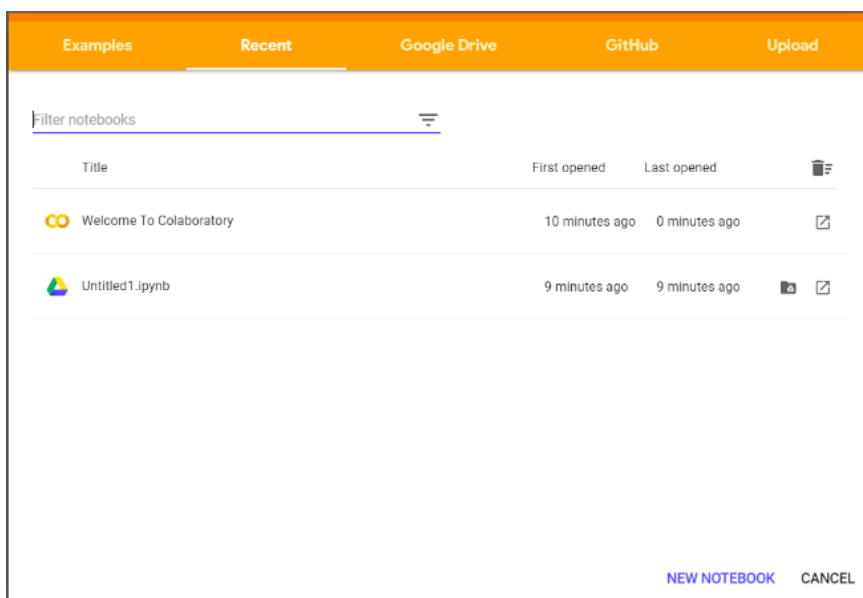


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# Ways to import CSV files in Google Colab

Difficulty Level : Basic • Last Updated : 16 Feb, 2022

**Colab (short for Collaboratory)** is Google's free platform which enables users to code in Python. It is a Jupyter Notebook-based cloud service, provided by Google. This platform allows us to train the Machine Learning models directly in the cloud and all for free. Google Colab does whatever your Jupyter Notebook does and a bit more, i.e. you can use GPU and TPU for free. Some of Google Colab's advantages include quick installation and real-time sharing of Notebooks between users. However, loading a CSV file requires writing some extra lines of codes. In this article, we will be discussing three different ways to load a CSV file and store it in a pandas dataframe. To get started, sign in to your Google Account, and then go to "<https://colab.research.google.com>" and click on "New Notebook".



## Ways to import CSV



Load data from local drive



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## Python3

```
from google.colab import files
```

```
uploaded = files.upload()
```

you will get a screen as,

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```
uploaded = files.upload()
```

...

[Choose Files](#)

No file chosen

[Cancel upload](#)

Click on *"choose files"*, then select and download the CSV file from your local drive. Later write the following code snippet to import it into a pandas dataframe.

### Python3

```
import pandas as pd
import io

df = pd.read_csv(io.BytesIO(uploaded['file.csv']))
print(df)
```

**Output:**

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3		Solapur ...		8.0	
4		Sindhudurg ...		1.0	
5		Satara ...		9.0	
6		Sangli ...		25.0	
7		Ratnagiri ...		5.0	
8		Raigarh ...		24.0	
9		Parbhani ...		1.0	
10		Palghar ...		46.0	
11		Osmanabad ...		3.0	
12		Nashik ...		6.0	
13		Nandurbar ...		0.0	
14		Nanded ...		0.0	
15		Nagpur ...		37.0	
16		Latur ...		8.0	
17		Kolhapur ...		4.0	
18		Buldana ...		17.0	
19		Jalgaon ...		1.0	
20		Hingoli ...		1.0	
21		Gondiya ...		1.0	
22		Dhule ...		0.0	
23		Chandrapur ...		2.0	
24		Buldana ...		17.0	
25		Bid ...		1.0	
26		Bhandara ...		0.0	
27		Aurangabad ...		22.0	

## From Github

It is the easiest way to upload a CSV file in Colab. For this go to the dataset in your GitHub repository, and then click on “*View Raw*”. Copy the link to the raw dataset and pass it as a parameter to the `read_csv()` in pandas to get the dataframe.

## Python3

```
url = 'copied_raw_github_link'
df = pd.read_csv(url)
```

## Output:

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Read	Discuss(2)	Courses	Practice	Video
3	4	11.120670	14.406780	
4	5	23.711550	2.557729	
...	...	...	...	
2995	2996	85.652800	-6.461061	
2996	2997	82.770880	-2.373299	
2997	2998	64.465320	-10.501360	
2998	2999	90.722820	-12.255840	
2999	3000	64.879760	-24.877310	

3000 rows × 3 columns

## From your Google drive

We can import datasets that are uploaded on our google drive in two ways :

### 1. Using PyDrive

This is the most complex method for importing datasets among all. For this, we are first required to install the PyDrive library from the python installer(pip) and execute the following.

---

## Python3

```
!pip install -U -q PyDrive
```

```
from pydrive.auth import GoogleAuth
from pydrive.drive import GoogleDrive
from google.colab import auth
from oauth2client.client import GoogleCredentials
```

```
# Authenticate and create the PyDrive client.
auth.authenticate_user()
gauth = GoogleAuth()
gauth.credentials = GoogleCredentials.get_application_default()
drive = GoogleDrive(gauth)
```

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Click on the following link in your browser:

[https://accounts.google.com/o/oauth2/auth?code\\_challenge=3d](https://accounts.google.com/o/oauth2/auth?code_challenge=3d)

Verification code:

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Click on the link prompted to get the authentication to allow Google to access your Drive. You will see a screen with **"Google Cloud SDK wants to access your Google Account"** at the top. After you allow permission, copy the given verification code and paste it into the box in Colab.

Now, go to the CSV file in your Drive and get the shareable link and store it in a string variable in Colab. Now, to get this file in the dataframe run the following code.

### Python3

```
link = 'https://drive.google.com/file/d/1KiYk09VqGI6tjNpalom5wI90GrC2p-lz/v'

import pandas as pd

# to get the id part of the file
id = link.split("/")[-2]

downloaded = drive.CreateFile({'id':id})
downloaded.GetContentFile('xclara.csv')

df = pd.read_csv('xclara.csv')
```

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## Output:

```

      Unnamed: 0      V1      V2
0              1  2.072345 -3.241693
1              2 17.936710 15.784810
2              3  1.083576  7.319176
3              4 11.120670 14.406780
4              5 23.711550  2.557729
...
2995          2996 85.652800 -6.461061
2996          2997 82.770880 -2.373299
2997          2998 64.465320 -10.501360
2998          2999 90.722820 -12.255840
2999          3000 64.879760 -24.877310

[3000 rows x 3 columns]
```

## 2. Mounting the drive

This method is quite simple and clean than the above-mentioned method.

- Create a folder in your Google Drive.
- Upload the CSV file in this folder.
- Write the following code in your Colab Notebook :

```

from google.colab import drive

drive.mount('/content/drive')
```

Just like with the previous method, the commands will bring you to a Google authentication step. Later complete the verification as we did in the last method. Now in the Notebook, at the top-left, there is a *File* menu and then click on *Locate in Drive*,

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```
path = "copied path"
df_bonus = pd.read_csv(path)
```

Now, to read the file run the following code.

## Python3

```
import pandas as pd

df = pd.read_csv("file_path")
print(df)
```

### Output:

```
   Unnamed: 0    V1    V2
0           1  2.072345 -3.241693
1           2 17.936710 15.784810
2           3  1.083576  7.319176
3           4 11.120670 14.406780
4           5 23.711550  2.557729
...         ...    ...    ...
2995        2996 85.652800 -6.461061
2996        2997 82.770880 -2.373299
2997        2998 64.465320 -10.501360
2998        2999 90.722820 -12.255840
2999        3000 64.879760 -24.877310

[3000 rows x 3 columns]
```



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