

The Instruction of how to run the program on Google Colab

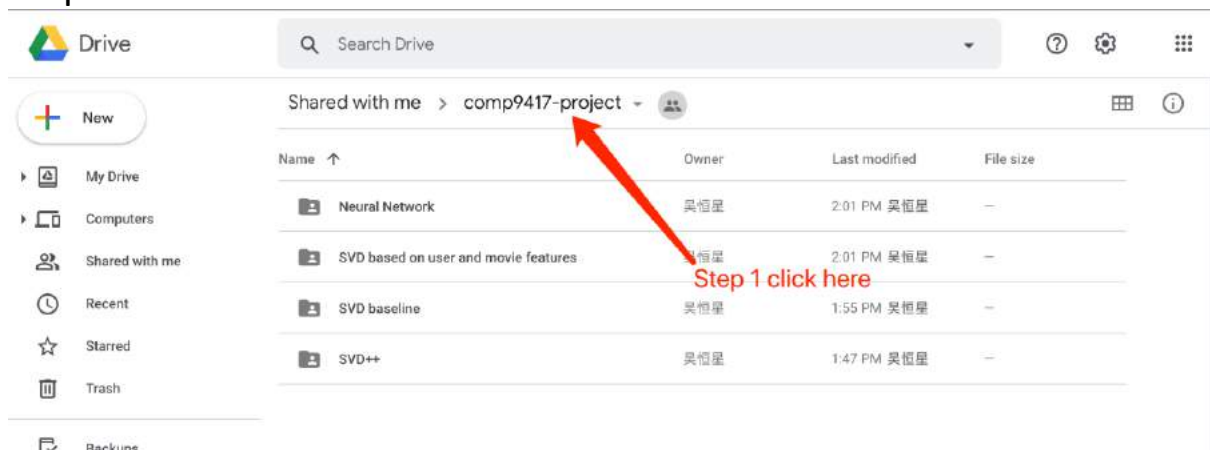
!! Please click the link below and follow the instruction to run our program
[Click here to Google drive](#)

Notice:

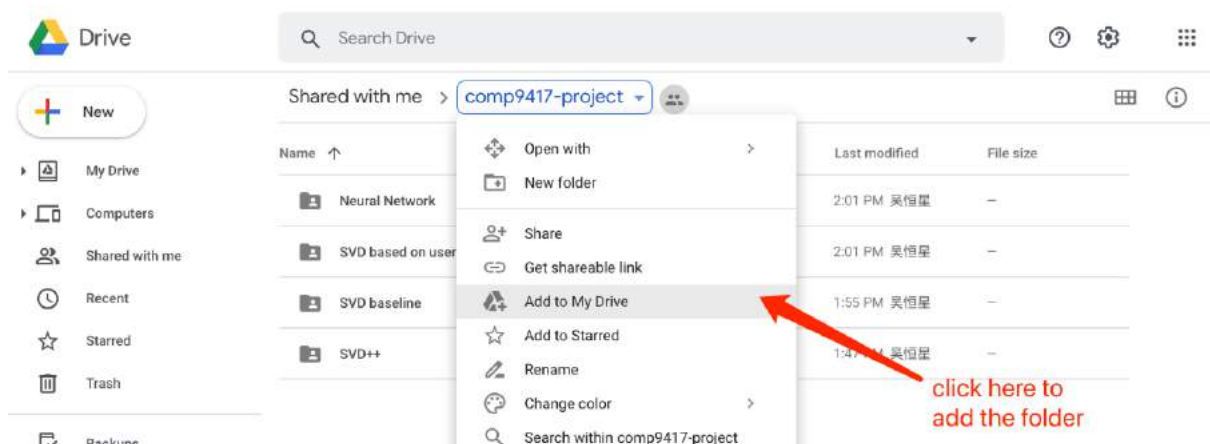
The file paths in the code are for running on Google Colab. If you want to run in the local machine, please modify them according to the local file paths.

If you encounter any problems while running the program, please send an email to z5147976@unsw.edu.au

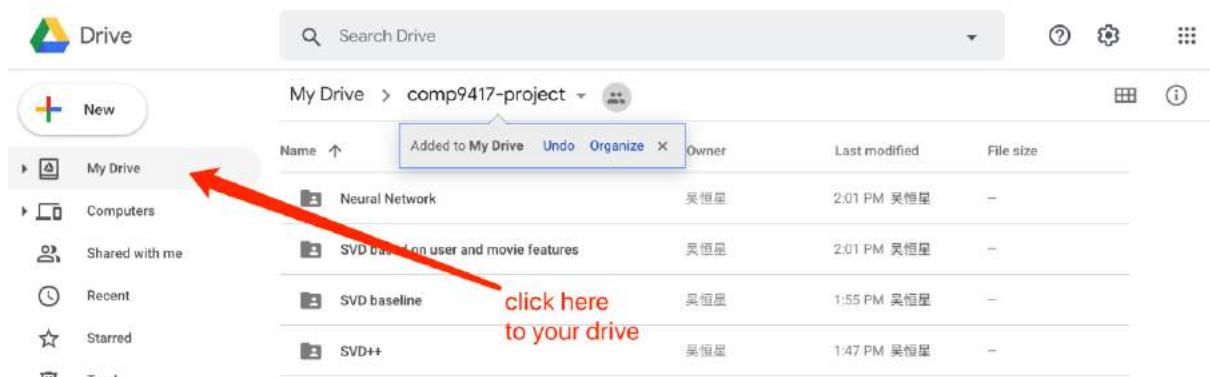
Step:1



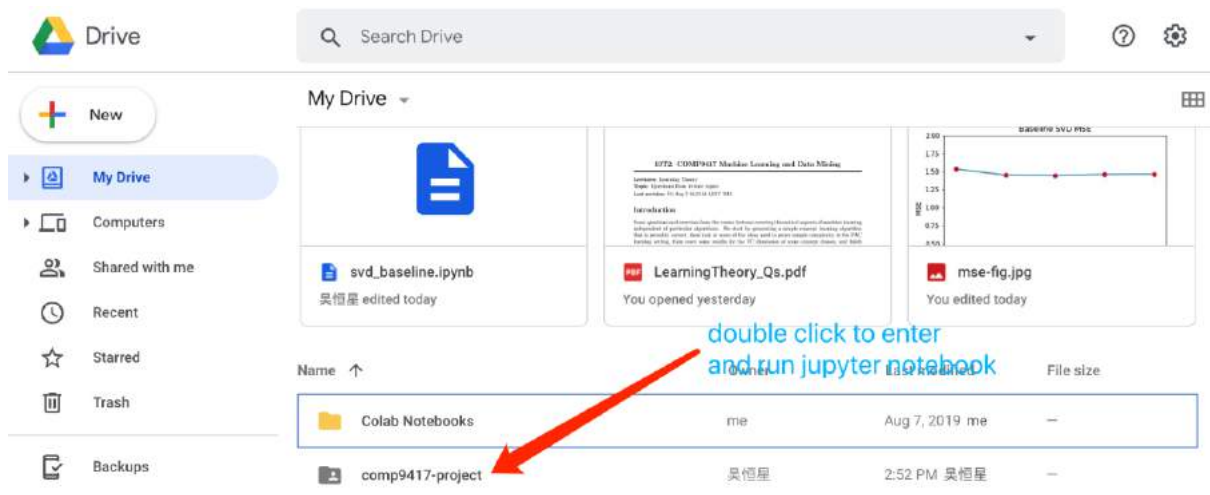
Step:2



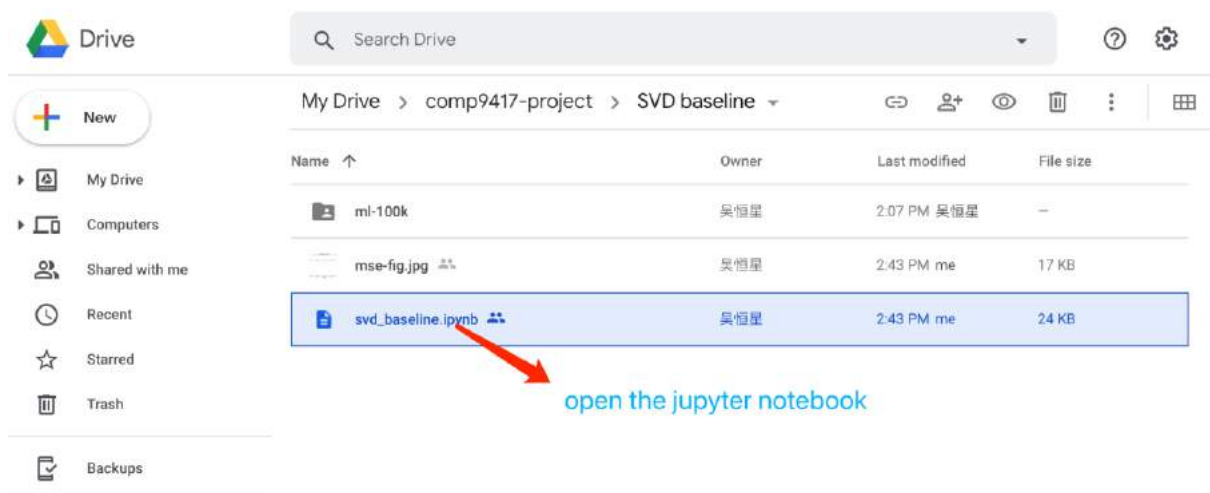
Step:3



Step:4



Step:5



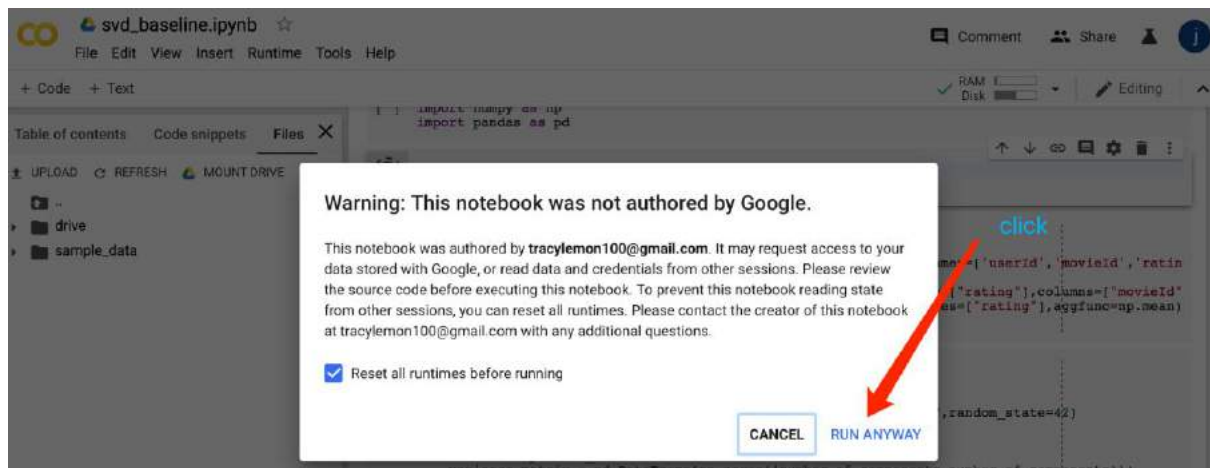
Step:6



Step:7



Step:8



Step:9

svd_baseline.ipynb

File Edit View Insert Runtime Tools Help

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UPLOAD REFRESH MOUNT DRIVE

..

sample_data

click the link and get the authorization code

```
import numpy as np
import pandas as pd

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=947318985

Enter your authorization code:
```

paste the code here

Step:10

svd_baseline.ipynb

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UPLOAD REFRESH MOUNT DRIVE

drive

- My Drive
 - Colab Notebooks
 - comp9417-project
 - Neural Network
 - SVD based on user and movie fe...
 - SVD baseline
 - SVD++
 - COMP9318_0603.pdf
 - SVD++.ipynb
 - u1.base
 - u1.test
 - u2.base
 - u2.test

After the driver be mounted, you will see the sharing folder. Then you can run jupyter notebook

```
import numpy as np
import pandas as pd

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=947318985

Enter your authorization code:
.....
Mounted at /content/drive

#read data into a sparse matrix
def read_data(rating_file):
    rating_df = pd.read_table(rating_file, sep='\t', header=None, names=['userId', 'movieId', 'rating'])
    rating_df = rating_df.drop(['timestamp'], axis=1)
    full_data_df = pd.pivot_table(rating_df, index=['userId'], values=['rating'], columns=['movieId'])
    user_average = pd.pivot_table(rating_df, index=['userId'], values=['rating'], aggfunc=np.mean)
    return full_data_df, user_average
```