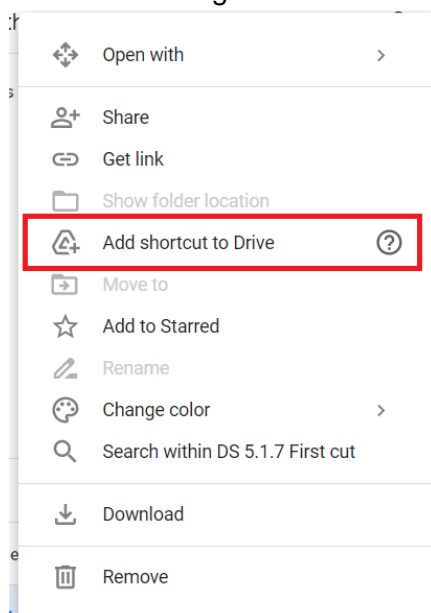# Working with Colab

## What is Colab?

Google Colaboratory, better known as colab, is a cloud service offered by Google for running the Python scripts from the browser itself. It allows anyone with limited computation resources in terms of RAM or processor to use the cloud service for their projects. It also helps in collaborating with the peers on a project. The higher computation power of colab can be accessed on a paid basis. However, for our project, the standard free version would work fine.

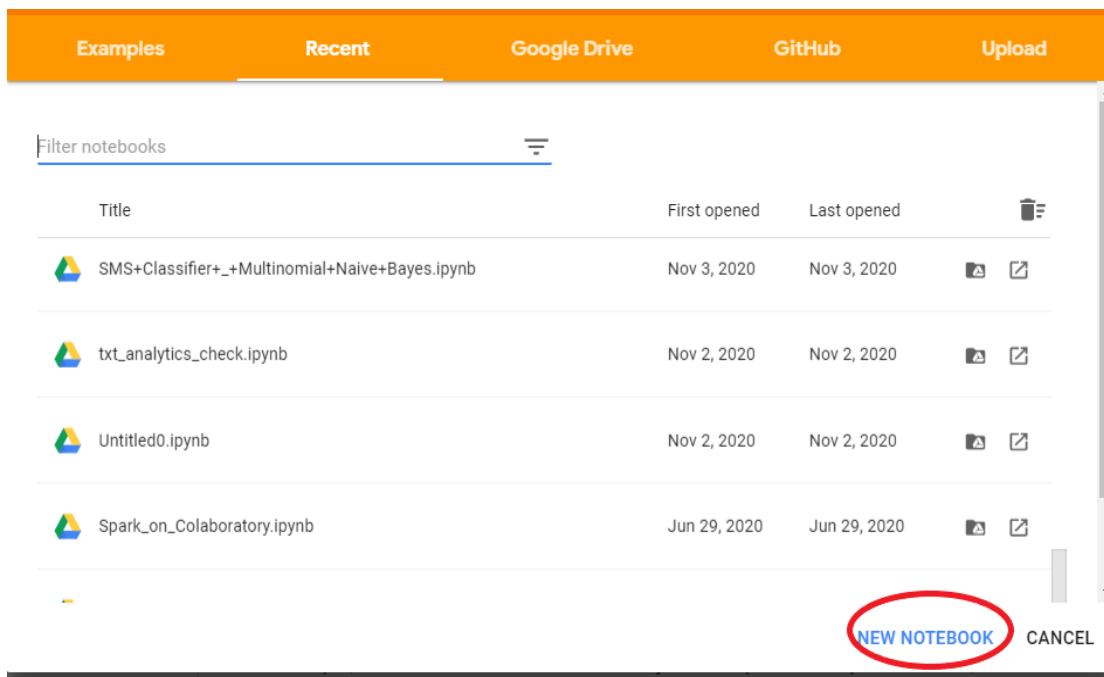Hence, in short, using colab, you can:
- Work without worrying about the packages, libraries and their installation.
- Most of the libraries are pre-installed that makes it easy to use, libraries which are not pre-installed here can be installed with a simple command.
- Bypass your computer's limited computation power.
- Access files from your google drive

Using colab is fairly simple. Follow the steps given below when you work on colab.

1. In this project, we have provided you with the 'read-only' access to the folder containing the datasets. Create a shortcut to 'MyDrive' for the dataset folder shared with you, as shown in the figure below:

2. Go to the link: https://colab.research.google.com/notebooks/intro.ipynb#recent=true.

3. Click on "New Notebook"  to open a colab notebook.



4. The next step is to mount your google drive to the colab so that you can access your files in the drive from the colab notebook. This is similar to accessing the files in the local machine from the Jupyter notebook. But in this case, google drive needs the user permission before giving drive access to Colab.

a) Run the following script in colab shell.

```
from google.colab import drive
drive.mount('/content/gdrive')
```
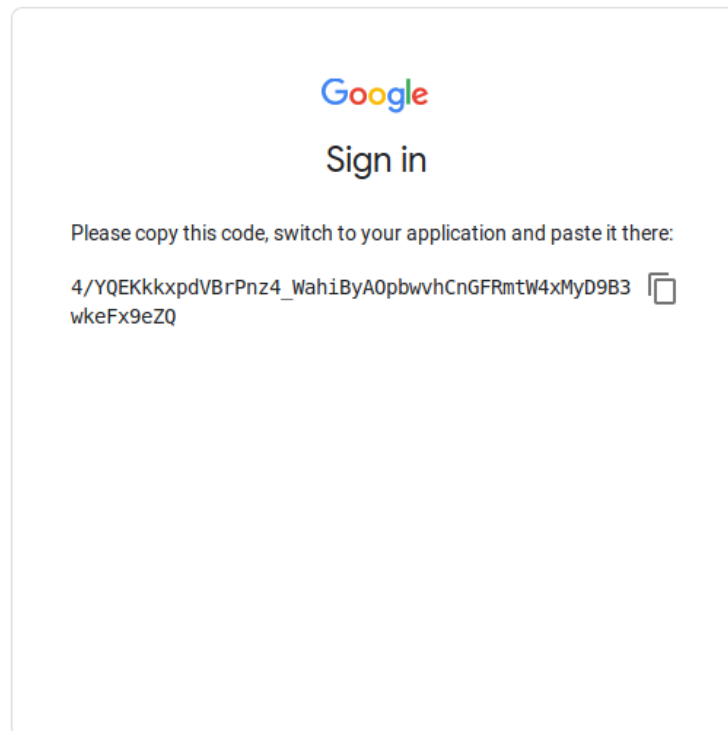
b) Click on the hyperlink:

```
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:

c) Copy the authorisation code of your account.

Google

Sign in

Please copy this code, switch to your application and paste it there:

4/YQEKkkxpdVBrPnz4_WahiByAOpbwvhCnGFRmtW4xMyD9B3
wkeFx9eZQ

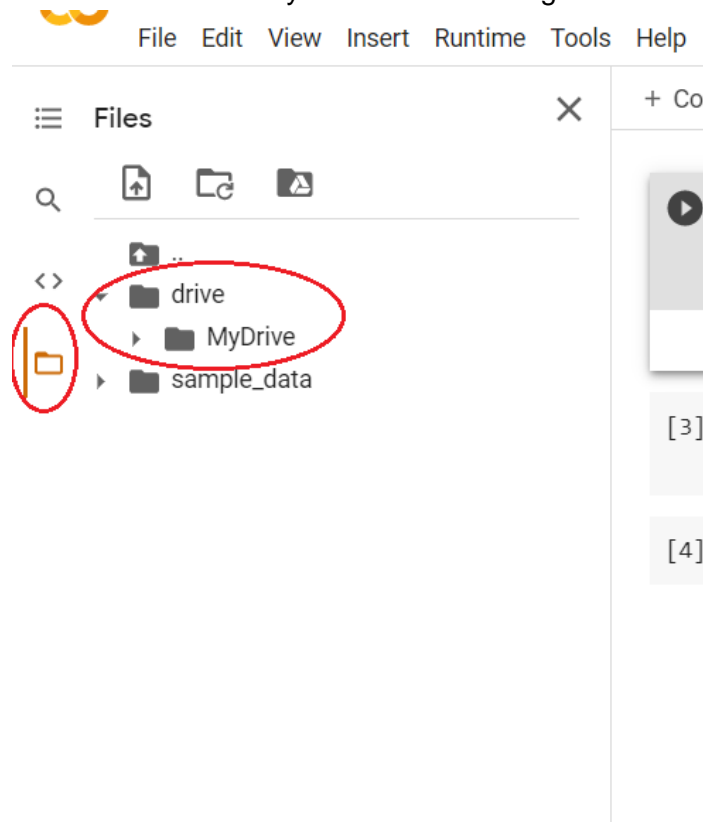d) Paste the authorisation code into the output shell.

```
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:
..........
Mounted at /content/drive/

5. Now, to read any file from the file, you need to give pd.read_csv(path) where the path is the google drive path for the file. In order to get the path of a file, follow the steps given below.

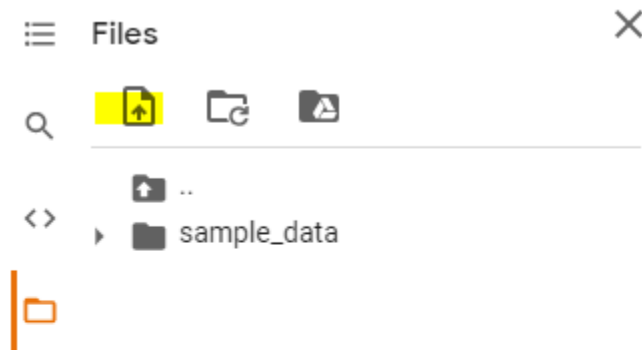a. Go to the folder in your drive containing the shortcut of the read-only file.



b. Right-click on the file and copy the path and pass the path as an argument while reading the .csv  file. Similarly, to write a dataframe into a .csv file, you can use 'DataFrame_name.to_csv(file_path)'

```
import pandas as pd
df = pd.read_csv('/content/drive/MyDrive/Google collab_documentation/session_feedback_ratings-v2_imt_c1-75439faf773a-2020-11-10-12-42-40.csv')

[ ] df.to_csv('/content/drive/MyDrive/Google collab_documentation/xyz.csv')
```

**Note:** While working on the project, please keep the shortcut to the data folder shared with you in your 'My Drive'. To store all the colab notebooks and other files you create during the course of this project, create a separate folder named 'Capstone' (or any other name of your choice).

5. You can also upload your data directly on colab using the below button.

Files ☰ ✕



You will see the upload options and you can upload the file from your local system.