


# CMPE 258 – Deep Learning Assignment 2

014642290 : Arpitha Gurumurthy

## 2. Hello Text Data:

### PROJECT SETUP:

- On the project selector page, created a project named: **CMPE258-HW2-TextData**

 Project info

Project name

CMPE258-HW2-TextData

Project ID

cmpe258-hw2-textdata

Project number

385442664901

[ADD PEOPLE TO THIS PROJECT](#)

[→ Go to project settings](#)

 Resources

Storage

2 buckets

- Enabled the API for the above created project:

Google Cloud Platform

CMPE258-HW2-TextData

The API is enabled


Cloud AI Platform API has been enabled.

Next, to use the API you'll need the right credentials.

[Go to credentials](#)

- Set up the authentication:

### Service Accounts

<input type="checkbox"/>	Email	Name 
<input type="checkbox"/>	arpitha-gurumurthy@cmpe258-hw2-textdata.iam.gserviceaccount.com	Arpitha Gurumurthy

- Set up the environment variable to the path of the JSON file downloaded from the previous step.

```

/Users/arpitha
(base) arpitha@Arpithas-MacBook-Air ~ % export GOOGLE_APPLICATION_CREDENTIALS=
="/Users/arpitha/Downloads/CMPE258-HW2-TextData-20f783b63fe4.json"
(base) arpitha@Arpithas-MacBook-Air ~ %

```

## CREATING CLOUD STORAGE BUCKET:

```

arpitha_gurumurthy@cloudshell:~ (cmpe258-hw2-textdata) $ export PROJECT_ID=project-id
arpitha_gurumurthy@cloudshell:~ (cmpe258-hw2-textdata) $ export PROJECT_ID=cmpe258-hw2-textdata
arpitha_gurumurthy@cloudshell:~ (cmpe258-hw2-textdata) $ export BUCKET=${PROJECT_ID}-lcm
arpitha_gurumurthy@cloudshell:~ (cmpe258-hw2-textdata) $ gsutil mb -p ${PROJECT_ID} -l us-central1 gs://${BUCKET}/
Creating gs://cmpe258-hw2-textdata-lcm/...
arpitha_gurumurthy@cloudshell:~ (cmpe258-hw2-textdata) $ gsutil -m cp -R 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.
arpitha_gurumurthy@cloudshell:~ (cmpe258-hw2-textdata) $

```

<input type="checkbox"/> Name ↑	Created	Location type	Location	Default storage class ?
<input type="checkbox"/> cloud-ai-platform-65244573-662c-4967-b20b-f3abf109e6...	Feb 20, 2021, 7:59:27 PM	Region	us-central1 (lo...	Regional
<input type="checkbox"/> cmpe258-hw2-textdata-lcm	Feb 20, 2021, 7:53:26 PM	Region	us-central1 (lo...	Standard

## CREATING THE DATASET:

Hello AI Platform Customer,

AI Platform finished importing data into dataset "CMPE258\_TextClassification\_Dataset".

Additional Details:

Operation State: Succeeded

Resource Name: projects/385442664901/locations/us-central1/datasets/2297486720842596352

To continue your progress, go back to your dataset using <https://console.cloud.google.com/ai/platform/locations/us-central1/datasets/2297486720842596352;annotationSetId=4505939388114403328/browse?project=cmpe258-hw2-textdata>

Sincerely,

The Google Cloud AI Team

<input type="checkbox"/>		Name	ID	Region	Type	Items	Labels	Last updated ↓	Status
<input type="checkbox"/>		CMPE258_TextClassification_Dataset	2297486720842596352	us-central1	Text	11,947	-	February 20, 2021	Finished importing data

CMPE258_TextClassification_Dataset		CMPE258_TextClassificat...	?	TRAIN NEW MODEL	CREATE LABELING T...
IMPORT	BROWSE	ANALYZE			
All	11,947	Filter items			
Labeled	11,947				
Unlabeled	0				
Filter labels	+				
achievement	3,791				
affection	4,232				
bonding	1,303				
enjoy_the_moment	1,343				
exercise	172				
leisure	832				
nature	274				
ADD NEW LABEL		Items per page: 10 1 – 10 of many < >			

TRAINING THE AUTO ML TEXT CLASSIFICATION MODEL:

CMPE258-HW2-TextData

Search products and resources

Models

PREVIEW

+ CREATE

IMPORT

REFRESH

Models are built from your datasets or unmanaged data sources. There are many different types of machine learning models available on AI Platform, depending on your use case and level of experience with machine learning. [Learn more](#)

Region

us-central1 (Iowa)

Filter models...

Name	ID	Data	Endpoints	Region
<div></div> CMPE258_TextClassification_Dataset_202122142810	2306705026329870336	CMPE258_TextClassification_Dataset_tcn	0	us-central1

DEPLOYING THE MODEL TO ENDPOINT:

Model Evaluation:

CMPE258-HW2-TextData

Search products and resources

CMPE258\_TextClassification\_Dataset\_202122142810

VIEW DATASET

EVALUATE

DEPLOY & TEST

BATCH PREDICTIONS

MODEL PROPERTIES

Filter labels

Confidence threshold

0.5

All labels0

affection0.99250

bonding0.96919

achievement0.95415

nature0.92218

exercise0.89614

leisure0.85141

enjoy\_the\_moment0.85011

All labels

Average precision	0.959
Precision	88.5%
Recall	86.8%
Created	Feb 21, 2021, 12:04:38 AM
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](#)

100%

100%

## Deploy and test:

Endpoint	ID	Models	Region	Last updated	API	Notification	Metadata	Encryption
<a href="#">hello_automl_text</a>	4786024582127550464	1	us-central1	Feb 21, 2021, 12:30:40 AM	<a href="#">Sample request</a>			Google-managed key

	Model	Traffic split	Compute nodes	Type	Created	
	<a href="#">CMPE258_TextClassification_Dataset_202122142810</a>	100%	Auto	Text classification	Feb 21, 2021, 12:24:24 AM	

## Test your model PREVIEW

Good morning. Have a great day!

PREDICT

Filter labels

affection0.000

achievement0.006

enjoy\_the\_moment0.993

bonding0.000

leisure0.000

nature0.000

exercise0.000