum length of 1.

Required: No

### TokenId

A unique identifier for a token.

Type: Integer

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## Tag

A key-value pair that adds as a metadata to a resource used by Amazon Comprehend. For example, a tag with the key-value pair 'Department': 'Sales' might be added to a resource to indicate its use by a particular department.

### Contents

#### Key

The initial part of a key-value pair that forms a tag associated with a given resource. For instance, if you want to show which resources are used by which departments, you might use "Department" as the key portion of the pair, with multiple possible values such as "sales," "legal," and "administration."

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Required: Yes

#### Value

The second part of a key-value pair that forms a tag associated with a given resource. For instance, if you want to show which resources are used by which departments, you might use "Department" as the initial (key) portion of the pair, with a value of "sales" to indicate the sales department.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)

- [AWS SDK for Ruby V3](#)

## TargetedSentimentDetectionJobFilter

Provides information for filtering a list of dominant language detection jobs. For more information, see the `ListTargetedSentimentDetectionJobs` operation.

### Contents

#### JobName

Filters on the name of the job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^([\p{L}\p{Z}\p{N}_ . : / = + \ - % @ ] *)$`

Required: No

#### JobStatus

Filters the list of jobs based on job status. Returns only jobs with the specified status.

Type: String

Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED  
| STOPPED

Required: No

#### SubmitTimeAfter

Filters the list of jobs based on the time that the job was submitted for processing. Returns only jobs submitted after the specified time. Jobs are returned in descending order, newest to oldest.

Type: Timestamp

Required: No

#### SubmitTimeBefore

Filters the list of jobs based on the time that the job was submitted for processing. Returns only jobs submitted before the specified time. Jobs are returned in ascending order, oldest to newest.

Type: Timestamp

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)



# TargetedSentimentDetectionJobProperties

Provides information about a targeted sentiment detection job.

## Contents

### DataAccessRoleArn

The Amazon Resource Name (ARN) of the IAM role that grants Amazon Comprehend read access to your input data.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:aws(-[^\:]+)?:iam::[0-9]{12}:role/.+`

Required: No

### EndTime

The time that the targeted sentiment detection job ended.

Type: Timestamp

Required: No

### InputDataConfig

The input properties for an inference job. The document reader config field applies only to non-text inputs for custom analysis.

Type: [InputDataConfig](#) object

Required: No

### JobArn

The Amazon Resource Name (ARN) of the targeted sentiment detection job. It is a unique, fully qualified identifier for the job. It includes the AWS account, AWS Region, and the job ID. The format of the ARN is as follows:

```
arn:<partition>:comprehend:<region>:<account-id>:targeted-sentiment-  
detection-job/<job-id>
```

The following is an example job ARN:

```
arn:aws:comprehend:us-west-2:111122223333:targeted-sentiment-detection-job/1234abcd12ab34cd56ef1234567890ab
```

Type: String

Length Constraints: Maximum length of 256.

```
Pattern: arn:aws(-[:^:]+)?:comprehend:[a-zA-Z0-9]*:[0-9]{12}:[a-zA-Z0-9-]{1,64}/[a-zA-Z0-9](-*[a-zA-Z0-9])*((/dataset/[a-zA-Z0-9](-*[a-zA-Z0-9])*)|(/version/[a-zA-Z0-9](-*[a-zA-Z0-9])*))?)
```

Required: No

### **JobId**

The identifier assigned to the targeted sentiment detection job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

```
Pattern: ^([\p{L}\p{Z}\p{N}_.:/=+\-%@]*)$
```

Required: No

### **JobName**

The name that you assigned to the targeted sentiment detection job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

```
Pattern: ^([\p{L}\p{Z}\p{N}_.:/=+\-%@]*)$
```

Required: No

### **JobStatus**

The current status of the targeted sentiment detection job. If the status is FAILED, the Messages field shows the reason for the failure.

Type: String

Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED  
| STOPPED

Required: No

### **LanguageCode**

The language code of the input documents.

Type: String

Valid Values: en

Required: No

### **Message**

A description of the status of a job.

Type: String

Required: No

### **OutputDataConfig**

Provides configuration parameters for the output of inference jobs.

Type: [OutputDataConfig](#) object

Required: No

### **SubmitTime**

The time that the targeted sentiment detection job was submitted for processing.

Type: Timestamp

Required: No

### **VolumeKmsKeyId**

ID for the AWS KMS key that Amazon Comprehend uses to encrypt the data on the storage volume attached to the ML compute instance(s) that process the targeted sentiment detection job. The VolumeKmsKeyId can be either of the following formats:

- KMS Key ID: "1234abcd-12ab-34cd-56ef-1234567890ab"

- Amazon Resource Name (ARN) of a KMS Key: "arn:aws:kms:us-west-2:111122223333:key/1234abcd-12ab-34cd-56ef-1234567890ab"

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^\p{ASCII}+$`

Required: No

## VpcConfig

Configuration parameters for an optional private Virtual Private Cloud (VPC) containing the resources you are using for the job. For more information, see [Amazon VPC](#).

Type: [VpcConfig](#) object

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# TargetedSentimentEntity

Information about one of the entities found by targeted sentiment analysis.

For more information about targeted sentiment, see [Targeted sentiment](#) in the *Amazon Comprehend Developer Guide*.

## Contents

### DescriptiveMentionIndex

One or more index into the Mentions array that provides the best name for the entity group.

Type: Array of integers

Required: No

### Mentions

An array of mentions of the entity in the document. The array represents a co-reference group. See [Co-reference group](#) for an example.

Type: Array of [TargetedSentimentMention](#) objects

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## TargetedSentimentMention

Information about one mention of an entity. The mention information includes the location of the mention in the text and the sentiment of the mention.

For more information about targeted sentiment, see [Targeted sentiment](#) in the *Amazon Comprehend Developer Guide*.

### Contents

#### BeginOffset

The offset into the document text where the mention begins.

Type: Integer

Required: No

#### EndOffset

The offset into the document text where the mention ends.

Type: Integer

Required: No

#### GroupScore

The confidence that all the entities mentioned in the group relate to the same entity.

Type: Float

Required: No

#### MentionSentiment

Contains the sentiment and sentiment score for the mention.

Type: [MentionSentiment](#) object

Required: No

#### Score

Model confidence that the entity is relevant. Value range is zero to one, where one is highest confidence.

Type: Float

Required: No

### Text

The text in the document that identifies the entity.

Type: String

Length Constraints: Minimum length of 1.

Required: No

### Type

The type of the entity. Amazon Comprehend supports a variety of [entity types](#).

Type: String

Valid Values: PERSON | LOCATION | ORGANIZATION | FACILITY | BRAND  
| COMMERCIAL\_ITEM | MOVIE | MUSIC | BOOK | SOFTWARE | GAME |  
PERSONAL\_TITLE | EVENT | DATE | QUANTITY | ATTRIBUTE | OTHER

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## TaskConfig

Configuration about the model associated with a flywheel.

### Contents

#### LanguageCode

Language code for the language that the model supports.

Type: String

Valid Values: en | es | fr | de | it | pt | ar | hi | ja | ko | zh | zh-TW

Required: Yes

#### DocumentClassificationConfig

Configuration required for a document classification model.

Type: [DocumentClassificationConfig](#) object

Required: No

#### EntityRecognitionConfig

Configuration required for an entity recognition model.

Type: [EntityRecognitionConfig](#) object

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)



## TextSegment

One of the of text strings. Each string has a size limit of 1KB.

### Contents

#### Text

The text content.

Type: String

Length Constraints: Minimum length of 1.

Required: Yes

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## TopicsDetectionJobFilter

Provides information for filtering topic detection jobs. For more information, see [ListTopicsDetectionJobs](#).

### Contents

#### JobName

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^([\p{L}\p{Z}\p{N}_ . : / = + \ - % @ ] * )$`

Required: No

#### JobStatus

Filters the list of topic detection jobs based on job status. Returns only jobs with the specified status.

Type: String

Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED  
| STOPPED

Required: No

#### SubmitTimeAfter

Filters the list of jobs based on the time that the job was submitted for processing. Only returns jobs submitted after the specified time. Jobs are returned in ascending order, oldest to newest.

Type: Timestamp

Required: No

#### SubmitTimeBefore

Filters the list of jobs based on the time that the job was submitted for processing. Only returns jobs submitted before the specified time. Jobs are returned in descending order, newest to oldest.

Type: Timestamp

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# TopicsDetectionJobProperties

Provides information about a topic detection job.

## Contents

### DataAccessRoleArn

The Amazon Resource Name (ARN) of the IAM role that grants Amazon Comprehend read access to your job data.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:aws(-[^\:]+)?:iam::[\0-9]{12}:role/.+`

Required: No

### EndTime

The time that the topic detection job was completed.

Type: Timestamp

Required: No

### InputDataConfig

The input data configuration supplied when you created the topic detection job.

Type: [InputDataConfig](#) object

Required: No

### JobArn

The Amazon Resource Name (ARN) of the topics detection job. It is a unique, fully qualified identifier for the job. It includes the AWS account, AWS Region, and the job ID. The format of the ARN is as follows:

```
arn:<partition>:comprehend:<region>:<account-id>:topics-detection-job/  
<job-id>
```

The following is an example job ARN:

arn:aws:comprehend:us-west-2:111122223333:topics-detection-job/1234abcd12ab34cd56ef1234567890ab

Type: String

Length Constraints: Maximum length of 256.

Pattern: arn:aws(-[:]+)?:comprehend:[a-zA-Z0-9]\*:[0-9]{12}:[a-zA-Z0-9]{1,64}/[a-zA-Z0-9](-\*[a-zA-Z0-9])\*((/dataset/[a-zA-Z0-9](-\*[a-zA-Z0-9])\*)|(/version/[a-zA-Z0-9](-\*[a-zA-Z0-9])\*))?)

Required: No

### JobId

The identifier assigned to the topic detection job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: ^([\p{L}\p{Z}\p{N}\_.:/+\\-%@]\*)\$

Required: No

### JobName

The name of the topic detection job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: ^([\p{L}\p{Z}\p{N}\_.:/+\\-%@]\*)\$

Required: No

### JobStatus

The current status of the topic detection job. If the status is Failed, the reason for the failure is shown in the Message field.

Type: String

Valid Values: SUBMITTED | IN\_PROGRESS | COMPLETED | FAILED | STOP\_REQUESTED | STOPPED

Required: No

### Message

A description for the status of a job.

Type: String

Required: No

### NumberOfTopics

The number of topics to detect supplied when you created the topic detection job. The default is 10.

Type: Integer

Required: No

### OutputDataConfig

The output data configuration supplied when you created the topic detection job.

Type: [OutputDataConfig](#) object

Required: No

### SubmitTime

The time that the topic detection job was submitted for processing.

Type: Timestamp

Required: No

### VolumeKmsKeyId

ID for the AWS Key Management Service (KMS) key that Amazon Comprehend uses to encrypt data on the storage volume attached to the ML compute instance(s) that process the analysis job. The VolumeKmsKeyId can be either of the following formats:

- KMS Key ID: "1234abcd-12ab-34cd-56ef-1234567890ab"
- Amazon Resource Name (ARN) of a KMS Key: "arn:aws:kms:us-west-2:111122223333:key/1234abcd-12ab-34cd-56ef-1234567890ab"

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^\p{ASCII}+$`

Required: No

## VpcConfig

Configuration parameters for a private Virtual Private Cloud (VPC) containing the resources you are using for your topic detection job. For more information, see [Amazon VPC](#).

Type: [VpcConfig](#) object

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## ToxicContent

Toxic content analysis result for one string. For more information about toxicity detection, see [Toxicity detection](#) in the *Amazon Comprehend Developer Guide*

### Contents

#### Name

The name of the toxic content type.

Type: String

Valid Values: GRAPHIC | HARASSMENT\_OR\_ABUSE | HATE\_SPEECH | INSULT | PROFANITY | SEXUAL | VIOLENCE\_OR\_THREAT

Required: No

#### Score

Model confidence in the detected content type. Value range is zero to one, where one is highest confidence.

Type: Float

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)



## ToxicLabels

Toxicity analysis result for one string. For more information about toxicity detection, see [Toxicity detection](#) in the *Amazon Comprehend Developer Guide*.

### Contents

#### Labels

Array of toxic content types identified in the string.

Type: Array of [ToxicContent](#) objects

Required: No

#### Toxicity

Overall toxicity score for the string. Value range is zero to one, where one is the highest confidence.

Type: Float

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# UpdateDataSecurityConfig

Data security configuration.

## Contents

### ModelKmsKeyId

ID for the AWS KMS key that Amazon Comprehend uses to encrypt trained custom models. The ModelKmsKeyId can be either of the following formats:

- KMS Key ID: "1234abcd-12ab-34cd-56ef-1234567890ab"
- Amazon Resource Name (ARN) of a KMS Key: "arn:aws:kms:us-west-2:111122223333:key/1234abcd-12ab-34cd-56ef-1234567890ab"

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^\p{ASCII}+$`

Required: No

### VolumeKmsKeyId

ID for the AWS KMS key that Amazon Comprehend uses to encrypt the volume.

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^\p{ASCII}+$`

Required: No

### VpcConfig

Configuration parameters for an optional private Virtual Private Cloud (VPC) containing the resources you are using for the job. For more information, see [Amazon VPC](#).

Type: [VpcConfig](#) object

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## VpcConfig

Configuration parameters for an optional private Virtual Private Cloud (VPC) containing the resources you are using for the job. For more information, see [Amazon VPC](#).

### Contents

#### SecurityGroupIds

The ID number for a security group on an instance of your private VPC. Security groups on your VPC function serve as a virtual firewall to control inbound and outbound traffic and provides security for the resources that you'll be accessing on the VPC. This ID number is preceded by "sg-", for instance: "sg-03b388029b0a285ea". For more information, see [Security Groups for your VPC](#).

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 5 items.

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: [-0-9a-zA-Z]+

Required: Yes

#### Subnets

The ID for each subnet being used in your private VPC. This subnet is a subset of the a range of IPv4 addresses used by the VPC and is specific to a given availability zone in the VPC's Region. This ID number is preceded by "subnet-", for instance: "subnet-04ccf456919e69055". For more information, see [VPCs and Subnets](#).

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 16 items.

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: [-0-9a-zA-Z]+

Required: Yes

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## WarningsListItem

The system identified one of the following warnings while processing the input document:

- The document to classify is plain text, but the classifier is a native document model.
- The document to classify is semi-structured, but the classifier is a plain-text model.

### Contents

#### Page

Page number in the input document.

Type: Integer

Required: No

#### WarnCode

The type of warning.

Type: String

Valid Values: `INFERENCEING_PLAINTEXT_WITH_NATIVE_TRAINED_MODEL` | `INFERENCEING_NATIVE_DOCUMENT_WITH_PLAINTEXT_TRAINED_MODEL`

Required: No

#### WarnMessage

Text message associated with the warning.

Type: String

Length Constraints: Minimum length of 1.

Required: No

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

## Common Parameters

The following list contains the parameters that all actions use for signing Signature Version 4 requests with a query string. Any action-specific parameters are listed in the topic for that action. For more information about Signature Version 4, see [Signing AWS API requests](#) in the *IAM User Guide*.

### Action

The action to be performed.

Type: string

Required: Yes

### Version

The API version that the request is written for, expressed in the format YYYY-MM-DD.

Type: string

Required: Yes

### X-Amz-Algorithm

The hash algorithm that you used to create the request signature.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Valid Values: AWS4-HMAC-SHA256

Required: Conditional

### X-Amz-Credential

The credential scope value, which is a string that includes your access key, the date, the region you are targeting, the service you are requesting, and a termination string ("aws4\_request").

The value is expressed in the following format: *access\_key/YYYYMMDD/region/service/aws4\_request*.

For more information, see [Create a signed AWS API request](#) in the *IAM User Guide*.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

### **X-Amz-Date**

The date that is used to create the signature. The format must be ISO 8601 basic format (YYYYMMDD'T'HHMMSS'Z'). For example, the following date time is a valid X-Amz-Date value: 20120325T120000Z.

Condition: X-Amz-Date is optional for all requests; it can be used to override the date used for signing requests. If the Date header is specified in the ISO 8601 basic format, X-Amz-Date is not required. When X-Amz-Date is used, it always overrides the value of the Date header. For more information, see [Elements of an AWS API request signature](#) in the *IAM User Guide*.

Type: string

Required: Conditional

### **X-Amz-Security-Token**

The temporary security token that was obtained through a call to AWS Security Token Service (AWS STS). For a list of services that support temporary security credentials from AWS STS, see [AWS services that work with IAM](#) in the *IAM User Guide*.

Condition: If you're using temporary security credentials from AWS STS, you must include the security token.

Type: string

Required: Conditional

### **X-Amz-Signature**

Specifies the hex-encoded signature that was calculated from the string to sign and the derived signing key.



Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

### **X-Amz-SignedHeaders**

Specifies all the HTTP headers that were included as part of the canonical request. For more information about specifying signed headers, see [Create a signed AWS API request](#) in the *IAM User Guide*.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

## **Common Errors**

This section lists the errors common to the API actions of all AWS services. For errors specific to an API action for this service, see the topic for that API action.

### **AccessDeniedException**

You do not have sufficient access to perform this action.

HTTP Status Code: 400

### **IncompleteSignature**

The request signature does not conform to AWS standards.

HTTP Status Code: 400

### **InternalFailure**

The request processing has failed because of an unknown error, exception or failure.

HTTP Status Code: 500

### **InvalidAction**

The action or operation requested is invalid. Verify that the action is typed correctly.

HTTP Status Code: 400

### **InvalidClientId**

The X.509 certificate or AWS access key ID provided does not exist in our records.

HTTP Status Code: 403

### **NotAuthorized**

You do not have permission to perform this action.

HTTP Status Code: 400

### **OptInRequired**

The AWS access key ID needs a subscription for the service.

HTTP Status Code: 403

### **RequestExpired**

The request reached the service more than 15 minutes after the date stamp on the request or more than 15 minutes after the request expiration date (such as for pre-signed URLs), or the date stamp on the request is more than 15 minutes in the future.

HTTP Status Code: 400

### **ServiceUnavailable**

The request has failed due to a temporary failure of the server.

HTTP Status Code: 503

### **ThrottlingException**

The request was denied due to request throttling.

HTTP Status Code: 400

### **ValidationError**

The input fails to satisfy the constraints specified by an AWS service.

HTTP Status Code: 400