

Tutorial Google's Colab

SEPTEMBER 11

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Logo
Name

What is Google Colab?

It's a Jupyter notebook environment that requires no setup to use. Moreover, it gives us **free GPU** access to run our code. In simple words Colab is a free hosted Jupyter notebook with access to GPU.

With Google Colab, we can:

1. improve your Python programming language coding skills.
2. develop deep learning applications using popular libraries such as Keras, TensorFlow, PyTorch, and OpenCV.

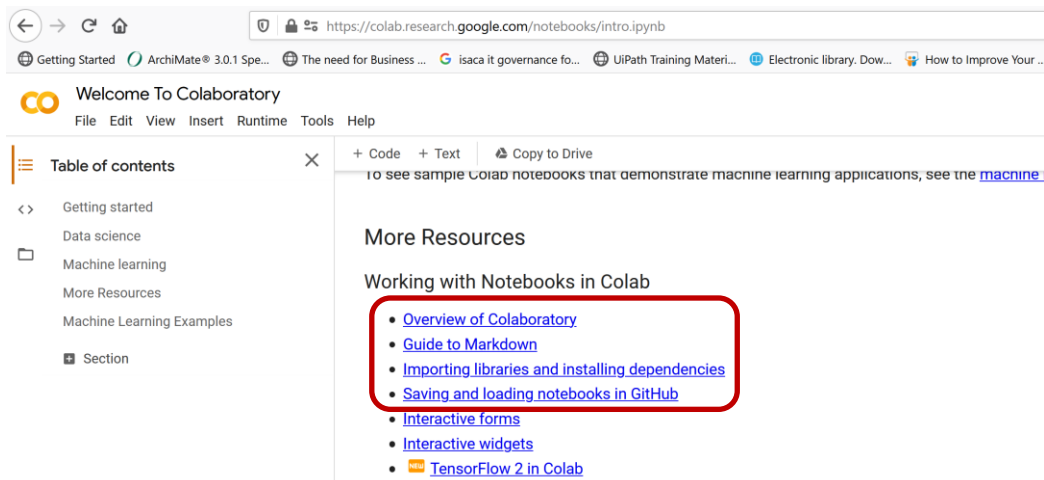
The most important feature that distinguishes Colab from other free cloud services is; Colab provides GPU and is totally free. In other words, Google Colab offers **free access to Nvidia K80 GPU**, and it is becoming a popular tool for quick prototyping and visualization. Colab is easy to learn and it is very similar to Jupyter Notebook, another very popular tool for interactive coding.

Getting Access

1. If you do not have a google account, register a google account.

A Google Account gives you Google-wide access to most Google products, such as Google Ads, Gmail, and YouTube, using the same username and password. To sign up for Gmail, create a Google Account. You can use the username and password to sign in to Gmail and other Google products like YouTube, Google Play, and Google Drive. Go to the Google Account creation page. Follow the steps on the screen to set up your account.

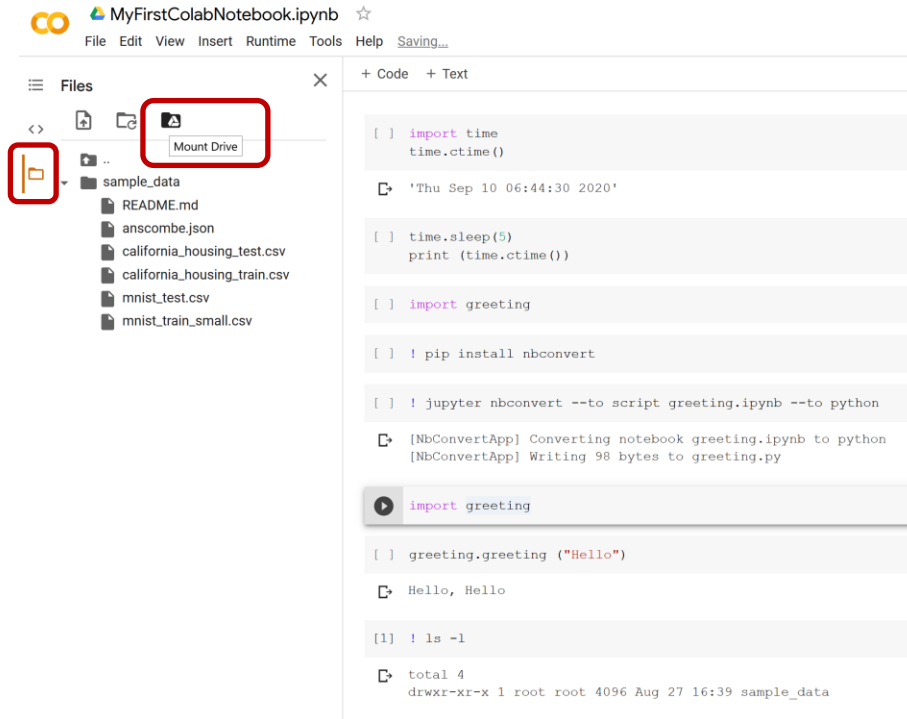
2. Go to: <https://colab.research.google.com> and login, if you have not.
3. To learn more about Google Colab, go to: <https://colab.research.google.com/notebooks/intro.ipynb> and then scroll down to the More Resources section, as shown below:



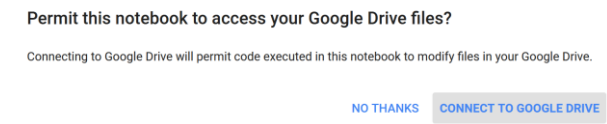
4. Read the 4 tutorials, as shown above.
5. Read: https://colab.research.google.com/notebooks/basic_features_overview.ipynb - for basic features tutorial.

Mounting Drive (to Google Drive)

1. From Google colab, choose the disc icon, as shown below.



2. You might be asked to give permission to Google Drive access, or alternatively you might be asked to run the following script.

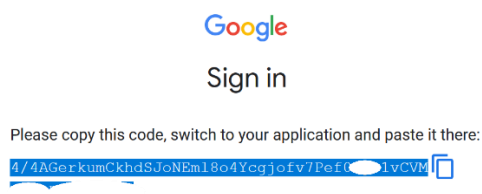


Click the "Connect to Google Drive" button and provide the login id and password.

Alternatively, we could run the generated script, as shown below.



Click on the URL and it will open another new tab in the browser. Provide the right id and password and copy the id, as shown below:



To:

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

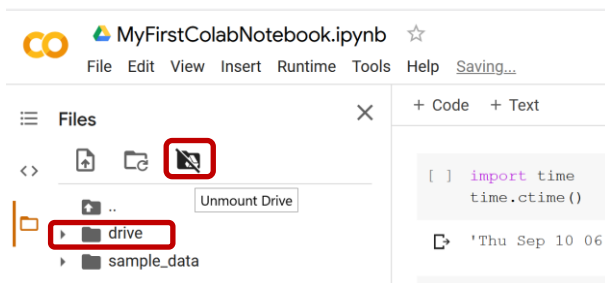
Go to this URL in a browser: https://accounts.google.com/o/oauth2/auth?client_id=947318989803-6bn6qk8qdgf4n4g3pfee6491hc0brc4i.apps.googleusercontent.com&...

Enter your authorization code: 4/4AGerKumCKhdSJONEm18o4YcgjoFv7Pef022w1vC_____?I

Mounted at /content/drive

Press enter.

3. As the result, the drive>>My Drive will be mounted, as shown below.



To amount, click the umount link

4. Example:

```
[ ] import time
time.ctime()

'Thu Sep 10 06:44:30 2020'
```

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

```
time.sleep(5)
print (time.ctime())
```

```
[ ] import greeting
```

```
[ ] ! pip install nbconvert
```

```
[ ] ! jupyter nbconvert --to script greeting.ipynb --to python
```

```
[ ] [NbConvertApp] Converting notebook greeting.ipynb to python
[NbConvertApp] Writing 98 bytes to greeting.py
```

```
[ ] import greeting
```

```
[ ] greeting.greeting ("Hello")
```

```
'Hello, Hello'
```

```
[ ] ! ls -l
```

```
total 4
drwxr-xr-x 1 root root 4096 Aug 27 16:39 sample_data
```



If you are familiar with Unix/Linux/Mac terminal – bash script, there you go.

