Managing models

You create a custom model by training it using a prepared dataset
(https://cloud.google.com/vision/automl/docs/datasets). AutoML Vision uses the items from the
dataset to train the model, test it, and evaluate
(https://cloud.google.com/vision/automl/docs/evaluate) its performance. You review the results,
adjust the training dataset as needed and train a new model using the improved dataset.

Training a model can take several hours to complete. The AutoML API enables you to check the
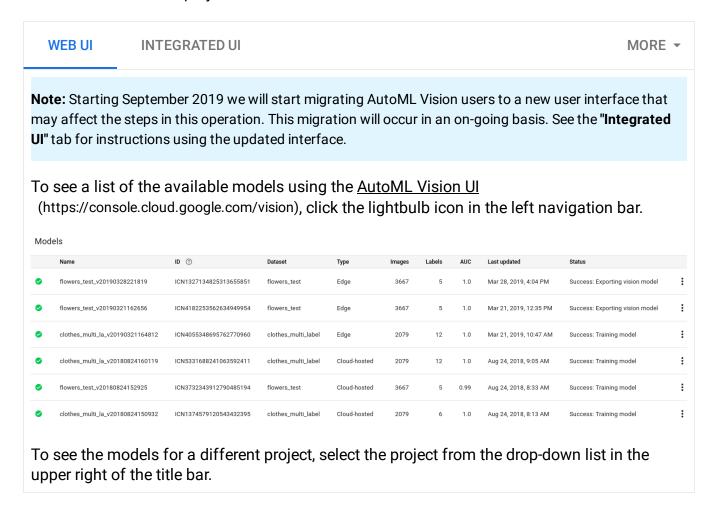status (#get-operation) of training.

Since AutoML Vision creates a new model each time you start training, your project may
include numerous models. You can get a list of the models in your project (#list-models) and can
delete models (#delete-model) that you no longer need.

Unless otherwise specified in applicable terms of service or documentation, custom models created in Cloud
AutoML products cannot be exported.

- The maximum lifespan for a custom model is 18 months as of the GA release. You must create and
  train a new model to continue classifying content after that amount of time.

- For online and batch predictions, the `predict` and `batchPredict` API calls respectively are covered
  under our Service Level Agreement. For online predictions, the model must be deployed on 2 or more
  nodes. Please refer to the section below on Updating a model's node number (#node-update).

  For both online and batch prediction, the model lifespan cannot be exceeded.

  All other terms are as noted in the Service Level Agreement (https://cloud.google.com/vision/sla).

- Use labels with user-defined metadata to organize your models. See Using labels to organize Google
  Cloud Platform resources (https://goo.gl/xmQnxf) for more information on labels including common
  uses.

Listing models

A project can include numerous models. This section describes how to retrieve a list of the available models for a project.

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Note: Starting September 2019 we will start migrating AutoML Vision users to a new user interface that may affect the steps in this operation. This migration will occur in an on-going basis. See the **"Integrated UI"** tab for instructions using the updated interface.

To see a list of the available models using the AutoML Vision UI (https://console.cloud.google.com/vision), click the lightbulb icon in the left navigation bar.

Models

	Name	ID ⑦	Dataset	Type	Images	Labels	AUC	Last updated	Status	
✓	flowers_test_v20190328221819	ICN1327134825313655851	flowers_test	Edge	3667	5	1.0	Mar 28, 2019, 4:04 PM	Success: Exporting vision model	⋮
✓	flowers_test_v20190321162656	ICN4182253562634949954	flowers_test	Edge	3667	5	1.0	Mar 21, 2019, 12:35 PM	Success: Exporting vision model	⋮
✓	clothes_multi_la_v20190321164812	ICN4055348695762770960	clothes_multi_label	Edge	2079	12	1.0	Mar 21, 2019, 10:47 AM	Success: Training model	⋮
✓	clothes_multi_la_v20180824160119	ICN5331688241063592411	clothes_multi_label	Cloud-hosted	2079	12	1.0	Aug 24, 2018, 9:05 AM	Success: Training model	⋮
✓	flowers_test_v20180824152925	ICN3732343912790485194	flowers_test	Cloud-hosted	3667	5	0.99	Aug 24, 2018, 8:33 AM	Success: Training model	⋮
✓	clothes_multi_la_v20180824150932	ICN1374579120543432395	clothes_multi_label	Cloud-hosted	2079	6	1.0	Aug 24, 2018, 8:13 AM	Success: Training model	⋮

To see the models for a different project, select the project from the drop-down list in the upper right of the title bar.

Getting information about a model

You can get a specific trained model to modify or for prediction.

The examples in this section return the basic metadata about a model. To get details about a model's accuracy and readiness, see Evaluating models (https://cloud.google.com/vision/automl/docs/evaluate).

REST & CMD LINE	C#	GO		MORE ▾

When training is complete, you can get information about the newly created model.

The examples in this section return the basic metadata about a model. To get details about a model's accuracy and readiness, see the "Evaluating models" topic.

REST & CMD LINE	C#		MORE ▾

Before using any of the request data below, make the following replacements:

- **project-id**: your GCP project ID.
- **model-id**: the ID of your model, from the response when you created the model. The ID is the last element of the name of your model. For example:
  - model name: projects/**project-id**/locations/**location-id**/models/**IOD4412217016962778756**
  - model id: **IOD4412217016962778756**

HTTP method and URL:

```
GET https://automl.googleapis.com/v1/projects/project-id/locations/us-central1/m
```

To send your request, choose one of these options:

CURL	POWERSHELL

> **Note:** Ensure you have set the **GOOGLE_APPLICATION_CREDENTIALS** (https://cloud.google.com/docs/authentication/production) environment variable to your service account private key file path.

Execute the following command:

```
curl -X GET \
-H "Authorization: Bearer "$(gcloud auth application-default print-access-toke
https://automl.googleapis.com/v1/projects/project-id/locations/us-central1/mod
```

You should receive a JSON response similar to the following:

```
{
  "name": "projects/project-id/locations/us-central1/models/model-id",
  "displayName": "display-name",
  "datasetId": "dataset-id",
  "createTime": "2019-10-29T19:06:38.048492Z",
  "deploymentState": "UNDEPLOYED",
  "updateTime": "2019-10-29T19:35:19.104716Z",
```
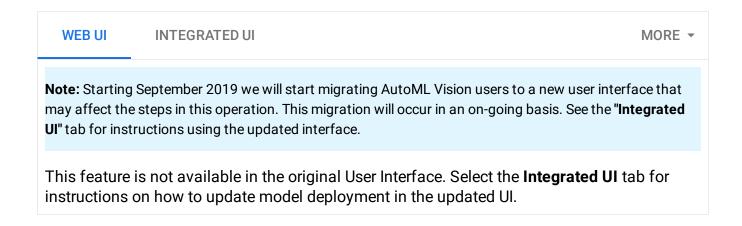
```
  "imageClassificationModelMetadata": {
    "trainBudget": "1",
    "modelType": "cloud",
    "nodeQps": 3.2
  }
}
```

Update a model's node number

Once you have a trained deployed model you can update the number of nodes the model is deployed on to respond to your specific amount of traffic. For example, if you experience a higher amount of queries per second (QPS) than expected.
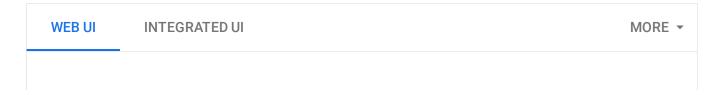
You can change this node number *without* first having to undeploy the model. Updating deployment will change the node number without interrupting your served prediction traffic.

Node count will be subject to quota listed at the quota page; **by default, a user can get up to 10 nodes**.

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This feature is not available in the original User Interface. Select the **Integrated UI** tab for instructions on how to update model deployment in the updated UI.

Deleting a model

The following example deletes a model.

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1. In the AutoML Vision UI (https://console.cloud.google.com/vision), click the lightbulb icon in the left navigation menu to display the list of available models.

2. Click the three-dot menu at the far right of the row you want to delete and select **Delete model**.

3. Click **Delete** in the confirmation dialog box.

Models

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✓	flowers_test_v20190328221819	ICN1327134825313655851	flowers_test	Edge	3667	5	1.0	Mar 28, 2019, 4:04 PM	Success: Exporting vision model	⋮
										Delete model
✓	flowers_test_v20190321162656	ICN4182253562634949954	flowers_test	Edge	3667	5	1.0	Mar 21, 2019, 12:35 PM	Success: Export	⋮