



Welcome

# Amazon Lookout for Vision API Reference



**API Version 2020-11-20**

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# Amazon Lookout for Vision API Reference: Welcome

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# Welcome

This is the Amazon Lookout for Vision API Reference. It provides descriptions of actions, data types, common parameters, and common errors.

Amazon Lookout for Vision enables you to find visual defects in industrial products, accurately and at scale. It uses computer vision to identify missing components in an industrial product, damage to vehicles or structures, irregularities in production lines, and even minuscule defects in silicon wafers — or any other physical item where quality is important such as a missing capacitor on printed circuit boards.

This document was last published on July 2, 2024.

# Actions

The following actions are supported:

- [CreateDataset](#)
- [CreateModel](#)
- [CreateProject](#)
- [DeleteDataset](#)
- [DeleteModel](#)
- [DeleteProject](#)
- [DescribeDataset](#)
- [DescribeModel](#)
- [DescribeModelPackagingJob](#)
- [DescribeProject](#)
- [DetectAnomalies](#)
- [ListDatasetEntries](#)
- [ListModelPackagingJobs](#)
- [ListModels](#)
- [ListProjects](#)
- [ListTagsForResource](#)
- [StartModel](#)
- [StartModelPackagingJob](#)
- [StopModel](#)
- [TagResource](#)
- [UntagResource](#)
- [UpdateDatasetEntries](#)

# CreateDataset

Creates a new dataset in an Amazon Lookout for Vision project. CreateDataset can create a training or a test dataset from a valid dataset source (DatasetSource).

If you want a single dataset project, specify `train` for the value of `DatasetType`.

To have a project with separate training and test datasets, call CreateDataset twice. On the first call, specify `train` for the value of `DatasetType`. On the second call, specify `test` for the value of `DatasetType`.

This operation requires permissions to perform the `lookoutvision:CreateDataset` operation.

## Request Syntax

```
POST /2020-11-20/projects/projectName/datasets HTTP/1.1
```

```
X-Amzn-Client-Token: ClientToken
```

```
Content-type: application/json
```

```
{
  "DatasetSource": {
    "GroundTruthManifest": {
      "S3Object": {
        "Bucket": "string",
        "Key": "string",
        "VersionId": "string"
      }
    }
  },
  "DatasetType": "string"
}
```

## URI Request Parameters

The request uses the following URI parameters.

### ClientToken

`ClientToken` is an idempotency token that ensures a call to `CreateDataset` completes only once. You choose the value to pass. For example, An issue might prevent you from getting a

response from `CreateDataset`. In this case, safely retry your call to `CreateDataset` by using the same `ClientToken` parameter value.

If you don't supply a value for `ClientToken`, the AWS SDK you are using inserts a value for you. This prevents retries after a network error from making multiple dataset creation requests. You'll need to provide your own value for other use cases.

An error occurs if the other input parameters are not the same as in the first request. Using a different value for `ClientToken` is considered a new call to `CreateDataset`. An idempotency token is active for 8 hours.

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

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

### projectName

The name of the project in which you want to create a dataset.

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[a-zA-Z0-9][a-zA-Z0-9_\-]*`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### DataSource

The location of the manifest file that Amazon Lookout for Vision uses to create the dataset.

If you don't specify `DataSource`, an empty dataset is created and the operation synchronously returns. Later, you can add JSON Lines by calling [UpdateDatasetEntries](#).

If you specify a value for `DataSource`, the manifest at the S3 location is validated and used to create the dataset. The call to `CreateDataset` is asynchronous and might take a while to complete. To find out the current status, Check the value of `Status` returned in a call to [DescribeDataset](#).

Type: [DatasetSource](#) object

Required: No

### [DatasetType](#)

The type of the dataset. Specify `train` for a training dataset. Specify `test` for a test dataset.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 10.

Pattern: `train|test`

Required: Yes

## Response Syntax

```
HTTP/1.1 202
Content-type: application/json

{
  "DatasetMetadata": {
    "CreationTimestamp": number,
    "DatasetType": "string",
    "Status": "string",
    "StatusMessage": "string"
  }
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 202 response.

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

### [DatasetMetadata](#)

Information about the dataset.

Type: [DatasetMetadata](#) object

## Errors

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

### AccessDeniedException

You are not authorized to perform the action.

HTTP Status Code: 403

### ConflictException

The update or deletion of a resource caused an inconsistent state.

HTTP Status Code: 409

### InternalServerErrorException

Amazon Lookout for Vision experienced a service issue. Try your call again.

HTTP Status Code: 500

### ResourceNotFoundException

The resource could not be found.

HTTP Status Code: 404

### ServiceQuotaExceededException

A service quota exceeded the allowed limit. For more information, see [Quotas in Amazon Lookout for Vision](#).

HTTP Status Code: 402

### ThrottlingException

Amazon Lookout for Vision is temporarily unable to process the request. Try your call again.

HTTP Status Code: 429

### ValidationException

An input validation error occurred. For example, invalid characters in a project name, or if a pagination token is invalid.

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](#)

# CreateModel

Creates a new version of a model within an Amazon Lookout for Vision project. `CreateModel` is an asynchronous operation in which Amazon Lookout for Vision trains, tests, and evaluates a new version of a model.

To get the current status, check the `Status` field returned in the response from [DescribeModel](#).

If the project has a single dataset, Amazon Lookout for Vision internally splits the dataset to create a training and a test dataset. If the project has a training and a test dataset, Lookout for Vision uses the respective datasets to train and test the model.

After training completes, the evaluation metrics are stored at the location specified in `OutputConfig`.

This operation requires the following permissions.

## Permission to create a model

`lookoutvision:CreateModel` - Permission to call the `CreateModel` operation.

## Permissions to read the dataset images during training

- `s3:GetObject` - Required on all S3 objects specified in the Train and Test datasets.
- (Optional) `kms:Decrypt` - Required on any KMS keys used to encrypt S3 objects specified in the Train and Test datasets.

## Permissions to write the training results output

- `s3:GetBucketLocation` - Validates the ownership and the AWS Region of the S3 bucket.
- `s3:PutObject` - Lets Amazon Lookout for Vision write training results to the S3 bucket.
- (Optional) `kms:GenerateDataKey` - Required on the S3 bucket's default encryption KMS key, if the S3 bucket is configured with SSE-KMS default encryption and `KmsKeyId` is not specified in the request.

## (Optional) Permissions to use a customer managed KMS key for encrypting images during training

- (Optional) `kms:CreateGrant` - Required on the `KmsKeyId` specified in the request.

- (Optional) `kms:GenerateDataKey` - Required on the `KmsKeyId` specified in the request.

### (Optional) Permissions to tag a model on creation

- (Optional) `lookoutvision:TagResource` - Required on the new model ARN if you tag your model with the `Tags` request parameter.

## Request Syntax

```
POST /2020-11-20/projects/projectName/models HTTP/1.1
```

```
X-Amzn-Client-Token: ClientToken
```

```
Content-type: application/json
```

```
{
  "Description": "string",
  "KmsKeyId": "string",
  "OutputConfig": {
    "S3Location": {
      "Bucket": "string",
      "Prefix": "string"
    }
  },
  "Tags": [
    {
      "Key": "string",
      "Value": "string"
    }
  ]
}
```

## URI Request Parameters

The request uses the following URI parameters.

### ClientToken

`ClientToken` is an idempotency token that ensures a call to `CreateModel` completes only once. You choose the value to pass. For example, An issue might prevent you from getting a response from `CreateModel`. In this case, safely retry your call to `CreateModel` by using the same `ClientToken` parameter value.

If you don't supply a value for `ClientToken`, the AWS SDK you are using inserts a value for you. This prevents retries after a network error from starting multiple training jobs. You'll need to provide your own value for other use cases.

An error occurs if the other input parameters are not the same as in the first request. Using a different value for `ClientToken` is considered a new call to `CreateModel`. An idempotency token is active for 8 hours.

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

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

### projectName

The name of the project in which you want to create a model version.

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[a-zA-Z0-9][a-zA-Z0-9_\-]*`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### Description

A description for the version of the model.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 500.

Pattern: `[0-9A-Za-z\.\-_\-]*`

Required: No

### KmsKeyId

The identifier for your AWS KMS key. The key is used to encrypt training and test images copied into the service for model training. Your source images are unaffected. If this parameter is not specified, the copied images are encrypted by a key that AWS owns and manages.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `^[A-Za-z0-9][A-Za-z0-9:_/+=, @. -]{0,2048}$`

Required: No

## OutputConfig

The location where Amazon Lookout for Vision saves the training results.

Type: [OutputConfig](#) object

Required: Yes

## Tags

A set of tags (key-value pairs) that you want to attach to the model. For more information, see [Tagging models](#) in the Amazon Lookout for Vision developer guide.

Type: Array of [Tag](#) objects

Array Members: Minimum number of 0 items. Maximum number of 200 items.

Required: No

## Response Syntax

```
HTTP/1.1 202
Content-type: application/json

{
  "ModelMetadata": {
    "CreationTimestamp": number,
    "Description": "string",
    "ModelArn": "string",
    "ModelVersion": "string",
    "Performance": {
      "F1Score": number,
      "Precision": number,
      "Recall": number
    }
  },
```

```
    "Status": "string",  
    "StatusMessage": "string"  
  }  
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 202 response.

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

### ModelMetadata

The response from a call to `CreateModel`.

Type: [ModelMetadata](#) object

## Errors

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

### **AccessDeniedException**

You are not authorized to perform the action.

HTTP Status Code: 403

### **ConflictException**

The update or deletion of a resource caused an inconsistent state.

HTTP Status Code: 409

### **InternalServerError**

Amazon Lookout for Vision experienced a service issue. Try your call again.

HTTP Status Code: 500

### **ResourceNotFoundException**

The resource could not be found.

HTTP Status Code: 404

## ServiceQuotaExceededException

A service quota exceeded the allowed limit. For more information, see [Quotas in Amazon Lookout for Vision](#).

HTTP Status Code: 402

## ThrottlingException

Amazon Lookout for Vision is temporarily unable to process the request. Try your call again.

HTTP Status Code: 429

## ValidationException

An input validation error occurred. For example, invalid characters in a project name, or if a pagination token is invalid.

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](#)

# CreateProject

Creates an empty Amazon Lookout for Vision project. After you create the project, add a dataset by calling [CreateDataset](#).

This operation requires permissions to perform the `lookoutvision:CreateProject` operation.

## Request Syntax

```
POST /2020-11-20/projects HTTP/1.1
X-Amzn-Client-Token: ClientToken
Content-type: application/json

{
  "ProjectName": "string"
}
```

## URI Request Parameters

The request uses the following URI parameters.

### [ClientToken](#)

`ClientToken` is an idempotency token that ensures a call to `CreateProject` completes only once. You choose the value to pass. For example, An issue might prevent you from getting a response from `CreateProject`. In this case, safely retry your call to `CreateProject` by using the same `ClientToken` parameter value.

If you don't supply a value for `ClientToken`, the AWS SDK you are using inserts a value for you. This prevents retries after a network error from making multiple project creation requests. You'll need to provide your own value for other use cases.

An error occurs if the other input parameters are not the same as in the first request. Using a different value for `ClientToken` is considered a new call to `CreateProject`. An idempotency token is active for 8 hours.

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

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



## Request Body

The request accepts the following data in JSON format.

### ProjectName

The name for the project.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[a-zA-Z0-9][a-zA-Z0-9_\-]*`

Required: Yes

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "ProjectMetadata": {
    "CreationTimestamp": number,
    "ProjectArn": "string",
    "ProjectName": "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.

### ProjectMetadata

Information about the project.

Type: [ProjectMetadata](#) object

## Errors

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

### **AccessDeniedException**

You are not authorized to perform the action.

HTTP Status Code: 403

### **ConflictException**

The update or deletion of a resource caused an inconsistent state.

HTTP Status Code: 409

### **InternalServerErrorException**

Amazon Lookout for Vision experienced a service issue. Try your call again.

HTTP Status Code: 500

### **ResourceNotFoundException**

The resource could not be found.

HTTP Status Code: 404

### **ServiceQuotaExceededException**

A service quota exceeded the allowed limit. For more information, see [Quotas in Amazon Lookout for Vision](#).

HTTP Status Code: 402

### **ThrottlingException**

Amazon Lookout for Vision is temporarily unable to process the request. Try your call again.

HTTP Status Code: 429

### **ValidationException**

An input validation error occurred. For example, invalid characters in a project name, or if a pagination token is invalid.

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](#)

# DeleteDataset

Deletes an existing Amazon Lookout for Vision dataset.

If your the project has a single dataset, you must create a new dataset before you can create a model.

If you project has a training dataset and a test dataset consider the following.

- If you delete the test dataset, your project reverts to a single dataset project. If you then train the model, Amazon Lookout for Vision internally splits the remaining dataset into a training and test dataset.
- If you delete the training dataset, you must create a training dataset before you can create a model.

This operation requires permissions to perform the `lookoutvision:DeleteDataset` operation.

## Request Syntax

```
DELETE /2020-11-20/projects/projectName/datasets/datasetType HTTP/1.1
X-Amzn-Client-Token: ClientToken
```

## URI Request Parameters

The request uses the following URI parameters.

### ClientToken

`ClientToken` is an idempotency token that ensures a call to `DeleteDataset` completes only once. You choose the value to pass. For example, An issue might prevent you from getting a response from `DeleteDataset`. In this case, safely retry your call to `DeleteDataset` by using the same `ClientToken` parameter value.

If you don't supply a value for `ClientToken`, the AWS SDK you are using inserts a value for you. This prevents retries after a network error from making multiple deletion requests. You'll need to provide your own value for other use cases.

An error occurs if the other input parameters are not the same as in the first request. Using a different value for `ClientToken` is considered a new call to `DeleteDataset`. An idempotency token is active for 8 hours.

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

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

### datasetType

The type of the dataset to delete. Specify `train` to delete the training dataset. Specify `test` to delete the test dataset. To delete the dataset in a single dataset project, specify `train`.

Length Constraints: Minimum length of 1. Maximum length of 10.

Pattern: `train|test`

Required: Yes

### projectName

The name of the project that contains the dataset that you want to delete.

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[a-zA-Z0-9][a-zA-Z0-9_\-]*`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 202
```

## Response Elements

If the action is successful, the service sends back an HTTP 202 response with an empty HTTP body.

## Errors

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

## **AccessDeniedException**

You are not authorized to perform the action.

HTTP Status Code: 403

## **ConflictException**

The update or deletion of a resource caused an inconsistent state.

HTTP Status Code: 409

## **InternalServerErrorException**

Amazon Lookout for Vision experienced a service issue. Try your call again.

HTTP Status Code: 500

## **ResourceNotFoundException**

The resource could not be found.

HTTP Status Code: 404

## **ThrottlingException**

Amazon Lookout for Vision is temporarily unable to process the request. Try your call again.

HTTP Status Code: 429

## **ValidationException**

An input validation error occurred. For example, invalid characters in a project name, or if a pagination token is invalid.

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](#)

# DeleteModel

Deletes an Amazon Lookout for Vision model. You can't delete a running model. To stop a running model, use the [StopModel](#) operation.

It might take a few seconds to delete a model. To determine if a model has been deleted, call [ListModels](#) and check if the version of the model (`ModelVersion`) is in the `Models` array.

This operation requires permissions to perform the `lookoutvision:DeleteModel` operation.

## Request Syntax

```
DELETE /2020-11-20/projects/projectName/models/modelVersion HTTP/1.1
X-Amzn-Client-Token: ClientToken
```

## URI Request Parameters

The request uses the following URI parameters.

### [ClientToken](#)

`ClientToken` is an idempotency token that ensures a call to `DeleteModel` completes only once. You choose the value to pass. For example, an issue might prevent you from getting a response from `DeleteModel`. In this case, safely retry your call to `DeleteModel` by using the same `ClientToken` parameter value.

If you don't supply a value for `ClientToken`, the AWS SDK you are using inserts a value for you. This prevents retries after a network error from making multiple model deletion requests. You'll need to provide your own value for other use cases.

An error occurs if the other input parameters are not the same as in the first request. Using a different value for `ClientToken` is considered a new call to `DeleteModel`. An idempotency token is active for 8 hours.

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

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

### [modelVersion](#)

The version of the model that you want to delete.



Length Constraints: Minimum length of 1. Maximum length of 10.

Pattern: (`[1-9][0-9]*`)

Required: Yes

### projectName

The name of the project that contains the model that you want to delete.

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[a-zA-Z0-9][a-zA-Z0-9_\-]*`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 202
Content-type: application/json

{
  "ModelArn": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 202 response.

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

### ModelArn

The Amazon Resource Name (ARN) of the model that was deleted.

Type: String

## Errors

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

### AccessDeniedException

You are not authorized to perform the action.

HTTP Status Code: 403

### ConflictException

The update or deletion of a resource caused an inconsistent state.

HTTP Status Code: 409

### InternalServerError

Amazon Lookout for Vision experienced a service issue. Try your call again.

HTTP Status Code: 500

### ResourceNotFoundException

The resource could not be found.

HTTP Status Code: 404

### ThrottlingException

Amazon Lookout for Vision is temporarily unable to process the request. Try your call again.

HTTP Status Code: 429

### ValidationException

An input validation error occurred. For example, invalid characters in a project name, or if a pagination token is invalid.

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](#)

# DeleteProject

Deletes an Amazon Lookout for Vision project.

To delete a project, you must first delete each version of the model associated with the project. To delete a model use the [DeleteModel](#) operation.

You also have to delete the dataset(s) associated with the model. For more information, see [DeleteDataset](#). The images referenced by the training and test datasets aren't deleted.

This operation requires permissions to perform the `lookoutvision:DeleteProject` operation.

## Request Syntax

```
DELETE /2020-11-20/projects/projectName HTTP/1.1
X-Amzn-Client-Token: ClientToken
```

## URI Request Parameters

The request uses the following URI parameters.

### [ClientToken](#)

`ClientToken` is an idempotency token that ensures a call to `DeleteProject` completes only once. You choose the value to pass. For example, An issue might prevent you from getting a response from `DeleteProject`. In this case, safely retry your call to `DeleteProject` by using the same `ClientToken` parameter value.

If you don't supply a value for `ClientToken`, the AWS SDK you are using inserts a value for you. This prevents retries after a network error from making multiple project deletion requests. You'll need to provide your own value for other use cases.

An error occurs if the other input parameters are not the same as in the first request. Using a different value for `ClientToken` is considered a new call to `DeleteProject`. An idempotency token is active for 8 hours.

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

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

## projectName

The name of the project to delete.

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[a-zA-Z0-9][a-zA-Z0-9_\-]*`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "ProjectArn": "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.

### ProjectArn

The Amazon Resource Name (ARN) of the project that was deleted.

Type: String

## Errors

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

### **AccessDeniedException**

You are not authorized to perform the action.

HTTP Status Code: 403

### **ConflictException**

The update or deletion of a resource caused an inconsistent state.

HTTP Status Code: 409

### **InternalServerErrorException**

Amazon Lookout for Vision experienced a service issue. Try your call again.

HTTP Status Code: 500

### **ResourceNotFoundException**

The resource could not be found.

HTTP Status Code: 404

### **ThrottlingException**

Amazon Lookout for Vision is temporarily unable to process the request. Try your call again.

HTTP Status Code: 429

### **ValidationException**

An input validation error occurred. For example, invalid characters in a project name, or if a pagination token is invalid.

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

Describe an Amazon Lookout for Vision dataset.

This operation requires permissions to perform the `lookoutvision:DescribeDataset` operation.

## Request Syntax

```
GET /2020-11-20/projects/projectName/datasets/datasetType HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### datasetType

The type of the dataset to describe. Specify `train` to describe the training dataset. Specify `test` to describe the test dataset. If you have a single dataset project, specify `train`

Length Constraints: Minimum length of 1. Maximum length of 10.

Pattern: `train|test`

Required: Yes

### projectName

The name of the project that contains the dataset that you want to describe.

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[a-zA-Z0-9][a-zA-Z0-9_\-\ ]*`

Required: Yes

## Request Body

The request does not have a request body.



## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "DatasetDescription": {
    "CreationTimestamp": number,
    "DatasetType": "string",
    "ImageStats": {
      "Anomaly": number,
      "Labeled": number,
      "Normal": number,
      "Total": number
    },
    "LastUpdatedTimestamp": number,
    "ProjectName": "string",
    "Status": "string",
    "StatusMessage": "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.

### [DatasetDescription](#)

The description of the requested dataset.

Type: [DatasetDescription](#) object

## Errors

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

### **AccessDeniedException**

You are not authorized to perform the action.

HTTP Status Code: 403

### **ConflictException**

The update or deletion of a resource caused an inconsistent state.

HTTP Status Code: 409

### **InternalServerErrorException**

Amazon Lookout for Vision experienced a service issue. Try your call again.

HTTP Status Code: 500

### **ResourceNotFoundException**

The resource could not be found.

HTTP Status Code: 404

### **ThrottlingException**

Amazon Lookout for Vision is temporarily unable to process the request. Try your call again.

HTTP Status Code: 429

### **ValidationException**

An input validation error occurred. For example, invalid characters in a project name, or if a pagination token is invalid.

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](#)

# DescribeModel

Describes a version of an Amazon Lookout for Vision model.

This operation requires permissions to perform the `lookoutvision:DescribeModel` operation.

## Request Syntax

```
GET /2020-11-20/projects/projectName/models/modelVersion HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### modelVersion

The version of the model that you want to describe.

Length Constraints: Minimum length of 1. Maximum length of 10.

Pattern: (`[1-9][0-9]*|latest`)

Required: Yes

### projectName

The project that contains the version of a model that you want to describe.

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[a-zA-Z0-9][a-zA-Z0-9_\-]*`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200  
Content-type: application/json
```

```
{
  "ModelDescription": {
    "CreationTimestamp": number,
    "Description": "string",
    "EvaluationEndTimestamp": number,
    "EvaluationManifest": {
      "Bucket": "string",
      "Key": "string"
    },
    "EvaluationResult": {
      "Bucket": "string",
      "Key": "string"
    },
    "KmsKeyId": "string",
    "MaxInferenceUnits": number,
    "MinInferenceUnits": number,
    "ModelArn": "string",
    "ModelVersion": "string",
    "OutputConfig": {
      "S3Location": {
        "Bucket": "string",
        "Prefix": "string"
      }
    },
    "Performance": {
      "F1Score": number,
      "Precision": number,
      "Recall": number
    },
    "Status": "string",
    "StatusMessage": "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.

### ModelDescription

Contains the description of the model.

Type: [ModelDescription](#) object

## Errors

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

### AccessDeniedException

You are not authorized to perform the action.

HTTP Status Code: 403

### ConflictException

The update or deletion of a resource caused an inconsistent state.

HTTP Status Code: 409

### InternalServerErrorException

Amazon Lookout for Vision experienced a service issue. Try your call again.

HTTP Status Code: 500

### ResourceNotFoundException

The resource could not be found.

HTTP Status Code: 404

### ThrottlingException

Amazon Lookout for Vision is temporarily unable to process the request. Try your call again.

HTTP Status Code: 429

### ValidationException

An input validation error occurred. For example, invalid characters in a project name, or if a pagination token is invalid.

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](#)

# DescribeModelPackagingJob

Describes an Amazon Lookout for Vision model packaging job.

This operation requires permissions to perform the `lookoutvision:DescribeModelPackagingJob` operation.

For more information, see [Using your Amazon Lookout for Vision model on an edge device](#).

## Request Syntax

```
GET /2020-11-20/projects/projectName/modelpackagingjobs/jobName HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### jobName

The job name for the model packaging job.

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

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

Required: Yes

### projectName

The name of the project that contains the model packaging job that you want to describe.

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[a-zA-Z0-9][a-zA-Z0-9_\-]*`

Required: Yes

## Request Body

The request does not have a request body.



## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "ModelPackagingDescription": {
    "CreationTimestamp": number,
    "JobName": "string",
    "LastUpdatedTimestamp": number,
    "ModelPackagingConfiguration": {
      "Greengrass": {
        "CompilerOptions": "string",
        "ComponentDescription": "string",
        "ComponentName": "string",
        "ComponentVersion": "string",
        "S3OutputLocation": {
          "Bucket": "string",
          "Prefix": "string"
        },
        "Tags": [
          {
            "Key": "string",
            "Value": "string"
          }
        ],
        "TargetDevice": "string",
        "TargetPlatform": {
          "Accelerator": "string",
          "Arch": "string",
          "Os": "string"
        }
      }
    },
    "ModelPackagingJobDescription": "string",
    "ModelPackagingMethod": "string",
    "ModelPackagingOutputDetails": {
      "Greengrass": {
        "ComponentName": "string",
        "ComponentVersion": "string",
        "ComponentVersionArn": "string"
      }
    }
  },
}
```

```
"ModelVersion": "string",  
"ProjectName": "string",  
"Status": "string",  
"StatusMessage": "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.

### ModelPackagingDescription

The description of the model packaging job.

Type: [ModelPackagingDescription](#) object

## Errors

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

### **AccessDeniedException**

You are not authorized to perform the action.

HTTP Status Code: 403

### **InternalServerError**

Amazon Lookout for Vision experienced a service issue. Try your call again.

HTTP Status Code: 500

### **ResourceNotFoundException**

The resource could not be found.

HTTP Status Code: 404

### **ThrottlingException**

Amazon Lookout for Vision is temporarily unable to process the request. Try your call again.

HTTP Status Code: 429

## ValidationException

An input validation error occurred. For example, invalid characters in a project name, or if a pagination token is invalid.

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](#)

# DescribeProject

Describes an Amazon Lookout for Vision project.

This operation requires permissions to perform the `lookoutvision:DescribeProject` operation.

## Request Syntax

```
GET /2020-11-20/projects/projectName HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### [projectName](#)

The name of the project that you want to describe.

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[a-zA-Z0-9][a-zA-Z0-9_\-]*`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "ProjectDescription": {
    "CreationTimestamp": number,
    "Datasets": [
      {
        "CreationTimestamp": number,
```

```
        "DatasetType": "string",
        "Status": "string",
        "StatusMessage": "string"
    }
],
"ProjectArn": "string",
"ProjectName": "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.

### ProjectDescription

The description of the project.

Type: [ProjectDescription](#) object

## Errors

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

### **AccessDeniedException**

You are not authorized to perform the action.

HTTP Status Code: 403

### **ConflictException**

The update or deletion of a resource caused an inconsistent state.

HTTP Status Code: 409

### **InternalServerErrorException**

Amazon Lookout for Vision experienced a service issue. Try your call again.

HTTP Status Code: 500

## ResourceNotFoundException

The resource could not be found.

HTTP Status Code: 404

## ThrottlingException

Amazon Lookout for Vision is temporarily unable to process the request. Try your call again.

HTTP Status Code: 429

## ValidationException

An input validation error occurred. For example, invalid characters in a project name, or if a pagination token is invalid.

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](#)

# DetectAnomalies

Detects anomalies in an image that you supply.

The response from `DetectAnomalies` includes a boolean prediction that the image contains one or more anomalies and a confidence value for the prediction. If the model is an image segmentation model, the response also includes segmentation information for each type of anomaly found in the image.

## Note

Before calling `DetectAnomalies`, you must first start your model with the [StartModel](#) operation. You are charged for the amount of time, in minutes, that a model runs and for the number of anomaly detection units that your model uses. If you are not using a model, use the [StopModel](#) operation to stop your model.

For more information, see [Detecting anomalies in an image](#).

This operation requires permissions to perform the `lookoutvision:DetectAnomalies` operation.

## Request Syntax

```
POST /2020-11-20/projects/projectName/models/modelVersion/detect HTTP/1.1
Content-Type: ContentType
```

*Body*

## URI Request Parameters

The request uses the following URI parameters.

### [ContentType](#)

The type of the image passed in `Body`. Valid values are `image/png` (PNG format images) and `image/jpeg` (JPG format images).

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: .\*

Required: Yes

### modelVersion

The version of the model that you want to use.

Length Constraints: Minimum length of 1. Maximum length of 10.

Pattern: ([1-9][0-9]\*|latest)

Required: Yes

### projectName

The name of the project that contains the model version that you want to use.

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [a-zA-Z0-9][a-zA-Z0-9\_\-]\*

Required: Yes

## Request Body

The request accepts the following binary data.

### Body

The unencrypted image bytes that you want to analyze.

Required: Yes

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "DetectAnomalyResult": {
    "Anomalies": [
      {
```



```
    "Name": "string",
    "PixelAnomaly": {
      "Color": "string",
      "TotalPercentageArea": number
    }
  ],
  "AnomalyMask": blob,
  "Confidence": number,
  "IsAnomalous": boolean,
  "Source": {
    "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.

### DetectAnomalyResult

The results of the DetectAnomalies operation.

Type: [DetectAnomalyResult](#) object

## Errors

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

### **AccessDeniedException**

You are not authorized to perform the action.

HTTP Status Code: 403

### **ConflictException**

The update or deletion of a resource caused an inconsistent state.

HTTP Status Code: 409

## InternalServerErrorException

Amazon Lookout for Vision experienced a service issue. Try your call again.

HTTP Status Code: 500

## ResourceNotFoundException

The resource could not be found.

HTTP Status Code: 404

## ThrottlingException

Amazon Lookout for Vision is temporarily unable to process the request. Try your call again.

HTTP Status Code: 429

## ValidationException

An input validation error occurred. For example, invalid characters in a project name, or if a pagination token is invalid.

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](#)

# ListDatasetEntries

Lists the JSON Lines within a dataset. An Amazon Lookout for Vision JSON Line contains the anomaly information for a single image, including the image location and the assigned label.

This operation requires permissions to perform the `lookoutvision:ListDatasetEntries` operation.

## Request Syntax

```
GET /2020-11-20/projects/projectName/datasets/datasetType/entries?  
anomalyClass=AnomalyClass&createdAfter=AfterCreationDate&createdBefore=BeforeCreationDate&label=Label  
HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### AfterCreationDate

Only includes entries after the specified date in the response. For example, `2020-06-23T00:00:00`.

### AnomalyClass

Specify `normal` to include only normal images. Specify `anomaly` to only include anomalous entries. If you don't specify a value, Amazon Lookout for Vision returns normal and anomalous images.

Length Constraints: Minimum length of 1. Maximum length of 10.

Pattern: `(normal|anomaly)`

### BeforeCreationDate

Only includes entries before the specified date in the response. For example, `2020-06-23T00:00:00`.

### datasetType

The type of the dataset that you want to list. Specify `train` to list the training dataset. Specify `test` to list the test dataset. If you have a single dataset project, specify `train`.

Length Constraints: Minimum length of 1. Maximum length of 10.

Pattern: `train|test`

Required: Yes

### Labeled

Specify `true` to include labeled entries, otherwise specify `false`. If you don't specify a value, Lookout for Vision returns all entries.

### MaxResults

The maximum number of results to return per paginated call. The largest value you can specify is 100. If you specify a value greater than 100, a `ValidationException` error occurs. The default value is 100.

Valid Range: Minimum value of 1. Maximum value of 100.

### NextToken

If the previous response was incomplete (because there is more data to retrieve), Amazon Lookout for Vision returns a pagination token in the response. You can use this pagination token to retrieve the next set of dataset entries.

Length Constraints: Maximum length of 2048.

Pattern: `^[a-zA-Z0-9\|\+\=\]{0,2048}$`

### projectName

The name of the project that contains the dataset that you want to list.

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[a-zA-Z0-9][a-zA-Z0-9_\-]*`

Required: Yes

### SourceRefContains

Perform a "contains" search on the values of the `source-ref` key within the dataset. For example a value of `"IMG_17"` returns all JSON Lines where the `source-ref` key value matches `*IMG_17*`.

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `.*\S.*`

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "DatasetEntries": [ "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.

### DatasetEntries

A list of the entries (JSON Lines) within the dataset.

Type: Array of strings

Length Constraints: Minimum length of 2. Maximum length of 8192.

Pattern: `^\{.*\}$`

### NextToken

If the response is truncated, Amazon Lookout for Vision returns this token that you can use in the subsequent request to retrieve the next set of dataset entries.

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^[a-zA-Z0-9\-\_/\+]{0,2048}$`

## Errors

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

### **AccessDeniedException**

You are not authorized to perform the action.

HTTP Status Code: 403

### **ConflictException**

The update or deletion of a resource caused an inconsistent state.

HTTP Status Code: 409

### **InternalServerErrorException**

Amazon Lookout for Vision experienced a service issue. Try your call again.

HTTP Status Code: 500

### **ResourceNotFoundException**

The resource could not be found.

HTTP Status Code: 404

### **ThrottlingException**

Amazon Lookout for Vision is temporarily unable to process the request. Try your call again.

HTTP Status Code: 429

### **ValidationException**

An input validation error occurred. For example, invalid characters in a project name, or if a pagination token is invalid.

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](#)

# ListModelPackagingJobs

Lists the model packaging jobs created for an Amazon Lookout for Vision project.

This operation requires permissions to perform the `lookoutvision:ListModelPackagingJobs` operation.

For more information, see [Using your Amazon Lookout for Vision model on an edge device](#).

## Request Syntax

```
GET /2020-11-20/projects/projectName/modelpackagingjobs?  
maxResults=MaxResults&nextToken=NextToken HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### MaxResults

The maximum number of results to return per paginated call. The largest value you can specify is 100. If you specify a value greater than 100, a `ValidationException` error occurs. The default value is 100.

Valid Range: Minimum value of 1. Maximum value of 100.

### NextToken

If the previous response was incomplete (because there is more results to retrieve), Amazon Lookout for Vision returns a pagination token in the response. You can use this pagination token to retrieve the next set of results.

Length Constraints: Maximum length of 2048.

Pattern: `^[a-zA-Z0-9\-\.\_\+\=]{0,2048}$`

### projectName

The name of the project for which you want to list the model packaging jobs.

Length Constraints: Minimum length of 1. Maximum length of 255.



Pattern: `[a-zA-Z0-9][a-zA-Z0-9_\-]*`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "ModelPackagingJobs": [
    {
      "CreationTimestamp": number,
      "JobName": "string",
      "LastUpdatedTimestamp": number,
      "ModelPackagingJobDescription": "string",
      "ModelPackagingMethod": "string",
      "ModelVersion": "string",
      "ProjectName": "string",
      "Status": "string",
      "StatusMessage": "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.

### ModelPackagingJobs

A list of the model packaging jobs created for the specified Amazon Lookout for Vision project.

Type: Array of [ModelPackagingJobMetadata](#) objects

## NextToken

If the previous response was incomplete (because there is more results to retrieve), Amazon Lookout for Vision returns a pagination token in the response. You can use this pagination token to retrieve the next set of results.

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^[a-zA-Z0-9\|\/\+\=\]{0,2048}$`

## Errors

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

### **AccessDeniedException**

You are not authorized to perform the action.

HTTP Status Code: 403

### **InternalServerErrorException**

Amazon Lookout for Vision experienced a service issue. Try your call again.

HTTP Status Code: 500

### **ResourceNotFoundException**

The resource could not be found.

HTTP Status Code: 404

### **ThrottlingException**

Amazon Lookout for Vision is temporarily unable to process the request. Try your call again.

HTTP Status Code: 429

### **ValidationException**

An input validation error occurred. For example, invalid characters in a project name, or if a pagination token is invalid.

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](#)

# ListModels

Lists the versions of a model in an Amazon Lookout for Vision project.

The `ListModels` operation is eventually consistent. Recent calls to `CreateModel` might take a while to appear in the response from `ListProjects`.

This operation requires permissions to perform the `lookoutvision:ListModels` operation.

## Request Syntax

```
GET /2020-11-20/projects/projectName/models?maxResults=MaxResults&nextToken=NextToken
HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### MaxResults

The maximum number of results to return per paginated call. The largest value you can specify is 100. If you specify a value greater than 100, a `ValidationException` error occurs. The default value is 100.

Valid Range: Minimum value of 1. Maximum value of 100.

### NextToken

If the previous response was incomplete (because there is more data to retrieve), Amazon Lookout for Vision returns a pagination token in the response. You can use this pagination token to retrieve the next set of models.

Length Constraints: Maximum length of 2048.

Pattern: `^[a-zA-Z0-9\-\_\.\+]{0,2048}$`

### projectName

The name of the project that contains the model versions that you want to list.

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[a-zA-Z0-9][a-zA-Z0-9_\-]*`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "Models": [
    {
      "CreationTimestamp": number,
      "Description": "string",
      "ModelArn": "string",
      "ModelVersion": "string",
      "Performance": {
        "F1Score": number,
        "Precision": number,
        "Recall": number
      },
      "Status": "string",
      "StatusMessage": "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.

### Models

A list of model versions in the specified project.

Type: Array of [ModelMetadata](#) objects

### [NextToken](#)

If the response is truncated, Amazon Lookout for Vision returns this token that you can use in the subsequent request to retrieve the next set of models.

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^[a-zA-Z0-9\-\_\+\=]{0,2048}$`

## Errors

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

### **AccessDeniedException**

You are not authorized to perform the action.

HTTP Status Code: 403

### **ConflictException**

The update or deletion of a resource caused an inconsistent state.

HTTP Status Code: 409

### **InternalServerError**

Amazon Lookout for Vision experienced a service issue. Try your call again.

HTTP Status Code: 500

### **ResourceNotFoundException**

The resource could not be found.

HTTP Status Code: 404

### **ThrottlingException**

Amazon Lookout for Vision is temporarily unable to process the request. Try your call again.

HTTP Status Code: 429

## ValidationException

An input validation error occurred. For example, invalid characters in a project name, or if a pagination token is invalid.

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](#)

# ListProjects

Lists the Amazon Lookout for Vision projects in your AWS account that are in the AWS Region in which you call `ListProjects`.

The `ListProjects` operation is eventually consistent. Recent calls to `CreateProject` and `DeleteProject` might take a while to appear in the response from `ListProjects`.

This operation requires permissions to perform the `lookoutvision:ListProjects` operation.

## Request Syntax

```
GET /2020-11-20/projects?maxResults=MaxResults&nextToken=NextToken HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### MaxResults

The maximum number of results to return per paginated call. The largest value you can specify is 100. If you specify a value greater than 100, a `ValidationException` error occurs. The default value is 100.

Valid Range: Minimum value of 1. Maximum value of 100.

### NextToken

If the previous response was incomplete (because there is more data to retrieve), Amazon Lookout for Vision returns a pagination token in the response. You can use this pagination token to retrieve the next set of projects.

Length Constraints: Maximum length of 2048.

Pattern: `^[a-zA-Z0-9\-\_\.\+\/]{0,2048}$`

## Request Body

The request does not have a request body.



## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "NextToken": "string",
  "Projects": [
    {
      "CreationTimestamp": number,
      "ProjectArn": "string",
      "ProjectName": "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

If the response is truncated, Amazon Lookout for Vision returns this token that you can use in the subsequent request to retrieve the next set of projects.

Type: String

Length Constraints: Maximum length of 2048.

Pattern: `^[a-zA-Z0-9\-\_\.\+]{0,2048}$`

### Projects

A list of projects in your AWS account.

Type: Array of [ProjectMetadata](#) objects

## Errors

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

## AccessDeniedException

You are not authorized to perform the action.

HTTP Status Code: 403

## ConflictException

The update or deletion of a resource caused an inconsistent state.

HTTP Status Code: 409

## InternalServerError

Amazon Lookout for Vision experienced a service issue. Try your call again.

HTTP Status Code: 500

## ResourceNotFoundException

The resource could not be found.

HTTP Status Code: 404

## ThrottlingException

Amazon Lookout for Vision is temporarily unable to process the request. Try your call again.

HTTP Status Code: 429

## ValidationException

An input validation error occurred. For example, invalid characters in a project name, or if a pagination token is invalid.

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

Returns a list of tags attached to the specified Amazon Lookout for Vision model.

This operation requires permissions to perform the `lookoutvision:ListTagsForResource` operation.

## Request Syntax

```
GET /2020-11-20/tags/resourceArn HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### [resourceArn](#)

The Amazon Resource Name (ARN) of the model for which you want to list tags.

Length Constraints: Minimum length of 1. Maximum length of 1011.

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200  
Content-type: application/json
```

```
{  
  "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.

### Tags

A map of tag keys and values attached to the specified model.

Type: Array of [Tag](#) objects

Array Members: Minimum number of 0 items. Maximum number of 200 items.

## Errors

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

### **AccessDeniedException**

You are not authorized to perform the action.

HTTP Status Code: 403

### **ConflictException**

The update or deletion of a resource caused an inconsistent state.

HTTP Status Code: 409

### **InternalServerErrorException**

Amazon Lookout for Vision experienced a service issue. Try your call again.

HTTP Status Code: 500

### **ResourceNotFoundException**

The resource could not be found.

HTTP Status Code: 404

### **ThrottlingException**

Amazon Lookout for Vision is temporarily unable to process the request. Try your call again.

HTTP Status Code: 429

## ValidationException

An input validation error occurred. For example, invalid characters in a project name, or if a pagination token is invalid.

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](#)

# StartModel

Starts the running of the version of an Amazon Lookout for Vision model. Starting a model takes a while to complete. To check the current state of the model, use [DescribeModel](#).

A model is ready to use when its status is HOSTED.

Once the model is running, you can detect custom labels in new images by calling [DetectAnomalies](#).

## Note

You are charged for the amount of time that the model is running. To stop a running model, call [StopModel](#).

This operation requires permissions to perform the `lookoutvision:StartModel` operation.

## Request Syntax

```
POST /2020-11-20/projects/projectName/models/modelVersion/start HTTP/1.1
X-Amzn-Client-Token: ClientToken
Content-type: application/json

{
  "MaxInferenceUnits": number,
  "MinInferenceUnits": number
}
```

## URI Request Parameters

The request uses the following URI parameters.

### [ClientToken](#)

`ClientToken` is an idempotency token that ensures a call to `StartModel` completes only once. You choose the value to pass. For example, An issue might prevent you from getting a response from `StartModel`. In this case, safely retry your call to `StartModel` by using the same `ClientToken` parameter value.

If you don't supply a value for `ClientToken`, the AWS SDK you are using inserts a value for you. This prevents retries after a network error from making multiple start requests. You'll need to provide your own value for other use cases.

An error occurs if the other input parameters are not the same as in the first request. Using a different value for `ClientToken` is considered a new call to `StartModel`. An idempotency token is active for 8 hours.

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

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

### modelVersion

The version of the model that you want to start.

Length Constraints: Minimum length of 1. Maximum length of 10.

Pattern: `([1-9][0-9]*|latest)`

Required: Yes

### projectName

The name of the project that contains the model that you want to start.

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[a-zA-Z0-9][a-zA-Z0-9_\-]*`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### MaxInferenceUnits

The maximum number of inference units to use for auto-scaling the model. If you don't specify a value, Amazon Lookout for Vision doesn't auto-scale the model.

Type: Integer

Valid Range: Minimum value of 1.



Required: No

### MinInferenceUnits

The minimum number of inference units to use. A single inference unit represents 1 hour of processing. Use a higher number to increase the TPS throughput of your model. You are charged for the number of inference units that you use.

Type: Integer

Valid Range: Minimum value of 1.

Required: Yes

## Response Syntax

```
HTTP/1.1 202
Content-type: application/json

{
  "Status": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 202 response.

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

### Status

The current running status of the model.

Type: String

Valid Values: STARTING\_HOSTING | HOSTED | HOSTING\_FAILED | STOPPING\_HOSTING  
| SYSTEM\_UPDATING

## Errors

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

## AccessDeniedException

You are not authorized to perform the action.

HTTP Status Code: 403

## ConflictException

The update or deletion of a resource caused an inconsistent state.

HTTP Status Code: 409

## InternalServerErrorException

Amazon Lookout for Vision experienced a service issue. Try your call again.

HTTP Status Code: 500

## ResourceNotFoundException

The resource could not be found.

HTTP Status Code: 404

## ServiceQuotaExceededException

A service quota exceeded the allowed limit. For more information, see [Quotas in Amazon Lookout for Vision](#).

HTTP Status Code: 402

## ThrottlingException

Amazon Lookout for Vision is temporarily unable to process the request. Try your call again.

HTTP Status Code: 429

## ValidationException

An input validation error occurred. For example, invalid characters in a project name, or if a pagination token is invalid.

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](#)

# StartModelPackagingJob

Starts an Amazon Lookout for Vision model packaging job. A model packaging job creates an AWS IoT Greengrass component for a Lookout for Vision model. You can use the component to deploy your model to an edge device managed by Greengrass.

Use the [DescribeModelPackagingJob](#) API to determine the current status of the job. The model packaging job is complete if the value of Status is SUCCEEDED.

To deploy the component to the target device, use the component name and component version with the AWS IoT Greengrass [CreateDeployment](#) API.

This operation requires the following permissions:

- `lookoutvision:StartModelPackagingJob`
- `s3:PutObject`
- `s3:GetBucketLocation`
- `kms:GenerateDataKey`
- `greengrass:CreateComponentVersion`
- `greengrass:DescribeComponent`
- (Optional) `greengrass:TagResource`. Only required if you want to tag the component.

For more information, see [Using your Amazon Lookout for Vision model on an edge device](#).

## Request Syntax

```
POST /2020-11-20/projects/projectName/modelpackagingjobs HTTP/1.1
```

```
X-Amzn-Client-Token: ClientToken
```

```
Content-type: application/json
```

```
{
  "Configuration": {
    "Greengrass": {
      "CompilerOptions": "string",
      "ComponentDescription": "string",
      "ComponentName": "string",
      "ComponentVersion": "string",
      "S3OutputLocation": {
```

```
    "Bucket": "string",
    "Prefix": "string"
  },
  "Tags": [
    {
      "Key": "string",
      "Value": "string"
    }
  ],
  "TargetDevice": "string",
  "TargetPlatform": {
    "Accelerator": "string",
    "Arch": "string",
    "Os": "string"
  }
},
"Description": "string",
"JobName": "string",
"ModelVersion": "string"
}
```

## URI Request Parameters

The request uses the following URI parameters.

### ClientToken

ClientToken is an idempotency token that ensures a call to StartModelPackagingJob completes only once. You choose the value to pass. For example, An issue might prevent you from getting a response from StartModelPackagingJob. In this case, safely retry your call to StartModelPackagingJob by using the same ClientToken parameter value.

If you don't supply a value for ClientToken, the AWS SDK you are using inserts a value for you. This prevents retries after a network error from making multiple dataset creation requests. You'll need to provide your own value for other use cases.

An error occurs if the other input parameters are not the same as in the first request. Using a different value for ClientToken is considered a new call to StartModelPackagingJob. An idempotency token is active for 8 hours.

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

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

### projectName

The name of the project which contains the version of the model that you want to package.

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[a-zA-Z0-9][a-zA-Z0-9_\-]*`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### Configuration

The configuration for the model packaging job.

Type: [ModelPackagingConfiguration](#) object

Required: Yes

### Description

A description for the model packaging job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `[a-zA-Z0-9-_. ()':,;?]+`

Required: No

### JobName

A name for the model packaging job. If you don't supply a value, the service creates a job name for you.

Type: String

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

Pattern: [a-zA-Z0-9-]+

Required: No

### ModelVersion

The version of the model within the project that you want to package.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 10.

Pattern: ([1-9][0-9]\*|latest)

Required: Yes

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "JobName": "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.

### JobName

The job name for the model packaging job. If you don't supply a job name in the JobName input parameter, the service creates a job name for you.

Type: String

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

Pattern: [a-zA-Z0-9-]+

## Errors

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

### AccessDeniedException

You are not authorized to perform the action.

HTTP Status Code: 403

### ConflictException

The update or deletion of a resource caused an inconsistent state.

HTTP Status Code: 409

### InternalServerErrorException

Amazon Lookout for Vision experienced a service issue. Try your call again.

HTTP Status Code: 500

### ResourceNotFoundException

The resource could not be found.

HTTP Status Code: 404

### ServiceQuotaExceededException

A service quota exceeded the allowed limit. For more information, see [Quotas in Amazon Lookout for Vision](#).

HTTP Status Code: 402

### ThrottlingException

Amazon Lookout for Vision is temporarily unable to process the request. Try your call again.

HTTP Status Code: 429

### ValidationException

An input validation error occurred. For example, invalid characters in a project name, or if a pagination token is invalid.

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](#)

# StopModel

Stops the hosting of a running model. The operation might take a while to complete. To check the current status, call [DescribeModel](#).

After the model hosting stops, the Status of the model is TRAINED.

This operation requires permissions to perform the `lookoutvision:StopModel` operation.

## Request Syntax

```
POST /2020-11-20/projects/projectName/models/modelVersion/stop HTTP/1.1
X-Amzn-Client-Token: ClientToken
```

## URI Request Parameters

The request uses the following URI parameters.

### [ClientToken](#)

`ClientToken` is an idempotency token that ensures a call to `StopModel` completes only once. You choose the value to pass. For example, An issue might prevent you from getting a response from `StopModel`. In this case, safely retry your call to `StopModel` by using the same `ClientToken` parameter value.

If you don't supply a value for `ClientToken`, the AWS SDK you are using inserts a value for you. This prevents retries after a network error from making multiple stop requests. You'll need to provide your own value for other use cases.

An error occurs if the other input parameters are not the same as in the first request. Using a different value for `ClientToken` is considered a new call to `StopModel`. An idempotency token is active for 8 hours.

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

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

### [modelVersion](#)

The version of the model that you want to stop.

Length Constraints: Minimum length of 1. Maximum length of 10.

Pattern: ([1-9][0-9]\*|latest)

Required: Yes

### projectName

The name of the project that contains the model that you want to stop.

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [a-zA-Z0-9][a-zA-Z0-9\_\-]\*

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 202
Content-type: application/json

{
  "Status": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 202 response.

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

### Status

The status of the model.

Type: String

Valid Values: STARTING\_HOSTING | HOSTED | HOSTING\_FAILED | STOPPING\_HOSTING  
| SYSTEM\_UPDATING

## Errors

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

### **AccessDeniedException**

You are not authorized to perform the action.

HTTP Status Code: 403

### **ConflictException**

The update or deletion of a resource caused an inconsistent state.

HTTP Status Code: 409

### **InternalServerErrorException**

Amazon Lookout for Vision experienced a service issue. Try your call again.

HTTP Status Code: 500

### **ResourceNotFoundException**

The resource could not be found.

HTTP Status Code: 404

### **ThrottlingException**

Amazon Lookout for Vision is temporarily unable to process the request. Try your call again.

HTTP Status Code: 429

### **ValidationException**

An input validation error occurred. For example, invalid characters in a project name, or if a pagination token is invalid.

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

Adds one or more key-value tags to an Amazon Lookout for Vision model. For more information, see *Tagging a model* in the *Amazon Lookout for Vision Developer Guide*.

This operation requires permissions to perform the `lookoutvision:TagResource` operation.

## Request Syntax

```
POST /2020-11-20/tags/resourceArn HTTP/1.1
```

```
Content-type: application/json
```

```
{
  "Tags": [
    {
      "Key": "string",
      "Value": "string"
    }
  ]
}
```

## URI Request Parameters

The request uses the following URI parameters.

### resourceArn

The Amazon Resource Name (ARN) of the model to assign the tags.

Length Constraints: Minimum length of 1. Maximum length of 1011.

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### Tags

The key-value tags to assign to the model.

Type: Array of [Tag](#) objects

Array Members: Minimum number of 0 items. Maximum number of 200 items.

Required: Yes

## Response Syntax

```
HTTP/1.1 200
```

## 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](#).

### AccessDeniedException

You are not authorized to perform the action.

HTTP Status Code: 403

### ConflictException

The update or deletion of a resource caused an inconsistent state.

HTTP Status Code: 409

### InternalServerError

Amazon Lookout for Vision experienced a service issue. Try your call again.

HTTP Status Code: 500

### ResourceNotFoundException

The resource could not be found.

HTTP Status Code: 404

## ServiceQuotaExceededException

A service quota exceeded the allowed limit. For more information, see [Quotas in Amazon Lookout for Vision](#).

HTTP Status Code: 402

## ThrottlingException

Amazon Lookout for Vision is temporarily unable to process the request. Try your call again.

HTTP Status Code: 429

## ValidationException

An input validation error occurred. For example, invalid characters in a project name, or if a pagination token is invalid.

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 one or more tags from an Amazon Lookout for Vision model. For more information, see *Tagging a model* in the *Amazon Lookout for Vision Developer Guide*.

This operation requires permissions to perform the `lookoutvision:UntagResource` operation.

## Request Syntax

```
DELETE /2020-11-20/tags/resourceArn?tagKeys=TagKeys HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### resourceArn

The Amazon Resource Name (ARN) of the model from which you want to remove tags.

Length Constraints: Minimum length of 1. Maximum length of 1011.

Required: Yes

### TagKeys

A list of the keys of the tags that you want to remove.

Array Members: Minimum number of 0 items. Maximum number of 200 items.

Length Constraints: Minimum length of 1. Maximum length of 128.

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

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
```

## 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](#).

### **AccessDeniedException**

You are not authorized to perform the action.

HTTP Status Code: 403

### **ConflictException**

The update or deletion of a resource caused an inconsistent state.

HTTP Status Code: 409

### **InternalServerError**

Amazon Lookout for Vision experienced a service issue. Try your call again.

HTTP Status Code: 500

### **ResourceNotFoundException**

The resource could not be found.

HTTP Status Code: 404

### **ThrottlingException**

Amazon Lookout for Vision is temporarily unable to process the request. Try your call again.

HTTP Status Code: 429

### **ValidationException**

An input validation error occurred. For example, invalid characters in a project name, or if a pagination token is invalid.

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](#)

# UpdateDatasetEntries

Adds or updates one or more JSON Line entries in a dataset. A JSON Line includes information about an image used for training or testing an Amazon Lookout for Vision model.

To update an existing JSON Line, use the `source-ref` field to identify the JSON Line. The JSON line that you supply replaces the existing JSON line. Any existing annotations that are not in the new JSON line are removed from the dataset.

For more information, see [Defining JSON lines for anomaly classification](#).

## Note

The images you reference in the `source-ref` field of a JSON line, must be in the same S3 bucket as the existing images in the dataset.

Updating a dataset might take a while to complete. To check the current status, call [DescribeDataset](#) and check the Status field in the response.

This operation requires permissions to perform the `lookoutvision:UpdateDatasetEntries` operation.

## Request Syntax

```
PATCH /2020-11-20/projects/projectName/datasets/datasetType/entries HTTP/1.1
X-Amzn-Client-Token: ClientToken
Content-type: application/json

{
  "Changes": blob
}
```

## URI Request Parameters

The request uses the following URI parameters.

### [ClientToken](#)

`ClientToken` is an idempotency token that ensures a call to `UpdateDatasetEntries` completes only once. You choose the value to pass. For example, An issue might prevent you

from getting a response from `UpdateDatasetEntries`. In this case, safely retry your call to `UpdateDatasetEntries` by using the same `ClientToken` parameter value.

If you don't supply a value for `ClientToken`, the AWS SDK you are using inserts a value for you. This prevents retries after a network error from making multiple updates with the same dataset entries. You'll need to provide your own value for other use cases.

An error occurs if the other input parameters are not the same as in the first request. Using a different value for `ClientToken` is considered a new call to `UpdateDatasetEntries`. An idempotency token is active for 8 hours.

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

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

### datasetType

The type of the dataset that you want to update. Specify `train` to update the training dataset. Specify `test` to update the test dataset. If you have a single dataset project, specify `train`.

Length Constraints: Minimum length of 1. Maximum length of 10.

Pattern: `train|test`

Required: Yes

### projectName

The name of the project that contains the dataset that you want to update.

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[a-zA-Z0-9][a-zA-Z0-9_\-]*`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### Changes

The entries to add to the dataset.

Type: Base64-encoded binary data object

Length Constraints: Minimum length of 1. Maximum length of 10485760.

Required: Yes

## Response Syntax

```
HTTP/1.1 202
Content-type: application/json

{
  "Status": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 202 response.

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

### Status

The status of the dataset update.

Type: String

Valid Values: CREATE\_IN\_PROGRESS | CREATE\_COMPLETE |  
CREATE\_FAILED | UPDATE\_IN\_PROGRESS | UPDATE\_COMPLETE |  
UPDATE\_FAILED\_ROLLBACK\_IN\_PROGRESS | UPDATE\_FAILED\_ROLLBACK\_COMPLETE |  
DELETE\_IN\_PROGRESS | DELETE\_COMPLETE | DELETE\_FAILED

## Errors

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

### **AccessDeniedException**

You are not authorized to perform the action.

HTTP Status Code: 403

### **ConflictException**

The update or deletion of a resource caused an inconsistent state.

HTTP Status Code: 409

### **InternalServerErrorException**

Amazon Lookout for Vision experienced a service issue. Try your call again.

HTTP Status Code: 500

### **ResourceNotFoundException**

The resource could not be found.

HTTP Status Code: 404

### **ThrottlingException**

Amazon Lookout for Vision is temporarily unable to process the request. Try your call again.

HTTP Status Code: 429

### **ValidationException**

An input validation error occurred. For example, invalid characters in a project name, or if a pagination token is invalid.

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 Amazon Lookout for Vision API contains several data types that various actions use. This section describes each data type in detail.

## Note

The order of each element in a data type structure is not guaranteed. Applications should not assume a particular order.

The following data types are supported:

- [Anomaly](#)
- [DatasetDescription](#)
- [DatasetGroundTruthManifest](#)
- [DatasetImageStats](#)
- [DatasetMetadata](#)
- [DatasetSource](#)
- [DetectAnomalyResult](#)
- [GreengrassConfiguration](#)
- [GreengrassOutputDetails](#)
- [ImageSource](#)
- [InputS3Object](#)
- [ModelDescription](#)
- [ModelMetadata](#)
- [ModelPackagingConfiguration](#)
- [ModelPackagingDescription](#)
- [ModelPackagingJobMetadata](#)
- [ModelPackagingOutputDetails](#)
- [ModelPerformance](#)
- [OutputConfig](#)
- [OutputS3Object](#)

- [PixelAnomaly](#)
- [ProjectDescription](#)
- [ProjectMetadata](#)
- [S3Location](#)
- [Tag](#)
- [TargetPlatform](#)

# Anomaly

Information about an anomaly type found on an image by an image segmentation model. For more information, see [DetectAnomalies](#).

## Contents

### Name

The name of an anomaly type found in an image. Name maps to an anomaly type in the training dataset, apart from the anomaly type background. The service automatically inserts the background anomaly type into the response from `DetectAnomalies`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `[a-zA-Z0-9]*`

Required: No

### PixelAnomaly

Information about the pixel mask that covers an anomaly type.

Type: [PixelAnomaly](#) 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](#)

# DatasetDescription

The description for a dataset. For more information, see [DescribeDataset](#).

## Contents

### CreationTimestamp

The Unix timestamp for the time and date that the dataset was created.

Type: Timestamp

Required: No

### DatasetType

The type of the dataset. The value `train` represents a training dataset or single dataset project. The value `test` represents a test dataset.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 10.

Pattern: `train|test`

Required: No

### ImageStats

Statistics about the images in a dataset.

Type: [DatasetImageStats](#) object

Required: No

### LastUpdatedTimestamp

The Unix timestamp for the date and time that the dataset was last updated.

Type: Timestamp

Required: No

### ProjectName

The name of the project that contains the dataset.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[a-zA-Z0-9][a-zA-Z0-9_\-]*`

Required: No

## Status

The status of the dataset.

Type: String

Valid Values: `CREATE_IN_PROGRESS` | `CREATE_COMPLETE` | `CREATE_FAILED` | `UPDATE_IN_PROGRESS` | `UPDATE_COMPLETE` | `UPDATE_FAILED_ROLLBACK_IN_PROGRESS` | `UPDATE_FAILED_ROLLBACK_COMPLETE` | `DELETE_IN_PROGRESS` | `DELETE_COMPLETE` | `DELETE_FAILED`

Required: No

## StatusMessage

The status message for the dataset.

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](#)

# DatasetGroundTruthManifest

Location information about a manifest file. You can use a manifest file to create a dataset.

## Contents

### S3Object

The S3 bucket location for the manifest file.

Type: [InputS3Object](#) 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](#)

# DatasetImageStats

Statistics about the images in a dataset.

## Contents

### Anomaly

the total number of images labeled as an anomaly.

Type: Integer

Required: No

### Labeled

The total number of labeled images.

Type: Integer

Required: No

### Normal

The total number of images labeled as normal.

Type: Integer

Required: No

### Total

The total number of images in the dataset.

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](#)



# DatasetMetadata

Summary information for an Amazon Lookout for Vision dataset. For more information, see [DescribeDataset](#) and [ProjectDescription](#).

## Contents

### CreationTimestamp

The Unix timestamp for the date and time that the dataset was created.

Type: Timestamp

Required: No

### DatasetType

The type of the dataset.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 10.

Pattern: `train|test`

Required: No

### Status

The status for the dataset.

Type: String

Valid Values: `CREATE_IN_PROGRESS | CREATE_COMPLETE | CREATE_FAILED | UPDATE_IN_PROGRESS | UPDATE_COMPLETE | UPDATE_FAILED_ROLLBACK_IN_PROGRESS | UPDATE_FAILED_ROLLBACK_COMPLETE | DELETE_IN_PROGRESS | DELETE_COMPLETE | DELETE_FAILED`

Required: No

### StatusMessage

The status message for the dataset.

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](#)

# DatasetSource

Information about the location of a manifest file that Amazon Lookout for Vision uses to create a dataset.

## Contents

### GroundTruthManifest

Location information for the manifest file.

Type: [DatasetGroundTruthManifest](#) 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](#)

# DetectAnomalyResult

The prediction results from a call to [DetectAnomalies](#). `DetectAnomalyResult` includes classification information for the prediction (`IsAnomalous` and `Confidence`). If the model you use is an image segmentation model, `DetectAnomalyResult` also includes segmentation information (`Anomalies` and `AnomalyMask`). Classification information is calculated separately from segmentation information and you shouldn't assume a relationship between them.

## Contents

### Anomalies

If the model is an image segmentation model, `Anomalies` contains a list of anomaly types found in the image. There is one entry for each type of anomaly found (even if multiple instances of an anomaly type exist on the image). The first element in the list is always an anomaly type representing the image background ('background') and shouldn't be considered an anomaly. Amazon Lookout for Vision automatically add the background anomaly type to the response, and you don't need to declare a background anomaly type in your dataset.

If the list has one entry ('background'), no anomalies were found on the image.

An image classification model doesn't return an `Anomalies` list.

Type: Array of [Anomaly](#) objects

Required: No

### AnomalyMask

If the model is an image segmentation model, `AnomalyMask` contains pixel masks that covers all anomaly types found on the image. Each anomaly type has a different mask color. To map a color to an anomaly type, see the `color` field of the [PixelAnomaly](#) object.

An image classification model doesn't return an `Anomalies` list.

Type: Base64-encoded binary data object

Length Constraints: Minimum length of 1. Maximum length of 5242880.

Required: No

## Confidence

The confidence that Lookout for Vision has in the accuracy of the classification in `IsAnomalous`.

Type: Float

Required: No

## IsAnomalous

True if Amazon Lookout for Vision classifies the image as containing an anomaly, otherwise false.

Type: Boolean

Required: No

## Source

The source of the image that was analyzed. `direct` means that the images was supplied from the local computer. No other values are supported.

Type: [ImageSource](#) 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](#)

# GreengrassConfiguration

Configuration information for the AWS IoT Greengrass component created in a model packaging job. For more information, see [StartModelPackagingJob](#).

## Note

You can't specify a component with the same `ComponentName` and `ComponentVersion` as an existing component with the same component name and component version.

## Contents

### ComponentName

A name for the AWS IoT Greengrass component.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `[a-zA-Z0-9-_. ]+`

Required: Yes

### S3OutputLocation

An S3 location in which Lookout for Vision stores the component artifacts.

Type: [S3Location](#) object

Required: Yes

### CompilerOptions

Additional compiler options for the Greengrass component. Currently, only NVIDIA Graphics Processing Units (GPU) and CPU accelerators are supported. If you specify `TargetDevice`, don't specify `CompilerOptions`.

For more information, see [Compiler options](#).

Type: String

Length Constraints: Minimum length of 3. Maximum length of 1024.

Pattern: .\*

Required: No

### ComponentDescription

A description for the AWS IoT Greengrass component.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: [a-zA-Z0-9-\_. ()' : , ; ? ] +

Required: No

### ComponentVersion

A Version for the AWS IoT Greengrass component. If you don't provide a value, a default value of *Model Version.0.0* is used.

Type: String

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

Pattern: ^([0-9]{1,6})\.[0-9]{1,6}\.[0-9]{1,6}\$

Required: No

### Tags

A set of tags (key-value pairs) that you want to attach to the AWS IoT Greengrass component.

Type: Array of [Tag](#) objects

Array Members: Minimum number of 0 items. Maximum number of 200 items.

Required: No

### TargetDevice

The target device for the model. Currently the only supported value is `jetson_xavier`. If you specify `TargetDevice`, you can't specify `TargetPlatform`.

Type: String

Valid Values: jetson\_xavier

Required: No

### **TargetPlatform**

The target platform for the model. If you specify TargetPlatform, you can't specify TargetDevice.

Type: [TargetPlatform](#) 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](#)



# GreengrassOutputDetails

Information about the AWS IoT Greengrass component created by a model packaging job.

## Contents

### ComponentName

The name of the component.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: [a-zA-Z0-9-\_.]+

Required: No

### ComponentVersion

The version of the component.

Type: String

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

Pattern: ^([0-9]{1,6})\.([0-9]{1,6})\.([0-9]{1,6})\$

Required: No

### ComponentVersionArn

The Amazon Resource Name (ARN) of the component.

Type: String

Pattern: arn:[^:]\*:greengrass:[^:]\*:aws:components:[^:]+

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](#)

# ImageSource

The source for an image.

## Contents

### Type

The type of the image.

Type: String

Pattern: `direct`

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](#)

# InputS3Object

Amazon S3 Location information for an input manifest file.

## Contents

### Bucket

The Amazon S3 bucket that contains the manifest.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 63.

Pattern: `[0-9A-Za-z\.\-\_]*`

Required: Yes

### Key

The name and location of the manifest file within the bucket.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `^([a-zA-Z0-9!_.*'()-][/[a-zA-Z0-9!_.*'()-]*)?*$`

Required: Yes

### VersionId

The version ID of the bucket.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `.*`

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](#)

# ModelDescription

Describes an Amazon Lookout for Vision model.

## Contents

### CreationTimestamp

The unix timestamp for the date and time that the model was created.

Type: Timestamp

Required: No

### Description

The description for the model.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 500.

Pattern: `[0-9A-Za-z\.\-\_]*`

Required: No

### EvaluationEndTimestamp

The unix timestamp for the date and time that the evaluation ended.

Type: Timestamp

Required: No

### EvaluationManifest

The S3 location where Amazon Lookout for Vision saves the manifest file that was used to test the trained model and generate the performance scores.

Type: [OutputS3Object](#) object

Required: No

### EvaluationResult

The S3 location where Amazon Lookout for Vision saves the performance metrics.

Type: [OutputS3Object](#) object

Required: No

### **KmsKeyId**

The identifier for the AWS Key Management Service (AWS KMS) key that was used to encrypt the model during training.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `^[A-Za-z0-9][A-Za-z0-9:_/+=@.-]{0,2048}$`

Required: No

### **MaxInferenceUnits**

The maximum number of inference units Amazon Lookout for Vision uses to auto-scale the model. For more information, see [StartModel](#).

Type: Integer

Valid Range: Minimum value of 1.

Required: No

### **MinInferenceUnits**

The minimum number of inference units used by the model. For more information, see [StartModel](#)

Type: Integer

Valid Range: Minimum value of 1.

Required: No

### **ModelArn**

The Amazon Resource Name (ARN) of the model.

Type: String

Required: No

## ModelVersion

The version of the model

Type: String

Length Constraints: Minimum length of 1. Maximum length of 10.

Pattern: (`[1-9][0-9]*|latest`)

Required: No

## OutputConfig

The S3 location where Amazon Lookout for Vision saves model training files.

Type: [OutputConfig](#) object

Required: No

## Performance

Performance metrics for the model. Created during training.

Type: [ModelPerformance](#) object

Required: No

## Status

The status of the model.

Type: String

Valid Values: TRAINING | TRAINED | TRAINING\_FAILED | STARTING\_HOSTING | HOSTED | HOSTING\_FAILED | STOPPING\_HOSTING | SYSTEM\_UPDATING | DELETING

Required: No

## StatusMessage

The status message for the model.

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](#)

# ModelMetadata

Describes an Amazon Lookout for Vision model.

## Contents

### CreationTimestamp

The unix timestamp for the date and time that the model was created.

Type: Timestamp

Required: No

### Description

The description for the model.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 500.

Pattern: `[0-9A-Za-z\.\-]*`

Required: No

### ModelArn

The Amazon Resource Name (ARN) of the model.

Type: String

Required: No

### ModelVersion

The version of the model.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 10.

Pattern: `([1-9][0-9]*|latest)`

Required: No

## Performance

Performance metrics for the model. Not available until training has successfully completed.

Type: [ModelPerformance](#) object

Required: No

## Status

The status of the model.

Type: String

Valid Values: TRAINING | TRAINED | TRAINING\_FAILED | STARTING\_HOSTING | HOSTED | HOSTING\_FAILED | STOPPING\_HOSTING | SYSTEM\_UPDATING | DELETING

Required: No

## StatusMessage

The status message for the model.

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](#)

# ModelPackagingConfiguration

Configuration information for a Amazon Lookout for Vision model packaging job. For more information, see [StartModelPackagingJob](#).

## Contents

### Greengrass

Configuration information for the AWS IoT Greengrass component in a model packaging job.

Type: [GreengrassConfiguration](#) object

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](#)

# ModelPackagingDescription

Information about a model packaging job. For more information, see [DescribeModelPackagingJob](#).

## Contents

### CreationTimestamp

The Unix timestamp for the time and date that the model packaging job was created.

Type: Timestamp

Required: No

### JobName

The name of the model packaging job.

Type: String

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

Pattern: [a-zA-Z0-9- ]+

Required: No

### LastUpdatedTimestamp

The Unix timestamp for the time and date that the model packaging job was last updated.

Type: Timestamp

Required: No

### ModelPackagingConfiguration

The configuration information used in the model packaging job.

Type: [ModelPackagingConfiguration](#) object

Required: No

### ModelPackagingJobDescription

The description for the model packaging job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: [a-zA-Z0-9-\_. ()':,;?]+

Required: No

### **ModelPackagingMethod**

The AWS service used to package the job. Currently Lookout for Vision can package jobs with AWS IoT Greengrass.

Type: String

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

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

Required: No

### **ModelPackagingOutputDetails**

Information about the output of the model packaging job. For more information, see [DescribeModelPackagingJob](#).

Type: [ModelPackagingOutputDetails](#) object

Required: No

### **ModelVersion**

The version of the model used in the model packaging job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 10.

Pattern: ([1-9][0-9]\*|latest)

Required: No

### **ProjectName**

The name of the project that's associated with a model that's in the model package.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[a-zA-Z0-9][a-zA-Z0-9_\-]*`

Required: No

## Status

The status of the model packaging job.

Type: String

Valid Values: CREATED | RUNNING | SUCCEEDED | FAILED

Required: No

## StatusMessage

The status message for the model packaging job.

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](#)

# ModelPackagingJobMetadata

Metadata for a model packaging job. For more information, see [ListModelPackagingJobs](#).

## Contents

### CreationTimestamp

The Unix timestamp for the time and date that the model packaging job was created.

Type: Timestamp

Required: No

### JobName

The name of the model packaging job.

Type: String

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

Pattern: [a-zA-Z0-9-]+

Required: No

### LastUpdatedTimestamp

The Unix timestamp for the time and date that the model packaging job was last updated.

Type: Timestamp

Required: No

### ModelPackagingJobDescription

The description for the model packaging job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: [a-zA-Z0-9-\_. ()':,;?]+

Required: No



## ModelPackagingMethod

The AWS service used to package the job. Currently Lookout for Vision can package jobs with AWS IoT Greengrass.

Type: String

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

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

Required: No

## ModelVersion

The version of the model that is in the model package.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 10.

Pattern: `([1-9][0-9]*|latest)`

Required: No

## ProjectName

The project that contains the model that is in the model package.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[a-zA-Z0-9][a-zA-Z0-9_\-]*`

Required: No

## Status

The status of the model packaging job.

Type: String

Valid Values: `CREATED | RUNNING | SUCCEEDED | FAILED`

Required: No

## StatusMessage

The status message for the model packaging job.

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](#)

# ModelPackagingOutputDetails

Information about the output from a model packaging job.

## Contents

### Greengrass

Information about the AWS IoT Greengrass component in a model packaging job.

Type: [GreengrassOutputDetails](#) 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](#)

# ModelPerformance

Information about the evaluation performance of a trained model.

## Contents

### F1Score

The overall F1 score metric for the trained model.

Type: Float

Required: No

### Precision

The overall precision metric value for the trained model.

Type: Float

Required: No

### Recall

The overall recall metric value for the trained model.

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](#)

# OutputConfig

The S3 location where Amazon Lookout for Vision saves model training files.

## Contents

### S3Location

The S3 location for the output.

Type: [S3Location](#) object

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](#)

# OutputS3Object

The S3 location where Amazon Lookout for Vision saves training output.

## Contents

### Bucket

The bucket that contains the training output.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 63.

Pattern: `[0-9A-Za-z\.\-\_]*`

Required: Yes

### Key

The location of the training output in the bucket.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `^([a-zA-Z0-9!_.*'()-][/a-zA-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](#)

# PixelAnomaly

Information about the pixels in an anomaly mask. For more information, see [Anomaly](#). PixelAnomaly is only returned by image segmentation models.

## Contents

### Color

A hex color value for the mask that covers an anomaly type. Each anomaly type has a different mask color. The color maps to the color of the anomaly type used in the training dataset.

Type: String

Length Constraints: Fixed length of 7.

Pattern: `\#[a-zA-Z0-9]{6}`

Required: No

### TotalPercentageArea

The percentage area of the image that the anomaly type covers.

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](#)

# ProjectDescription

Describe an Amazon Lookout for Vision project. For more information, see [DescribeProject](#).

## Contents

### CreationTimestamp

The unix timestamp for the date and time that the project was created.

Type: Timestamp

Required: No

### Datasets

A list of datasets in the project.

Type: Array of [DatasetMetadata](#) objects

Required: No

### ProjectArn

The Amazon Resource Name (ARN) of the project.

Type: String

Required: No

### ProjectName

The name of the project.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

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](#)

# ProjectMetadata

Metadata about an Amazon Lookout for Vision project.

## Contents

### CreationTimestamp

The unix timestamp for the date and time that the project was created.

Type: Timestamp

Required: No

### ProjectArn

The Amazon Resource Name (ARN) of the project.

Type: String

Required: No

### ProjectName

The name of the project.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

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](#)



# S3Location

Information about the location of training output or the output of a model packaging job.

## Contents

### Bucket

The S3 bucket that contains the training or model packaging job output. If you are training a model, the bucket must be in your AWS account. If you use an S3 bucket for a model packaging job, the S3 bucket must be in the same AWS Region and AWS account in which you use AWS IoT Greengrass.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 63.

Pattern: `[0-9A-Za-z\.\- _]*`

Required: Yes

### Prefix

The path of the folder, within the S3 bucket, that contains the output.

Type: String

Length Constraints: Maximum length of 1024.

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](#)



# Tag

A key and value pair that is attached to the specified Amazon Lookout for Vision model.

## Contents

### Key

The key of the tag that is attached to the specified model.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

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

Required: Yes

### Value

The value of the tag that is attached to the specified model.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

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

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](#)

# TargetPlatform

The platform on which a model runs on an AWS IoT Greengrass core device.

## Contents

### Arch

The target architecture for the model. The currently supported architectures are X86\_64 (64-bit version of the x86 instruction set) and ARM\_64 (ARMv8 64-bit CPU).

Type: String

Valid Values: ARM64 | X86\_64

Required: Yes

### Os

The target operating system for the model. Linux is the only operating system that is currently supported.

Type: String

Valid Values: LINUX

Required: Yes

### Accelerator

The target accelerator for the model. Currently, Amazon Lookout for Vision only supports NVIDIA (Nvidia graphics processing unit) and CPU accelerators. If you specify NVIDIA as an accelerator, you must also specify the `gpu-code`, `trt-ver`, and `cuda-ver` compiler options. If you don't specify an accelerator, Lookout for Vision uses the CPU for compilation and we highly recommend that you use the [GreengrassConfiguration:CompilerOptions](#) field. For example, you can use the following compiler options for CPU:

- `mcpu`: CPU micro-architecture. For example, `{'mcpu': 'skylake-avx512'}`
- `matrx`: CPU flags. For example, `{'matrx': ['+neon', '+vfpv4']}`

Type: String

Valid Values: NVIDIA

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: 403

## **ExpiredTokenException**

The security token included in the request is expired

HTTP Status Code: 403

## **IncompleteSignature**

The request signature does not conform to AWS standards.

HTTP Status Code: 403

## **InternalFailure**

The request processing has failed because of an unknown error, exception or failure.

HTTP Status Code: 500

## **MalformedHttpRequestException**

Problems with the request at the HTTP level, e.g. we can't decompress the body according to the decompression algorithm specified by the content-encoding.

HTTP Status Code: 400

## **NotAuthorized**

You do not have permission to perform this action.

HTTP Status Code: 401

## **OptInRequired**

The AWS access key ID needs a subscription for the service.

HTTP Status Code: 403

### **RequestAbortedException**

Convenient exception that can be used when a request is aborted before a reply is sent back (e.g. client closed connection).

HTTP Status Code: 400

### **RequestEntityTooLargeException**

Problems with the request at the HTTP level. The request entity is too large.

HTTP Status Code: 413

### **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

### **RequestTimeoutException**

Problems with the request at the HTTP level. Reading the Request timed out.

HTTP Status Code: 408

### **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

### **UnrecognizedClientException**

The X.509 certificate or AWS access key ID provided does not exist in our records.

HTTP Status Code: 403

## **UnknownOperationException**

The action or operation requested is invalid. Verify that the action is typed correctly.

HTTP Status Code: 404

## **ValidationError**

The input fails to satisfy the constraints specified by an AWS service.

HTTP Status Code: 400