

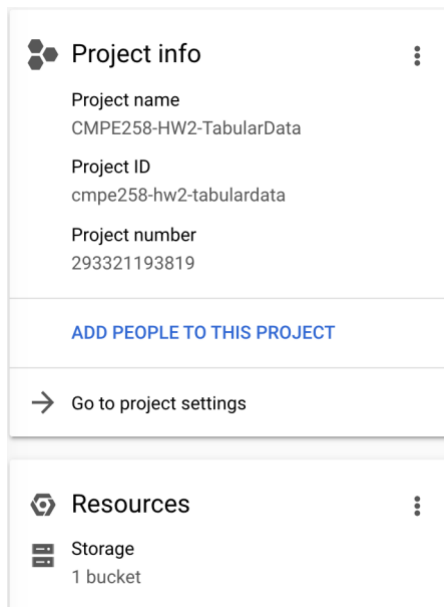
CMPE 258 – Deep Learning Assignment 2

014642290 : Arpitha Gurumurthy

5. Hello Structured Data:

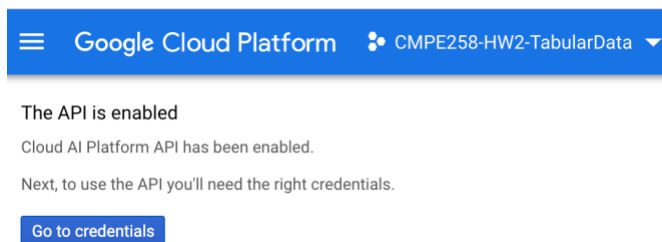
PROJECT SETUP:

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



The screenshot shows the Google Cloud console interface for a project. The 'Project info' section displays the project name 'CMPE258-HW2-TabularData', the project ID 'cmpe258-hw2-tabulardata', and the project number '293321193819'. Below this is a button 'ADD PEOPLE TO THIS PROJECT'. A link 'Go to project settings' is also visible. The 'Resources' section shows 'Storage' with '1 bucket'.

- Enabled the API for the above created project:



The screenshot shows the Google Cloud Platform console. The top bar displays 'Google Cloud Platform' and the project name 'CMPE258-HW2-TabularData'. Below the bar, a message states 'The API is enabled' and 'Cloud AI Platform API has been enabled.' It also mentions 'Next, to use the API you'll need the right credentials.' and includes a button 'Go to credentials'.

- Set up the authentication:

Private key saved to your computer

⚠ CMPE258-HW2-TabularData-8f068cc4ed7b.json allows access to your cloud resources, so store it securely. [Learn more](#)

CLOSE

Service Accounts

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

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

```
Last login: Wed Feb 24 10:06:51 on ttys000
(base) arpitha@Arpithas-MacBook-Air ~ % export GOOGLE_APPLICATION_CREDENTIALS="/Users/arpitha/Downloads/CMPE258-HW2-TabularData-8f068cc4ed7b.json"
(base) arpitha@Arpithas-MacBook-Air ~ %
```

CREATING A TABULAR DATASET:

Hello AI Platform Customer,

AI Platform finished training model "Structured_AutoML_Tutorial".

Additional Details:

Operation State: Succeeded

Resource Name: projects/293321193819/locations/us-central1/trainingPipelines/924627706308460544

To continue your progress, go back to your training pipeline using <https://console.cloud.google.com/ai/platform/models?project=cmpe258-hw2-tabulardata>

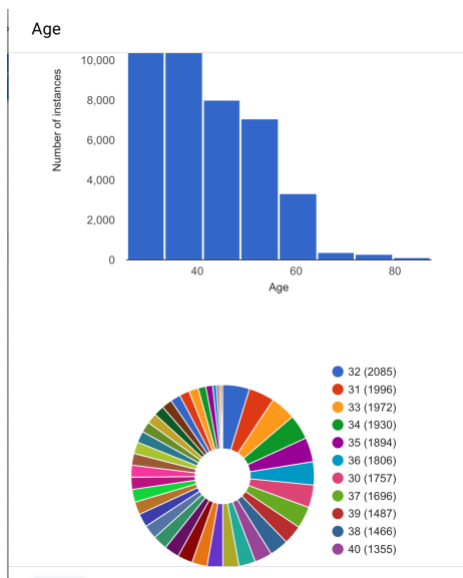
Sincerely,

The Google Cloud AI Team

Filter datasets									
<input type="checkbox"/>	<input checked="" type="radio"/>	Name	ID	Region	Type	Items	Labels	Last updated ↓	Status
<input type="checkbox"/>	<input checked="" type="radio"/>	Structured_AutoML_Tutorial	4325232453066162176	us-central1	Tabular	-	-	February 24, 2021	Created dataset

Field Name ↑	Missing % (count) ?	Distinct values ?
Age	-	77
Balance	-	7168
Campaign	-	48
Contact	-	3
Day	-	31
Default	-	2
Deposit	-	2
Duration	-	1573
Education	-	4
Housing	-	2
Job	-	12
Loan	-	2
MaritalStatus	-	3
Month	-	12
PDays	-	559

After generating statistics, showing only Age feature:



TRAINING THE AUTO ML TEXT CLASSIFICATION MODEL:

Name	ID	Data	Endpoints	Region	Type	Created
Structured_AutoML_Tutorial	5106818094647476224	Structured_AutoML_Tutorial	1	us-central1	Tabular	Feb 24, 2021, 10:47:26 PM

DEPLOYING THE MODEL TO ENDPOINT:

Model Evaluation:

CMPE258-HW2-TabularData
Search products and resources

Structured_AutoML_Tutorial
VIEW DATASET
EXPORT

EVALUATE
DEPLOY & TEST
BATCH PREDICTIONS
MODEL PROPERTIES

Filter labels
Confidence threshold 0.5

All labels	0
1	0.99143
2	0.61029

All labels

PR AUC	0.977
ROC AUC	0.975
Log loss	0.193
F1 score	0.9100067
Precision	91%
Recall	91%
Created	Feb 24, 2021, 11:52:45 PM

EVALUATE
DEPLOY & TEST
BATCH PREDICTIONS
MODEL PROPERTIES

Filter labels
Confidence threshold 0.5

All labels	0
1	0.99143
2	0.61029

Feature Importance

Feature	Importance (approx.)
Duration	0.95
Month	0.85
Day	0.75
Contact	0.70
Housing	0.65
POutcome	0.55
Campaign	0.50
Balance	0.45
Job	0.40
Age	0.35
Education	0.30
MaritalStatus	0.25

Deploy and test:

Endpoint	ID	Models	Region	Last updated	API	Notification	Metadata	Encryption
Structured_AutoML_Tutorial	6766482518263726080	1	us-central1	Feb 25, 2021, 9:23:51 AM	Sample request			Google-managed key

