



BATCH : **BATCH 168 DATA SCIENCE**
LESSON : **DEEP LEARNING**
DATE : **06.01.2024**
SUBJECT : **Google Colab**



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CONTENTS

- ✔ Opening notebook at Google Colab
- ✔ Uploading csv file to Google Colab
- ✔ GPU and TPU usage at Google Colab



OPENING NOTEBOOK AT GOOGLE COLAB



GOOGLE COLAB

- Zero configuration required
- Access to GPUs free of charge
- Easy sharing



GOOGLE COLAB

Gmail Images



Drive



New

New folder

File upload

Folder upload

- Google Docs
- Google Sheets
- Google Slides
- Google Forms

More

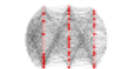
- Google Drawings
- Google My Maps
- Google Sites
- Google Apps Script
- Google Colaboratory
- Google Jamboard

+ Connect more apps

Storage

1.6 GB of 15 GB used

[Buy storage](#)



Account



Drive



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Sheets



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Contacts





GOOGLE COLAB

```
Deep_Learning_Notebook_1.ipynb
File Edit View Insert Runtime Tools Help Last saved at 11:31 PM

+ Code + Text

image.png
tensorflow.png

Installing Tensorflow

[ ] pip install tensorflow

Requirement already satisfied: tensorflow in c:\users\lenovo\anaconda3\lib\site-packages (2.8.0)
Requirement already satisfied: tercolor>=1.1.0 in c:\users\lenovo\anaconda3\lib\site-packages (from tensorflow) (1.1.0)
Requirement already satisfied: typing_extensions>=3.6.6 in c:\users\lenovo\anaconda3\lib\site-packages (from tensorflow) (3.10.0.2)
Requirement already satisfied: wrapt>=1.11.0 in c:\users\lenovo\anaconda3\lib\site-packages (from tensorflow) (1.12.1)
Requirement already satisfied: keras<2.9,>=2.8.0rc0 in c:\users\lenovo\anaconda3\lib\site-packages (from tensorflow) (2.8.0)
Requirement already satisfied: tensorflow-io-gcs-filesystem>=0.23.1 in c:\users\lenovo\anaconda3\lib\site-packages (from tensorflow) (0.25.0)
Requirement already satisfied: tf-estimator-nightly==2.8.0.dev2021122109 in c:\users\lenovo\anaconda3\lib\site-packages (from tensorflow) (2.8.0.dev2021122109)
Requirement already satisfied: setuptools in c:\users\lenovo\anaconda3\lib\site-packages (from tensorflow) (58.0.4)
Requirement already satisfied: astunparse>=1.6.0 in c:\users\lenovo\anaconda3\lib\site-packages (from tensorflow) (1.6.3)
Requirement already satisfied: tensorboard<2.9,>=2.8 in c:\users\lenovo\anaconda3\lib\site-packages (from tensorflow) (2.8.0)
Requirement already satisfied: keras-preprocessing>=1.1.1 in c:\users\lenovo\anaconda3\lib\site-packages (from tensorflow) (1.1.2)
Requirement already satisfied: h5py>=2.9.0 in c:\users\lenovo\anaconda3\lib\site-packages (from tensorflow) (3.2.1)
```

Connect Editing



File Edit View Insert Runtime Tools Help All changes saved

- Locate in Drive
- Open in playground mode
- New notebook
- Open notebook Ctrl+O
- Upload notebook
- Rename
- Move
- Move to trash
- Save a copy in Drive
- Save a copy as a GitHub Gist
- Save a copy in GitHub
- Save Ctrl+S
- Save and pin revision Ctrl+M S
- Revision history
- Download
- Print Ctrl+P

Examples Recent Google Drive GitHub Upload

Dosya Seç Dosya seçilmedi

Aç

← → ↕ ↗

Bu bilgisayar > Yerel Disk (C:) > Kullanıcılar > LENOVO > ANN >

Düzenle Yeni klasör

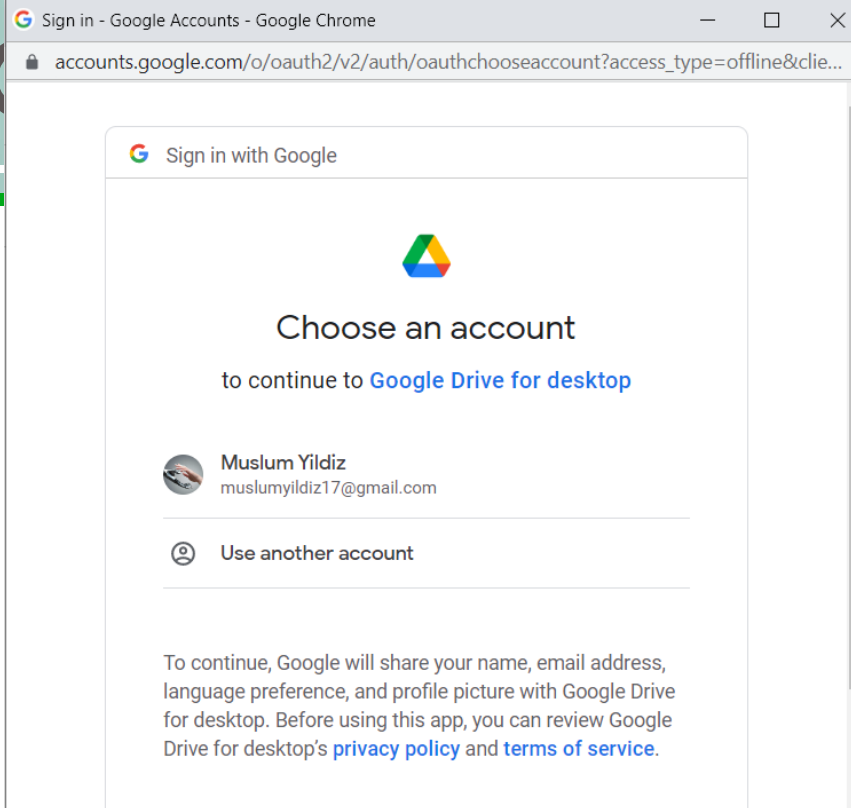
	Ad	Değiştirme tarihi	Tür	Boyut
★ Hızlı erişim				
📁 Masaüstü				
⬇ İndirilenler				
📁 Belgeler				
🖼 Resimler				
📁 Google Drive (D:)				
📁 ANN				
	.ipynb_checkpoints	29.10.2022 07:24	Dosya klasörü	
	Deep_Learning_Notebook_1	30.10.2022 18:37	Jupyter Kaynak Do...	1.902 KB
	DL_S5_(CNN_MNIST_DATA)_ÇALIŞMA NO...	17.09.2022 11:50	Jupyter Kaynak Do...	116 KB
	DL-S2 (Installing Tensorflow & Keras Synt...	17.10.2022 23:52	Jupyter Kaynak Do...	682 KB
	DL-S3 (Regression with ANN-kc house da...	20.09.2022 23:08	Jupyter Kaynak Do...	17.430 KB
	DL-S4 (Classification with ANN-cancer d...	20.09.2022 23:04	Jupyter Kaynak Do...	2.175 KB



UPLOADING CSV FILES



GOOGLE C



Google Drive for desktop wants to access your Google Account

muslumiildiz17@gmail.com

This will allow **Google Drive for desktop** to:

- See, edit, create, and delete all of your Google Drive files
- View the photos, videos and albums in your Google Photos
- Retrieve Mobile client configuration and experimentation
- View Google people information such as profiles and contacts
- View the activity record of files in your Google Drive
- See, edit, create, and delete any of your Google Drive documents

Make sure you trust Google Drive for desktop

You may be sharing sensitive info with this site or app. You can always see or remove access in your [Google Account](#).

Learn how Google helps you [share data safely](#).

See Google Drive for desktop's [Privacy Policy](#) and [Terms of Service](#).

Cancel

Allow

```
from google.colab import drive
drive.mount('/content/drive')
```

```
from google.colab import drive
drive.mount('/content/drive')
```

Mounted at /content/drive

Permit this notebook to access your Google Drive files?

This notebook is requesting access to your Google Drive files. Granting access to Google Drive will permit this notebook to modify files in your Google Drive. Make sure to review notebook code prior to allowing this.

No thanks



GOOGLE COLAB



Untitled10.ipynb



File Edit View Insert Runtime Tools Help All changes saved



Files



{x}



..

drive

sample_data

Reminder, uploaded files will get deleted when this runtime is recycled.

[More info](#)

OK

+ Code + Text

2m



```
from google.colab import drive
drive.mount('/content/drive')
```

Mounted at /content/drive



sample_data

fake_reg.csv



Dosyalar



{x}



..

drive

MyDrive

CNN

Classroom

Colab Notebooks

Python

TEST

fake_reg.csv

hepsiburada.csv

sample_data



GOOGLE COLAB



Untitled10.ipynb ☆

File Edit View Insert Runtime Tools Help [All changes saved](#)

Comment

Share



✓ RAM
Disk

Editing



Files



+ Code + Text



{x}

- ..
- Vocabularies_S.gslides
- Vocabularies_T.gslides
- Vocabularies_U.gslides
- Vocabularies_W.gslides
- Vocabularies_X.gslides
- Vocabularies_Y.gslides
- Vocabularies_Z.gslides
- Web Scraping.gslides
- b81 82 83.gsheet
- fake_reg.csv
- hepsiburada.csv

<>



Disk 85.12 GB available

Download

Rename file

Delete file

Copy path

Refresh

```
[5] from google.colab import drive  
drive.mount('/content/drive')
```

Mounted at /content/drive

```
[8] import pandas as pd
```

```
df=pd.read_csv('/content/drive/MyDrive/hepsiburada.csv')  
df
```

	Rating	Review
0	1	3 yıldır tık demedi. :)
1	1	3 yıldır kullanıyorum müthiş
1	1	Ürün bugün elime geçti çok fazla inceleme fırs...
1	1	Almaya karar verdim. Hemencecik geldi. Keyifle...
1	1	Günlük kullanımınızı çok çok iyi karşılıyor kı...
...
2	1	fiyatına göre güzel
243493	1	Ürün kullanışlı iş görüyor fazlasıyla eşime al...

✓ 2s completed at 12:59 AM



GOOGLE COLAB

Files



sample_data

fake_reg.csv

model_fake.h5

scaler_fake_reg



+ Code + Text

```
warnings.warn("this will not show")

plt.rcParams["figure.figsize"] = (10,6)

sns.set_style("whitegrid")
pd.set_option('display.float_format', lambda x: '%.3f' % x)

# Set it None to display all rows in the dataframe
# pd.set_option('display.max_rows', None)

# Set it to None to display all columns in the dataframe
pd.set_option('display.max_columns', None)
```

✓
0s

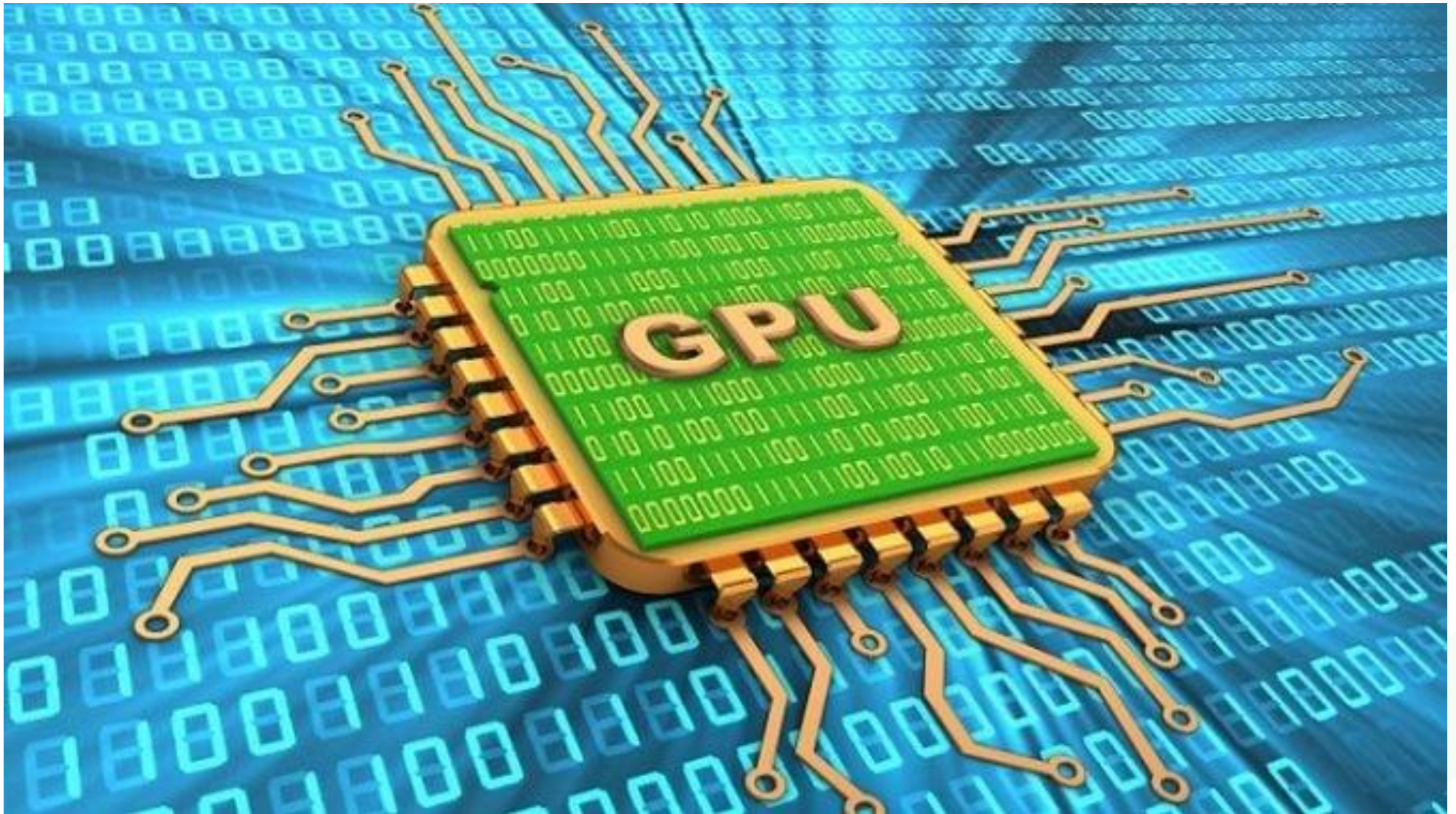
```
[4] df = pd.read_csv("fake_reg.csv")
```



ACCESS TO GPU and TPU



GOOGLE COLAB





GOOGLE COLAB

co

Deep_Learning_Notebook_1.ipynb ☆

File Edit View Insert Runtime Tools Help All changes saved

+ Code + Text

```
sns.set_style('white', {'font.family': 'serif'})
pd.set_option('display.max_colwidth', 100)

# Set it None to avoid warning
# pd.set_option('display.max_colwidth', None)

# Set it to None to avoid warning
pd.set_option('display.max_colwidth', None)

df = pd.read_csv('fake_reg.csv')

FileNotFoundError: [Errno 2] No such file or directory: 'fake_reg.csv'
```

Run all Ctrl+F9

Run before Ctrl+F8

Run the focused cell Ctrl+Enter

Run selection Ctrl+Shift+Enter

Run after Ctrl+F10

Interrupt execution Ctrl+M I

Restart runtime Ctrl+M .

Restart and run all

Disconnect and delete runtime

Change runtime type

Manage sessions

View runtime logs

Change runtime type

Runtime type Python 3

Hardware accelerator ?

☐ CPU

☒ T4 GPU

☐ A100 GPU

☐ V100 GPU

☐ TPU

Want access to premium GPUs? [Purchase additional compute units](#)

Cancel Save

Comment Share Settings Profile

RAM Disk Editing

Notebook settings

Hardware accelerator GPU ?

Want access to premium GPUs? [Purchase additional compute units here.](#)

☐ Omit code cell output when saving this notebook

Cancel Save

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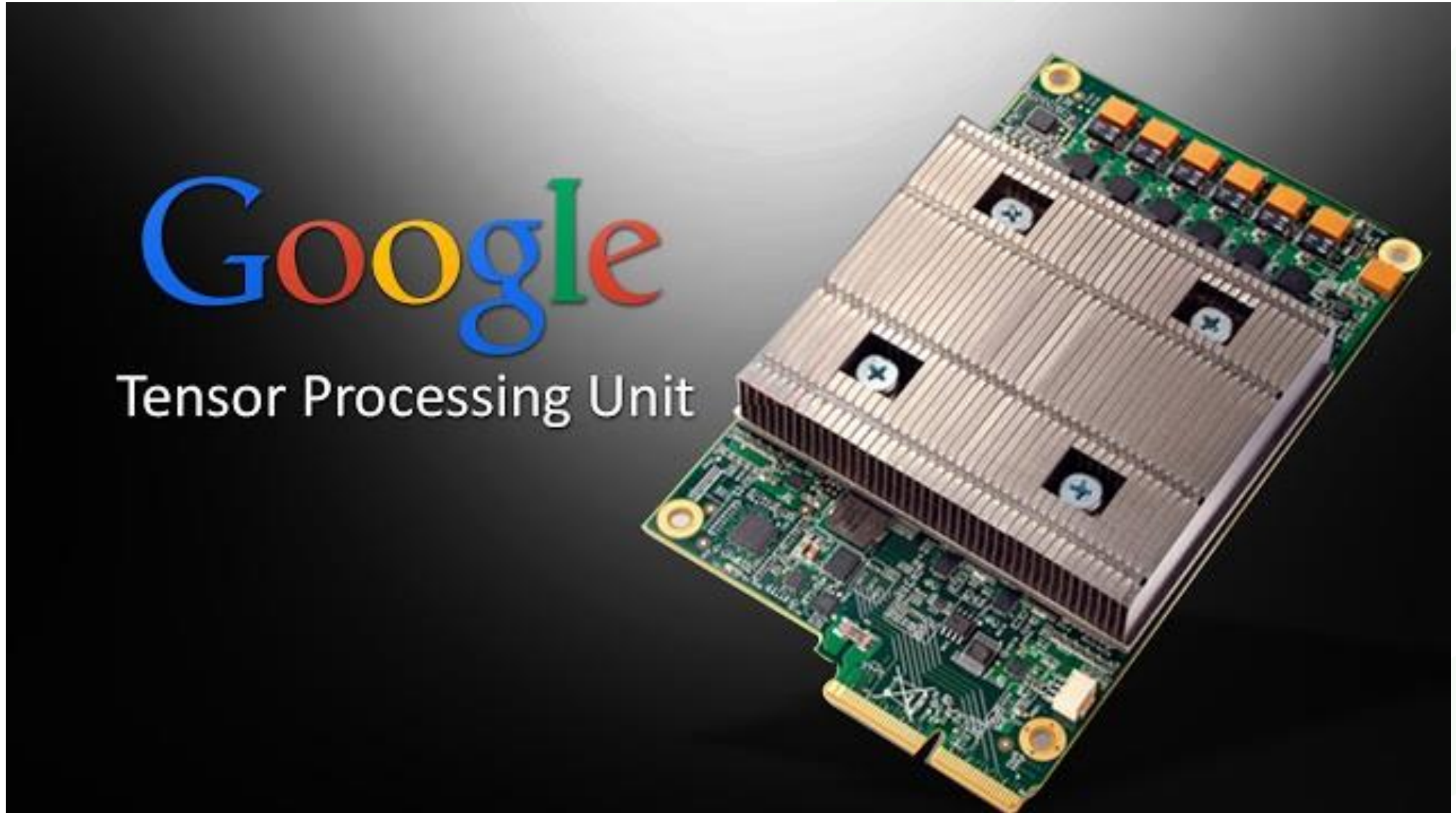
RAM Disk Editing

Connected to Python 3 Google Compute Engine backend (GPU)

RAM: 1.09 GB/12.68 GB Disk: 22.89 GB/78.19 GB



GOOGLE COLAB






GOOGLE COLAB

Notebook settings

Hardware accelerator

None 

- None
- GPU
- TPU

Output when saving this notebook

Cancel


Save

Delete previous runtime

You have connected to a new runtime. Would you like to terminate the previous runtime?



Cancel

OK

 Comment

 Share



✓ RAM 
Disk 

 Editing



Connected to
Python 3 Google Compute Engine backend (TPU)
RAM: 1.04 GB/12.68 GB Disk: 22.55 GB/107.72 GB



GOOGLE COLAB

```
[8] df = pd.read_csv("/content/drive/MyDrive/999_Others/fake_reg.csv")
```

image.p

Explora

eda.jpeg

df.head()

price feature1 feature2

Notebook settings

Hardware accelerator

None

☒ Omit code cell output when saving this notebook

Cancel Save