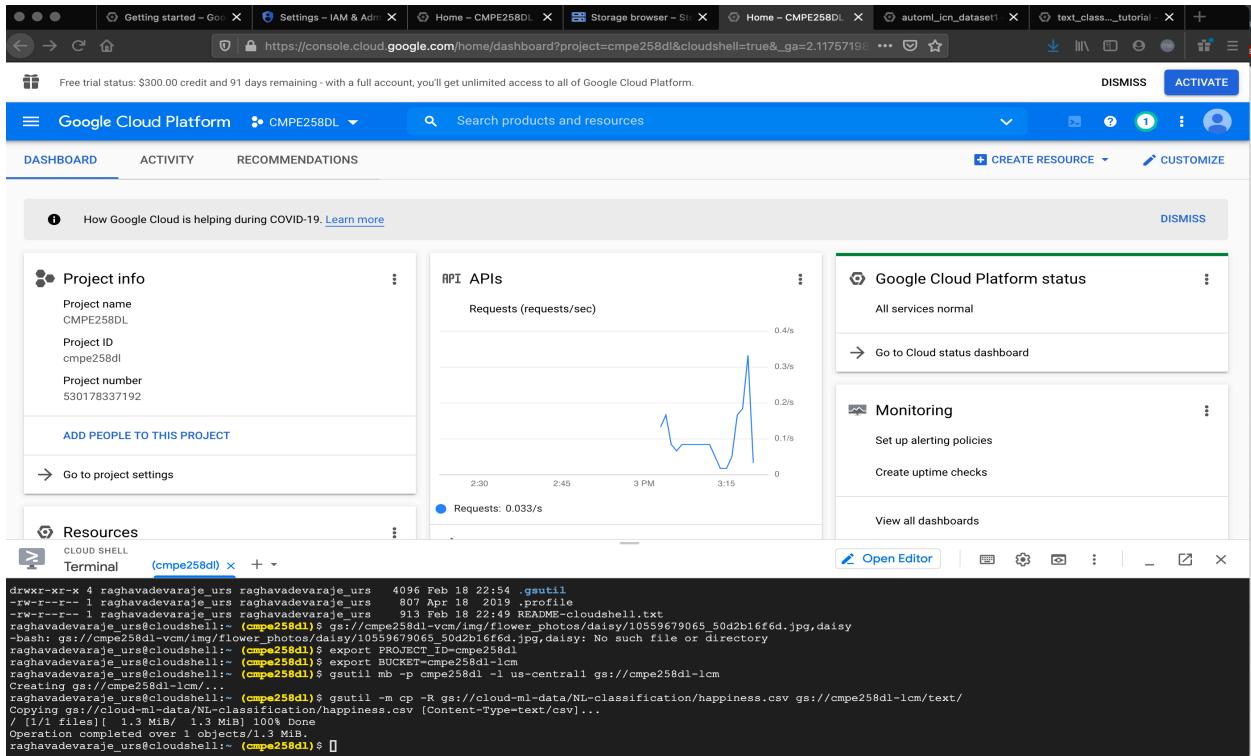


AI Platform: Text Data Classification

Creation of new Storage bucket for text classification



Project info:

- Project name: CMPE258DL
- Project ID: cmpe258dl
- Project number: 530178337192

API APIs:

Requests (requests/sec)

Google Cloud Platform status:

- All services normal
- Go to Cloud status dashboard

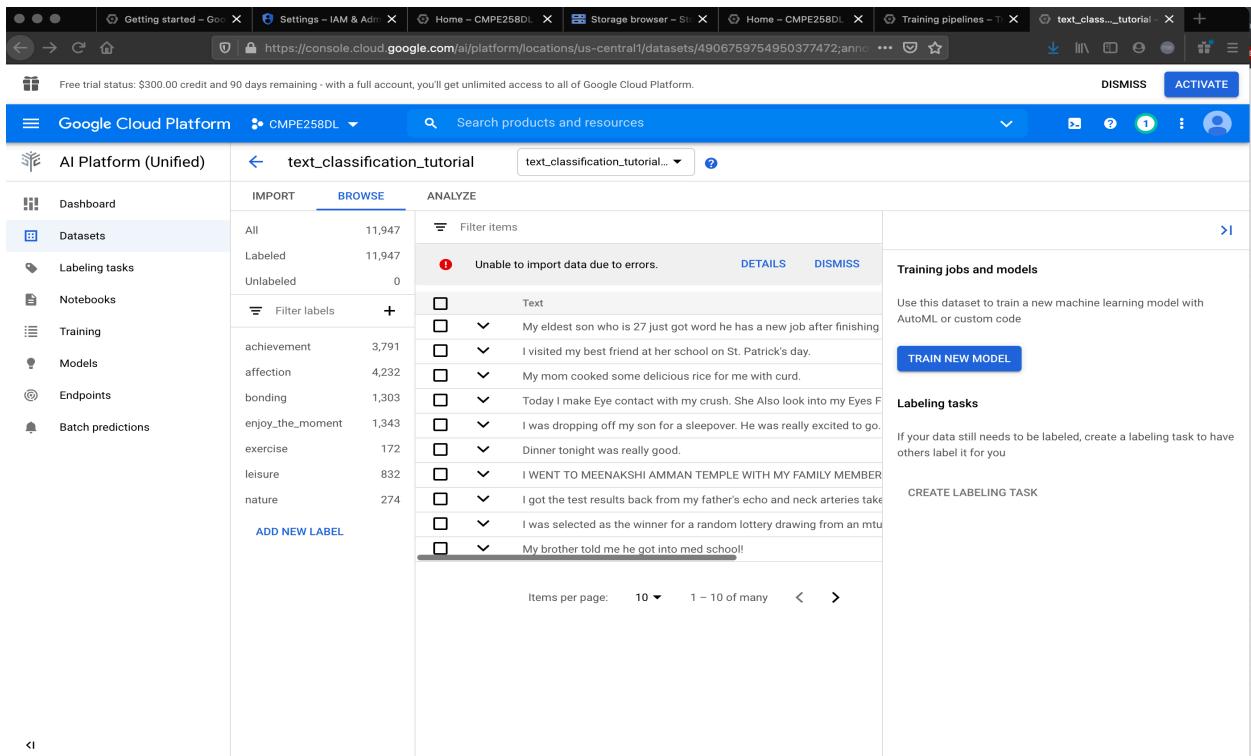
Monitoring:

- Set up alerting policies
- Create uptime checks
- View all dashboards

Resources:

CLOUD SHELL Terminal (cmpe258dl) x +

```
drwxr-xr-x 4 raghavadevaraje_urs raghavadevaraje_urs 4096 Feb 18 22:54 .gsutil
-rw-r--r-- 1 raghavadevaraje_urs raghavadevaraje_urs 807 Apr 18 2019 .profile
-rw-r--r-- 1 raghavadevaraje_urs raghavadevaraje_urs 913 Feb 18 22:49 README-cloudshell.txt
raghavadevaraje_urs@cloudshell:~ (cmpe258dl)$ gs://cmpe258dl-vcm/img/flower_photos/daisy/10559679065_50d2b16f6d.jpg,daisy
-bash: gs://cmpe258dl-vcm/img/flower_photos/daisy/10559679065_50d2b16f6d.jpg,daisy: No such file or directory
raghavadevaraje_urs@cloudshell:~ (cmpe258dl)$ export PROJECT=cmpe258dl
raghavadevaraje_urs@cloudshell:~ (cmpe258dl)$ export RUCKET=cmpe258dl-lcm
raghavadevaraje_urs@cloudshell:~ (cmpe258dl)$ gsutil mb -p cmpe258dl -l lcm
Creating gs://cmpe258dl-lcm...
raghavadevaraje_urs@cloudshell:~ (cmpe258dl)$ gsutil mb -p cmpe258dl -l us-central1 gs://cmpe258dl-lcm
Copying gs://cloud-ml-data/NL-Classification/happiness.csv gs://cmpe258dl-lcm/text/
Copying gs://cloud-ml-data/NL-Classification/happiness.csv [Content-Type=text/csv]...
/[1/1 files] (1.3 MiB / 1.3 MiB) 000 Done
Operation completed over 1 objects/1.3 MiB.
raghavadevaraje_urs@cloudshell:~ (cmpe258dl)$
```



AI Platform (Unified) text_classificationTutorial

Datasets:

Category	Name	Count
All		11,947
Labeled		11,947
Unlabeled		0

Filter items:

- Text
- My eldest son who is 27 just got word he has a new job after finishing
- I visited my best friend at her school on St. Patrick's day.
- My mom cooked some delicious rice for me with curd.
- Today I make Eye contact with my crush. She Also look into my Eyes F
- I was dropping off my son for a sleepover. He was really excited to go.
- Dinner tonight was really good.
- I WENT TO MEENAKSHI AMMAN TEMPLE WITH MY FAMILY MEMBER
- I got the test results back from my father's echo and neck arteries take
- I was selected as the winner for a random lottery drawing from an mtu
- My brother told me he got into med school!

Training jobs and models:

Use this dataset to train a new machine learning model with AutoML or custom code

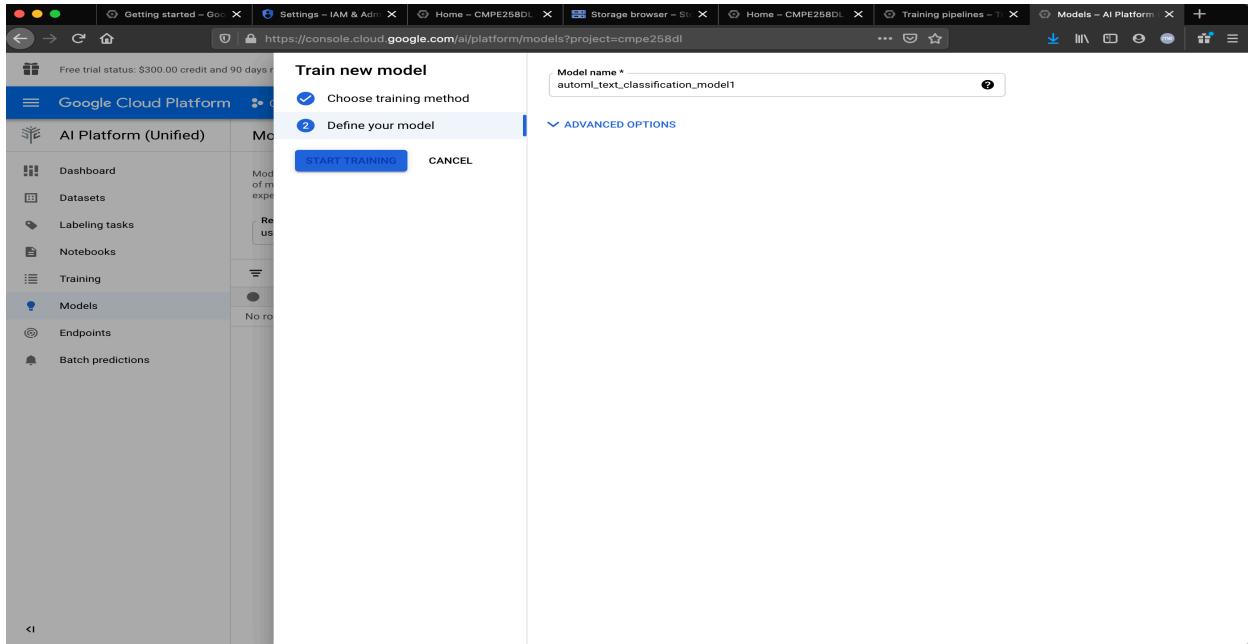
TRAIN NEW MODEL

Labeling tasks:

If your data still needs to be labeled, create a labeling task to have others label it for you

CREATE LABELING TASK

A new Model is trained by either going via Models on the left navigation > then clicking on Create > Train new model (or) going into the data set and selecting the option: Train New Model in the right side.



The screenshot shows the Google Cloud Platform AI Platform (Unified) interface, specifically the 'Training' section. The sidebar on the left is identical to the previous screenshot. The main area is titled 'Training' and shows a list of training pipelines. The 'TRAINING PIPELINE' tab is selected. The table lists two entries:

Name	ID	Job type	Model type	Status	Created	Elapsed time
automl_text_classification_model1	7357034611588726784	Training pipeline	Text classification (Single-label)	Running	Feb 18, 2021, 3:36:25 PM	6 sec
automl_image_classification_model1	3227233753289981952	Training pipeline	Image classification (Single-label)	Running	Feb 18, 2021, 3:32:15 PM	2 min 29 sec

automl_text_classification_model1

Upgrade your account to avoid a break in service (\$23.99 credit and 79 days left in your trial).

Google Cloud Platform CMPE258DL

AI Platform (Unified) automl_text_classification_model1 VIEW DATASET

EVALUATE DEPLOY & TEST BATCH PREDICTIONS MODEL PROPERTIES

This model finished training on Feb 18, 2021, 8:01:18 PM.

Status Succeeded

Model ID 7743112726519480320

Training pipeline ID 7357034611588726784

Created Feb 18, 2021, 3:36:25 PM

Training time 4 hr 24 min

Region us-central1

Encryption type Google-managed key

Dataset text_classification_tutorial

Dataset ID 490679754950377472

Annotation set text_classification_tutorial_tcn

Data split Randomly assigned (80/10/10)

Total items 11,947

Training items 9,555 (80.0%)

Validation items 1,207 (10.1%)

Test items 1,185 (9.9%)

Algorithm AutoML

Objective Text classification (Single-label)

<https://console.cloud.google.com/ai/platform/locations/us-central1/models/7743112726519480320>

hello_automl_text - AI Platform

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Google Cloud Platform CMPE258DL

AI Platform (Unified) hello_automl_text EDIT SETTINGS SAMPLE REQUEST

Region us-central1 Logs View Logs

Model automl_text_classification_model1

Traffic split 100%

Compute nodes Auto

Type Text classification

Created Feb 20, 2021, 5:48:18 PM

DEPLOY ANOTHER MODEL

Chart interval: 1 hour 6 hours 12 hours 1 day 2 days 4 days 7 days 14 days 30 days

Predictions/second

No data is available for the selected time frame.

Prediction error percentage

No data is available for the selected time frame.

automl_text_classification_model1

console.cloud.google.com/a/platform/locations/us-central1/models/7743112726519480320/evaluate?authuser=1&project=cmpe258dl

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LEARN MORE UPGRADE

Google Cloud Platform CMPE258DL

AI Platform (Unified) automl_text_classification_model1 VIEW DATASET

EVALUATE DEPLOY & TEST BATCH PREDICTIONS MODEL PROPERTIES

Filter labels Confidence threshold 0.5

All labels 0

	affection	bonding	achievement	nature	exercise	enjoy_the_moment	leisure
Average precision	0.9932c	0.9730s	0.9525t	0.9127c	0.89549	0.8422t	0.8286s
Precision	99.3%	97.3%	95.3%	91.3%	89.5%	84.2%	82.9%
Recall	99.3%	97.3%	95.3%	91.3%	89.5%	84.2%	82.9%
Created	Feb 18, 2021, 8:00:47 PM						
Total items	11,947						
Training items	9,555						
Validation items	1,207						
Test items	1,185						

Use the slider to see which score threshold works best for your model on the precision-recall tradeoff curve. Learn more about these metrics and graphs

All labels

Precision

Recall

Confidence threshold

Recall@1 Precision@1

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 this table is limited to the 10 most confused labels. You can download the entire confusion matrix as a CSV file.

Item counts

True label	Predicted label							
	nature	enjoy_the_moment	affection	bonding	leisure	exercise	achievement	—
nature	81%	—	4%	4%	—	—	12%	—
enjoy_the_moment	75%	3%	1%	4%	1%	15%	—	—

automl_text_classification_model1

console.cloud.google.com/a/platform/locations/us-central1/models/7743112726519480320/evaluate?authuser=1&project=cmpe258dl

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LEARN MORE UPGRADE

Google Cloud Platform CMPE258DL

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Average precision	0.9932c	0.9730s	0.9525t	0.9127c	0.89549	0.8422t	0.8286s
Precision	99.3%	97.3%	95.3%	91.3%	89.5%	84.2%	82.9%
Recall	99.3%	97.3%	95.3%	91.3%	89.5%	84.2%	82.9%
Confidence threshold	Recall@1 Precision@1						
Created	Feb 18, 2021, 8:00:47 PM						
Total items	11,947						
Training items	9,555						
Validation items	1,207						
Test items	1,185						

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Recall

Confidence threshold

Recall@1 Precision@1

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True label	Predicted label							
	nature	enjoy_the_moment	affection	bonding	leisure	exercise	achievement	—
nature	81%	—	4%	4%	—	—	12%	—
enjoy_the_moment	—	75%	3%	1%	4%	1%	15%	—
affection	—	2%	96%	0%	—	—	2%	—
bonding	—	1%	5%	91%	—	—	3%	—
leisure	—	19%	3%	1%	68%	—	9%	—
exercise	—	—	—	—	—	85%	15%	—
achievement	1%	6%	5%	1%	2%	1%	86%	—

Getting started Settings - IAM Home - CMPE258DL Storage browser Storage browser Cloud Shell automl_text Classification Models Logs Explorer Logs Explorer hello_custom Logs Explorer + https://console.cloud.google.com/ai/platform/locations/us-central1/models/7743112726519480320/deploy?project=cmpe258dl DISMISS ACTIVATE

Free trial status: \$300.00 credit and 88 days remaining - with a full account, you'll get unlimited access to all of Google Cloud Platform.

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AI Platform (Unified) < automl_text_classification_model1 VIEW DATASET

EVALUATE DEPLOY & TEST BATCH PREDICTIONS MODEL PROPERTIES

Deploy your model

Endpoints are machine learning models made available for online prediction requests. Endpoints are useful for timely predictions from many users (for example, in response to an application request). You can also request batch predictions if you don't need immediate results.

DEPLOY TO ENDPOINT

Endpoint	ID	Models	Region	Last updated	API	Notification	Metadata	Encryption
hello_automl_text	3257052508635267072	1	us-central1	Feb 20, 2021, 5:54:00 PM	Sample request		Google-managed key	⋮

Test your model PREVIEW

amazing feeling to complete the text classification model

PREDICT

Filter labels

Label	Score
affection	0.000
achievement	0.997
enjoy_the_moment	0.002
bonding	0.000
leisure	0.001
nature	0.000
exercise	0.000

Getting started Settings - IAM Home - CMPE258DL Storage browser Storage browser Cloud Shell automl_text Classification Models Logs Explorer Logs Explorer hello_custom Logs Explorer + https://console.cloud.google.com/ai/platform/locations/us-central1/models/7743112726519480320/deploy?authuser=1&project=cmpe258dl LEARN MORE UPGRADE

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AI Platform (Unified) < automl_text_classification_model1 VIEW DATASET

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DEPLOY TO ENDPOINT

Endpoint	ID	Models	Region	Last updated	API	Notification	Metadata	Encryption
hello_automl_text	3257052508635267072	1	us-central1	Feb 20, 2021, 5:54:00 PM	Sample request		Google-managed key	⋮

Test your model PREVIEW

I am watching 3blue1brown videos

PREDICT

Filter labels

Label	Score
affection	0.000
achievement	0.001
enjoy_the_moment	0.012
bonding	0.000
leisure	0.986
nature	0.000
exercise	0.000

