

<http://cloud.google.com/ai-platform-unified/docs/tutorials>

<https://cloud.google.com/ai-platform-unified/docs/start/automl-model-types>

Image Dataset

The screenshot shows the Google Cloud Platform (GCP) dashboard. At the top, there's a blue header bar with the GCP logo and the text "Deep Learning - Assignment 2". Below the header, there are three tabs: "DASHBOARD" (which is selected), "ACTIVITY", and "RECOMMENDATIONS". A banner below the tabs says "How Google Cloud is helping during COVID-19. [Learn more](#)". The main content area has a card titled "Project info" with details: Project name "Deep Learning - Assignment 2", Project ID "direct-hope-306504", and a three-dot menu icon. At the bottom of the dashboard, there are sections for "Account management" (Billing account ID: 012066-558BEB-069898, Organization: sjsu.edu), "My Billing Account" (with a dropdown arrow), and "CHANGE ORGANIZATION". Below this, a section titled "Projects linked to this billing account" lists one project: "Deep Learning - Assignment 2" (Project ID: direct-hope-306504).

Project name	Project ID	Actions
Deep Learning - Assignment 2	direct-hope-306504	⋮

Filter Enter property name or value

<input type="checkbox"/>	Email	Status	Name 
<input type="checkbox"/>	 tpka-144@direct-hope-306504.iam.gserviceaccount.com		tpka

```
teeepika_ramasamymarimuthu@cloudshell:~ (direct-hope-306504)$ export PROJECT_ID='direct-hope-306504'
teeepika_ramasamymarimuthu@cloudshell:~ (direct-hope-306504)$ gsutil mb -p ${PROJECT_ID} -l us-central1 gs://${PROJECT_ID}/
Creating gs://direct-hope-306504/...
teeepika_ramasamymarimuthu@cloudshell:~ (direct-hope-306504)$
teeepika_ramasamymarimuthu@cloudshell:~ (direct-hope-306504)$ export BUCKET=${PROJECT_ID}
teeepika_ramasamymarimuthu@cloudshell:~ (direct-hope-306504)$ echo $BUCKET
direct-hope-306504
teeepika_ramasamymarimuthu@cloudshell:~ (direct-hope-306504)$ █
```

<input type="checkbox"/>	Name 	Created	Location type	Location
<input type="checkbox"/>	direct-hope-3065...	Mar 3, 2021, 6:40:45 PM	Region	us-central1 (lo...

direct-hope-306504

OBJECTS						
CONFIGURATION		PERMISSIONS		RETENTION		LIFECYCLE
Buckets > direct-hope-306504 > img > flower_photos 						
UPLOAD FILES		UPLOAD FOLDER		CREATE FOLDER	MANAGE HOLDS	DOWNLOAD
Filter by name prefix only ▾  Filter <input type="text" value="Filter objects and folders"/> Mar 3, 2021, 6:49:19 PM						
<input type="checkbox"/>	Name	Size	Type		Storage class	Last modified
<input type="checkbox"/>	LICENSE.txt	408.3 KB	text/plain	Mar 3, 2021, 6:...	Standard	Mar 3, 202...
<input type="checkbox"/>	README.txt	363 B	text/plain	Mar 3, 2021, 6:...	Standard	Mar 3, 202...
<input type="checkbox"/>	all_data.csv	289.2 KB	text/csv	Mar 3, 2021, 6:...	Standard	Mar 3, 202...
<input type="checkbox"/>	daisy.zip	1.7 MB	application/zip	Mar 3, 2021, 6:...	Standard	Mar 3, 202...
<input type="checkbox"/>	daisy/	—	Folder	—	—	—
<input type="checkbox"/>	dandelion.zip	1.8 MB	application/zip	Mar 3, 2021, 6:...	Standard	Mar 3, 202...
<input type="checkbox"/>	dandelion/	—	Folder	—	—	—
<input type="checkbox"/>	dict.txt	40 B	text/plain	Mar 3, 2021, 6:...	Standard	Mar 3, 202...
<input type="checkbox"/>	eval_set.csv	29.3 KB	text/csv	Mar 3, 2021, 6:...	Standard	Mar 3, 202...
<input type="checkbox"/>	flowers_200_csv.zip	11.4 MB	application/zip	Mar 3, 2021, 6:...	Standard	Mar 3, 202...
<input type="checkbox"/>	flowers_200_folders.zip	11.4 MB	application/zip	Mar 3, 2021, 6:...	Standard	Mar 3, 202...
<input type="checkbox"/>	flowers_200_presplit.zip	11.5 MB	application/zip	Mar 3, 2021, 6:...	Standard	Mar 3, 202...
<input type="checkbox"/>	flowers_200_unlabeled.zip	11.4 MB	application/zip	Mar 3, 2021, 6:...	Standard	Mar 3, 202...
<input type="checkbox"/>	flowers_full_with_csv.zip	218.9 MB	application/zip	Mar 3, 2021, 6:...	Standard	Mar 3, 202...
<input type="checkbox"/>	inception_v3_2016_08_28.	103.8 MB	application/octet-stream	Mar 3, 2021, 6:...	Standard	Mar 3, 202...
<input type="checkbox"/>	open_image_inception_v3.	630.2 MB	application/octet-stream	Mar 3, 2021, 6:...	Standard	Mar 3, 202...

Public access	Not public
Type	text/csv
Size	307.2 KB
Created	Mar 3, 2021, 7:00:57 PM
Last modified	Mar 3, 2021, 7:00:57 PM
Hold status	None 
Retention policy	None
Encryption type	Google-managed key
Custom time	—
Public URL 	Not applicable
Authenticated URL 	https://storage.cloud.google.com/direct-hope-306504/csv/all_data.csv 
URI 	gs://direct-hope-306504/csv/all_data.csv 

 flower_identification
flower_identification_icn 


IMPORT
BROWSE
ANALYZE

Add images to your dataset

Before you begin, read the [data guide](#) to learn how to prepare your data. Then choose an import method.

Select an import method

- **Upload images:** Recommended if you don't have labels yet
- **Import files:** Recommended if you already have labels. An import file is a list of Cloud Storage URLs to your images and optional data, like labels. [Learn how to create an import file](#)

Upload images from your computer
 Upload import files from your computer
 Select import files from Cloud Storage

Upload images from your computer

Add up to 500 images per upload. Images will be preprocessed and stored in Cloud Storage.

SELECT FILES

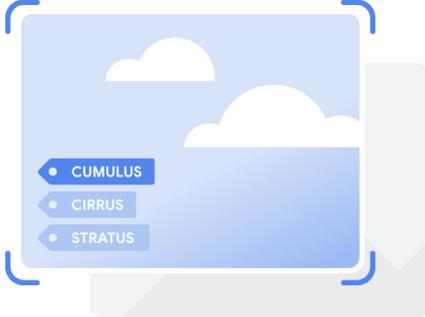


Image classification models predict one (or many) labels for an image. For example, identifying types of clouds from images of the sky.

Instead of creating a custom model, try Google's Vision API to detect generic objects, faces, and text. [Learn more](#)

[IMPORT](#)[BROWSE](#)[ANALYZE](#)

Add images to your dataset

Before you begin, read the [data guide](#) to learn how to prepare your data. Then choose an import method.

Select an import method

- **Upload images:** Recommended if you don't have labels yet
- **Import files:** Recommended if you already have labels. An import file is a list of Cloud Storage URIs to your images and optional data, like labels. [Learn how to create an import file](#)

- Upload images from your computer
 Upload import files from your computer
 Select import files from Cloud Storage

Select import files from Cloud Storage

Images referenced in the import files will be preprocessed and stored in a new Cloud Storage bucket ([charges apply](#))

Import file path *

 gs:// direct-hope-306504/csv/all_data.csv [BROWSE](#) [?](#) Data split [Automatic](#) [?](#)[ADD ANOTHER FILE](#)

What happens next?

You'll be emailed after the images are imported and your dataset is ready

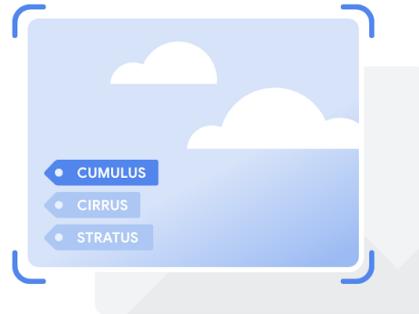
[CONTINUE](#)

Image classification models predict one (or many) labels for an image. For example, identifying types of clouds from images of the sky.

Instead of creating a custom model, try Google's Vision API to detect generic objects, faces, and text. [Learn more](#)

Train new model

1 Choose training method

2 Define your model

3 Compute and pricing

START TRAINING

CANCEL

Dataset
flower_identification

Annotation set
flower_identification_icn

Objective
Image classification (Single-label)

Please refer to the pricing guide for more details (and available deployment options) for each method.

AutoML

Train high-quality models with minimal effort and machine learning expertise. Just specify how long you want to train. [Learn more](#)

AutoML Edge

Train a model that can be exported for on-prem/on-device use. Typically has lower accuracy. [Learn more](#)

Custom training (advanced)

Run your TensorFlow, scikit-learn, and XGBoost training applications in the cloud. Train with one of Google Cloud's pre-built containers or use your own. [Learn more](#)

CONTINUE

Train new model

Choose training method

Define your model

3 Compute and pricing

START TRAINING

CANCEL

Enter the **maximum** number of node hours you want to spend training your model.

You can train for as little as 8 node hours. You may also be eligible to train with free node hours. [Pricing guide](#)

Budget *

8

Maximum node hours

Estimated completion date: Mar 3, 2021 10 PM GMT-8

Enable early stopping

Ends model training when no more improvements can be made and refunds leftover training budget. If early stopping is disabled, training continues until the budget is exhausted.

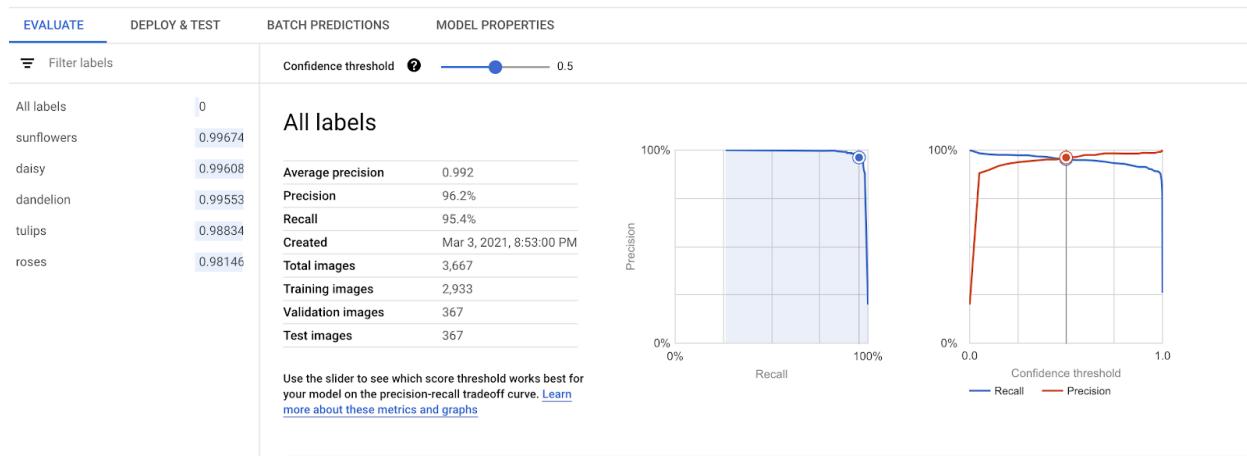
Training

Filter models...

Name	ID	Data	Endpoints	Region	Type
flower_identification_2021344268	4021309846962831360	flower_identification_icn	0	us-central1	Image classification

Models

Endpoints



Confusion matrix

This table shows how often the model classified each label correctly (in blue), and which labels were most often confused for that label (in gray). Note that labels. You can download the entire confusion matrix as a CSV file.

True label	Predicted label					
	sunflowers	dandelion	tulips	roses	daisy	
sunflowers	97%	3%	—	—	—	
dandelion	1%	96%	2%	—	1%	
tulips	—	—	94%	6%	—	
roses	—	2%	3%	95%	—	
daisy	2%	2%	—	2%	95%	

Deploy to endpoint

1 Define your endpoint

2 Endpoint details

DEPLOY

CANCEL

Create new endpoint Add to existing endpoint

Endpoint name *

endpoint_flower_idetification

?

Model settings

flower_identification_2021344268

Traffic split *

100

%

?

AutoML image classification and object detection models require a fixed number of compute nodes per model. If you want to change your compute resources for this model in the future, you will have to create a new endpoint.

[Pricing guide](#)



The number of nodes you specify in the input field below will always be ready, and you will be charged continuously for them.

[Learn more about nodes and prediction cost](#)

Number of compute nodes *

1

The number of nodes to allocate for this endpoint.

Logging

Logging settings are permanent for this endpoint, and Stackdriver charges will apply. To change your logging preference in the future, create a new endpoint.

Enable access logging for this endpoint

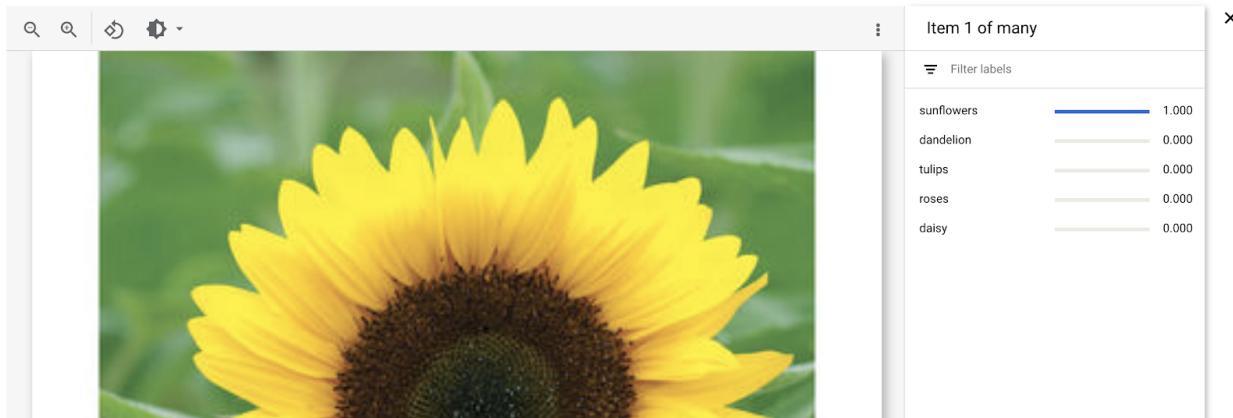
It may take several minutes for endpoint settings to take effect.

CANCEL

DONE

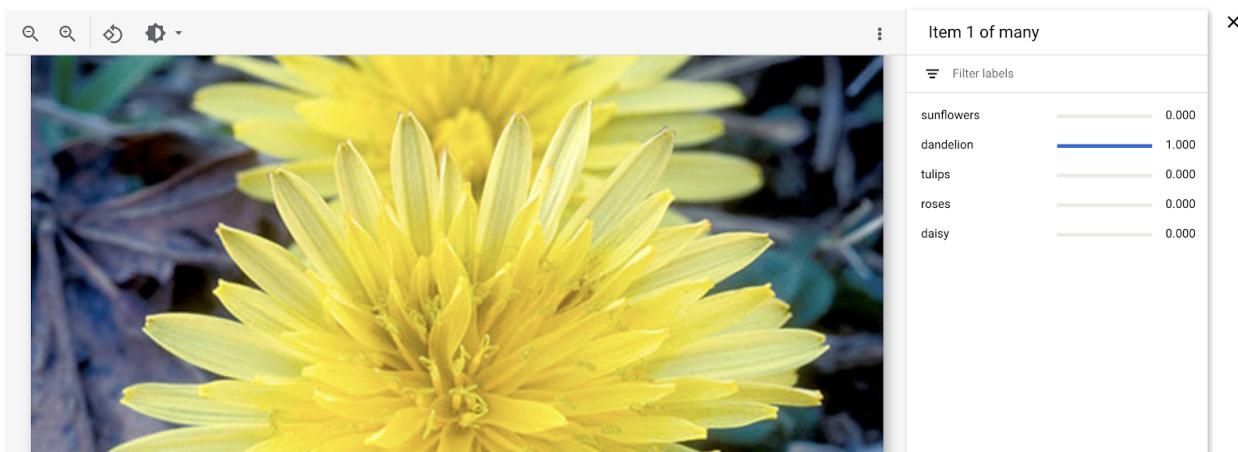
Endpoint	ID	Models	Region	Last updated	API	Notification	Metadata	Encryption
endpoint_flower_idetification	8631957926413598720	1	us-central1	Mar 3, 2021, 9:32:13 PM	Sample request		Google-managed key	⋮

Test your model [PREVIEW](#)



Endpoint	ID	Models	Region	Last updated	API	Notification	Metadata	Encryption
endpoint_flower_idetification	8631957926413598720	1	us-central1	Mar 3, 2021, 9:32:13 PM	Sample request		Google-managed key	⋮

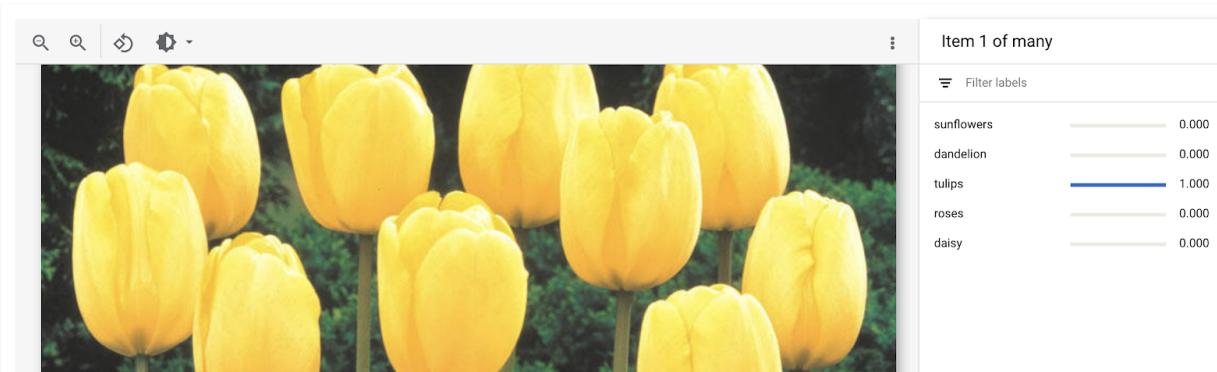
Test your model [PREVIEW](#)



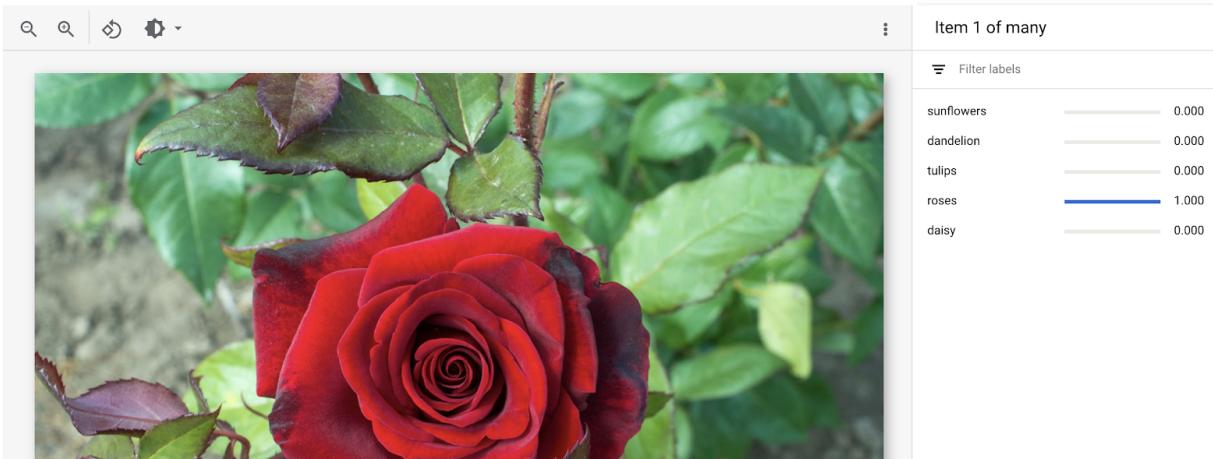


Endpoint	ID	Models	Region	Last updated	API	Notification	Metadata	Encryption
● endpoint_flower_idetification	8631957926413598720	1	us-central1	Mar 3, 2021, 9:32:13 PM	Sample request			Google-managed key

Test your model [PREVIEW](#)



Test your model [PREVIEW](#)



Text Dataset

```
teepika_ramasamymarimuthu@cloudshell:~ (direct-hope-306504)$
teepika_ramasamymarimuthu@cloudshell:~ (direct-hope-306504)$ gsutil mb -p $(PROJECT_ID) -l us-central1 gs://$(BUCKET)/
Creating gs://direct-hope-306504-lcm/...
teepika_ramasamymarimuthu@cloudshell:~ (direct-hope-306504)$
teepika_ramasamymarimuthu@cloudshell:~ (direct-hope-306504)$ gsutil -m cp gs://cloud-ml-data/NL-classification/happiness.csv gs://$(BUCKET)/text/
Copying gs://cloud-ml-data/NL-classification/happiness.csv [Content-Type=text/csv]...
/ [1/1 files][ 1.3 MiB/ 1.3 MiB] 100% Done
Operation completed over 1 objects/1.3 MiB.
```

Dataset name * Can use up to 128 characters.

Select a data type and objective

First select the type of data your dataset will contain. Then select an objective, which is the outcome that you want to achieve with the trained model. [Learn more about model types](#)

IMAGE TABULAR TEXT VIDEO

Text classification (Single-label)
Predict the one correct label that you want assigned to a document.

Text classification (Multi-label)
Predict all the correct labels that you want assigned to a document.

Text entity extraction
Identify entities within your text items.

Text sentiment analysis
Understand the overall sentiment expressed in a block of text.

Region ?

ADVANCED OPTIONS

You can use this dataset for other text-based objectives later by creating an annotation set. [Learn more about annotation sets](#)

CREATE CANCEL