National College of Ireland

# Configuration Manual

MSc Research Project
Cloud Computing


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School of Computing
National College of Ireland


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**National College of Ireland**
**Project Submission Sheet**
**School of Computing**

| | |
|---|---|
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| **Programme:** | Cloud Computing |
| **Year:** | 2021 |
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# Configuration Manual

Honey Rajendra Gugale
x20133685

## 1 Section 1

Step 1 - Install python on the local machine according your Operating system.

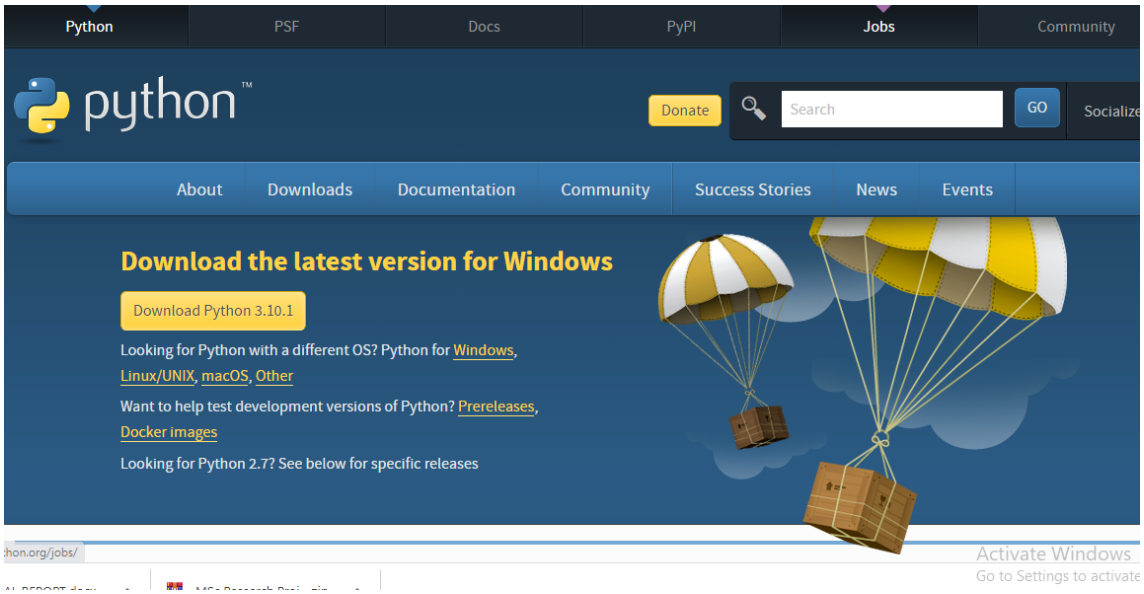


Figure 1: Install Python

Step 2 - Upgrade package installer for Python using the Following Command.

```
C:\Users\dell>python -m pip install --upgrade pip
```

Figure 2: Upgrade pip

Step 3 - Install or Upgrade packages related OpenCV library using the Following Command.

```
C:\Users\dell>python -m pip install --upgrade opencv-python
```

Figure 3: OpenCV

Step 4 - Install or Upgrade packages related tensorflow library using the Following Command.

```
C:\Users\dell>python -m pip install --upgrade tensorflow
```

Figure 4: TensorFlow

Step 5 - Install or Upgrade packages related Scikit-image library using the Following Command.

```
C:\Users\dell>python -m pip install scikit-image
```

Figure 5: Scikit-image

Step 6 - Install or Upgrade packages related TensorFlow Hub library using the Following Command.

```
C:\Users\dell>python -m pip install tensorflow-hub
```

Figure 6: TensorFlow Hub

# 2 Section 2

Step 1 - Sign into the Google account

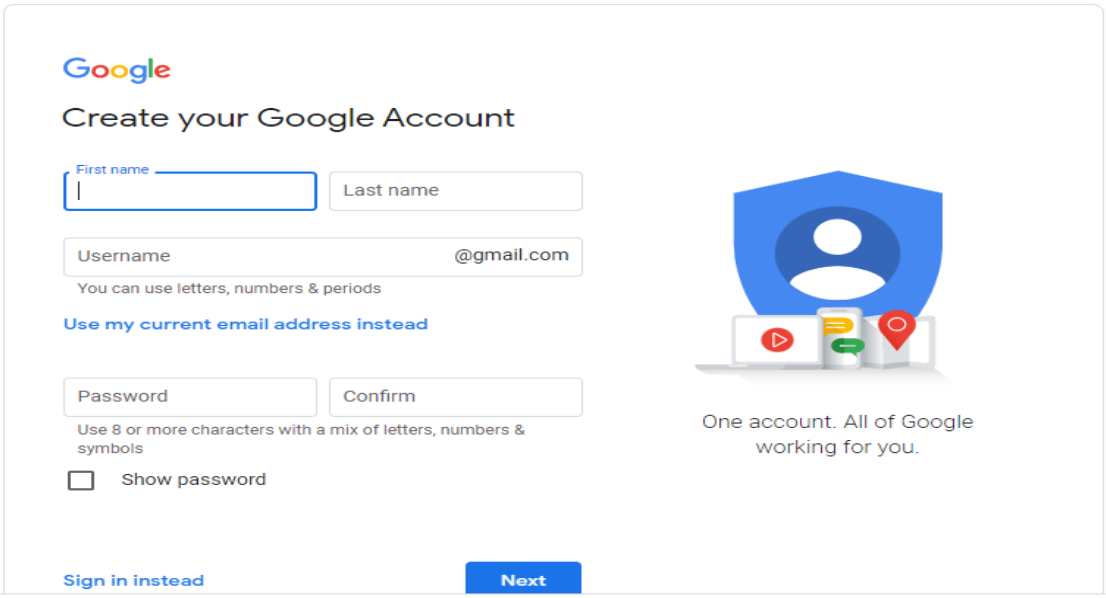


Figure 7: Google Sign in

Step 2 - Type 'Google Colab' on the Google search bar and Click on the highlighted link.

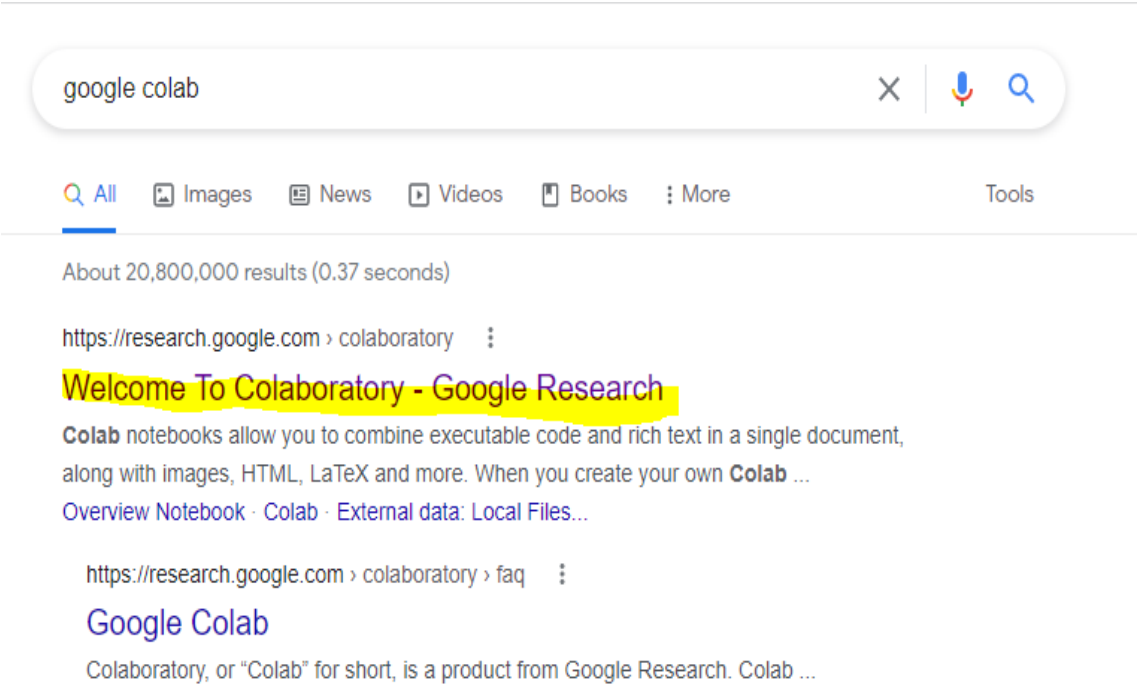


Figure 8: Google Colab

Step 3 - Navigate and Upload the ipynb files for training the model.

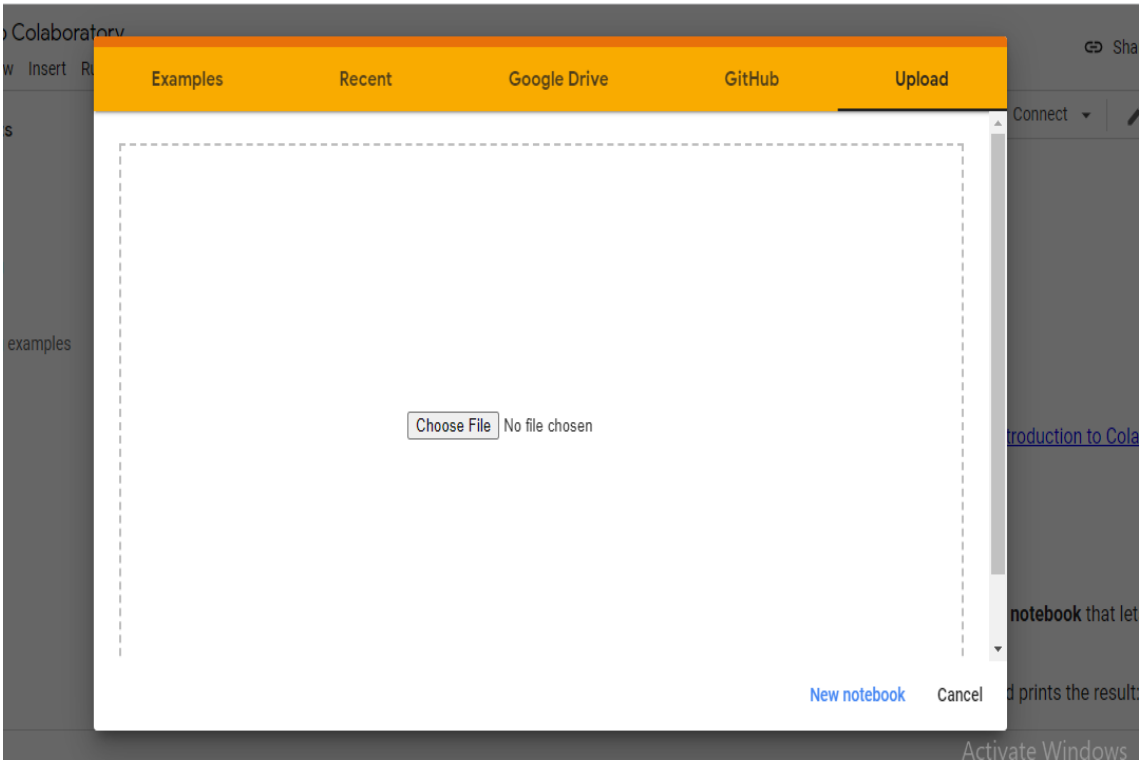


Figure 9: Google Colab Upload

Step 4 - After uploading ipynb files, we can view that files in recent tab.

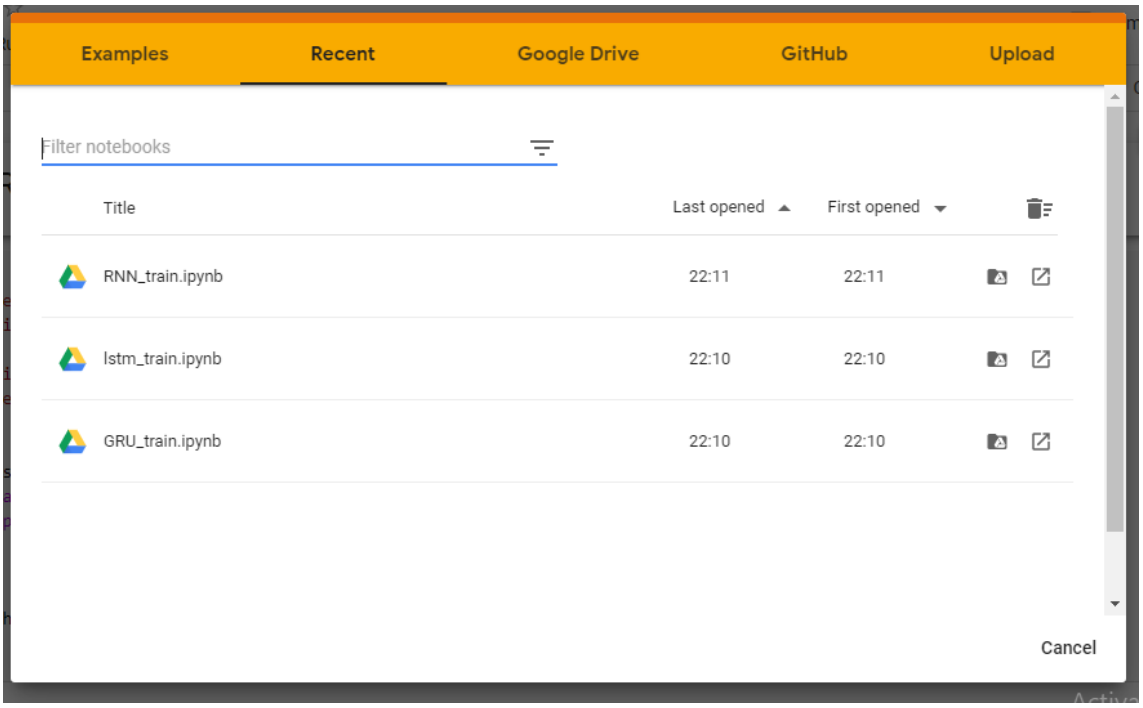


Figure 10: Google Colab Recent

Step 5 - Select the any of the deep learning algorithm. For the time I have selected GRU.

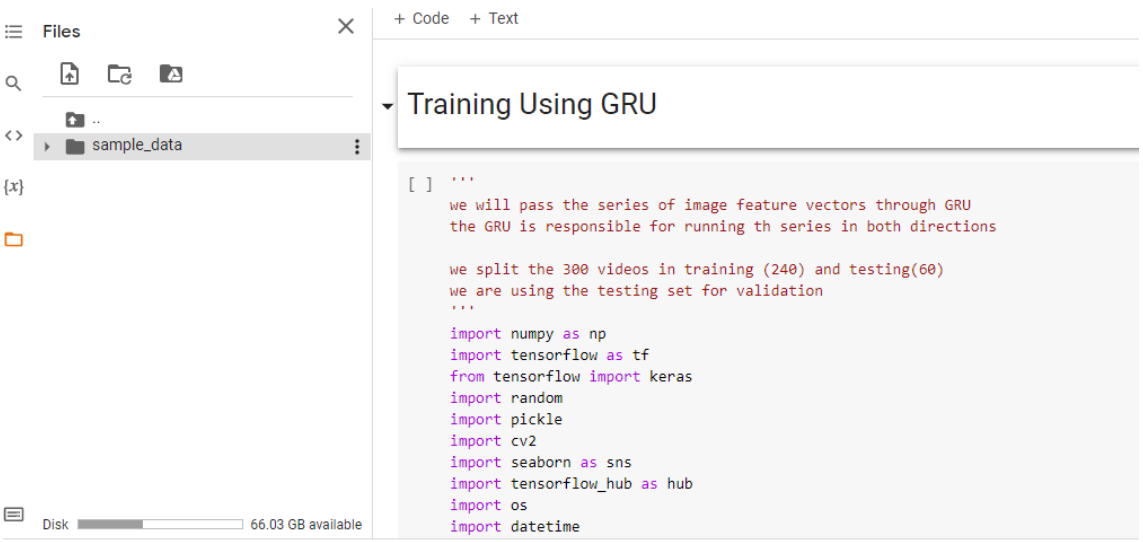


Figure 11: GRU

Step 6 - Select the Runtime which is located at top Left-Hand side. Which will drop down list. After that Select Change Runtime Type . Which will land to the following page.

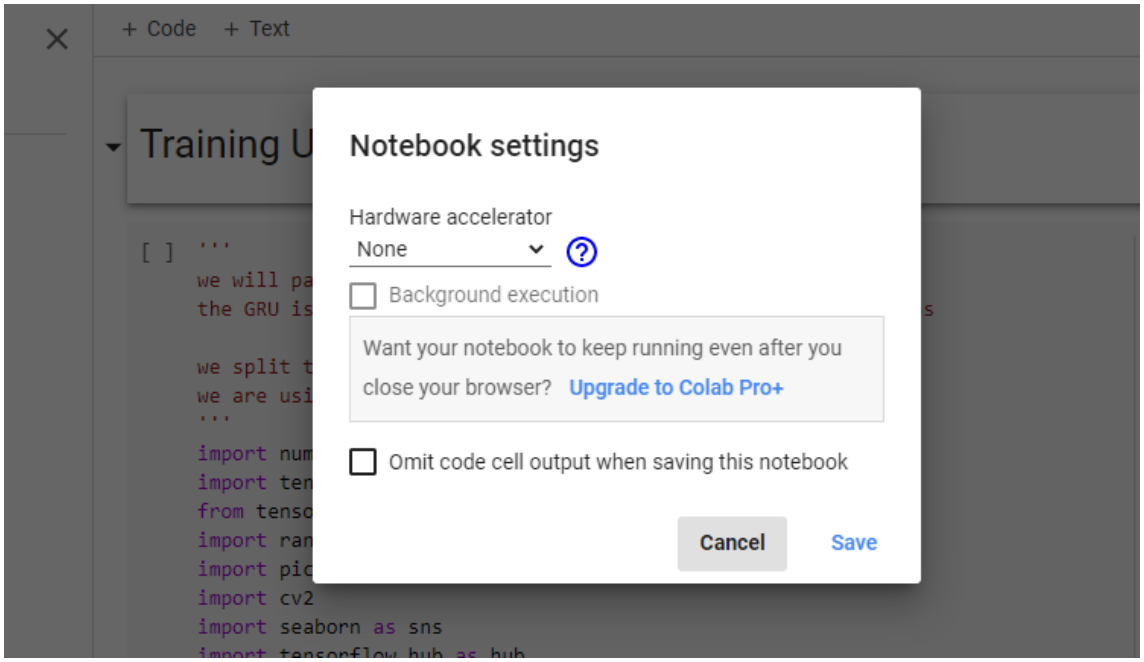


Figure 12: Runtime Setting

Step 7 - Select GRU for Hardware accelerator and Click on save button below.

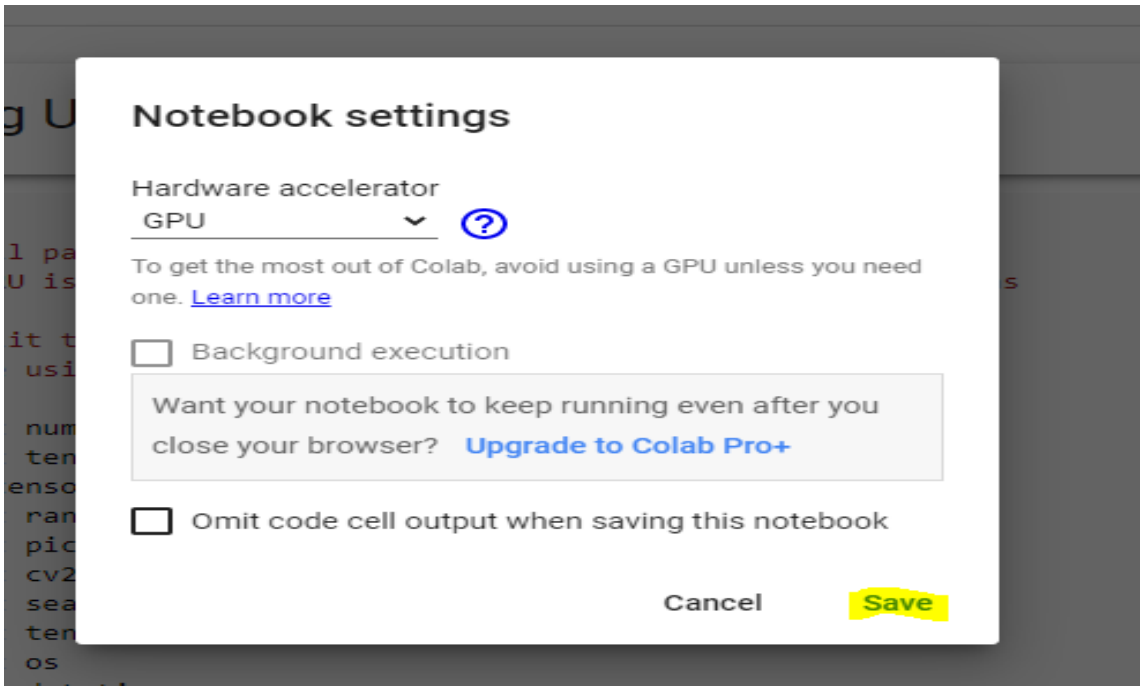


Figure 13: GRU Setting

Step 8 - Add dataset using the following step. Clicking on the location which the blue Arrow in the Figure below is showing will land you to navigate pkl files from the local machine, and We should add three pkl files named Dataset, Feature, Label.

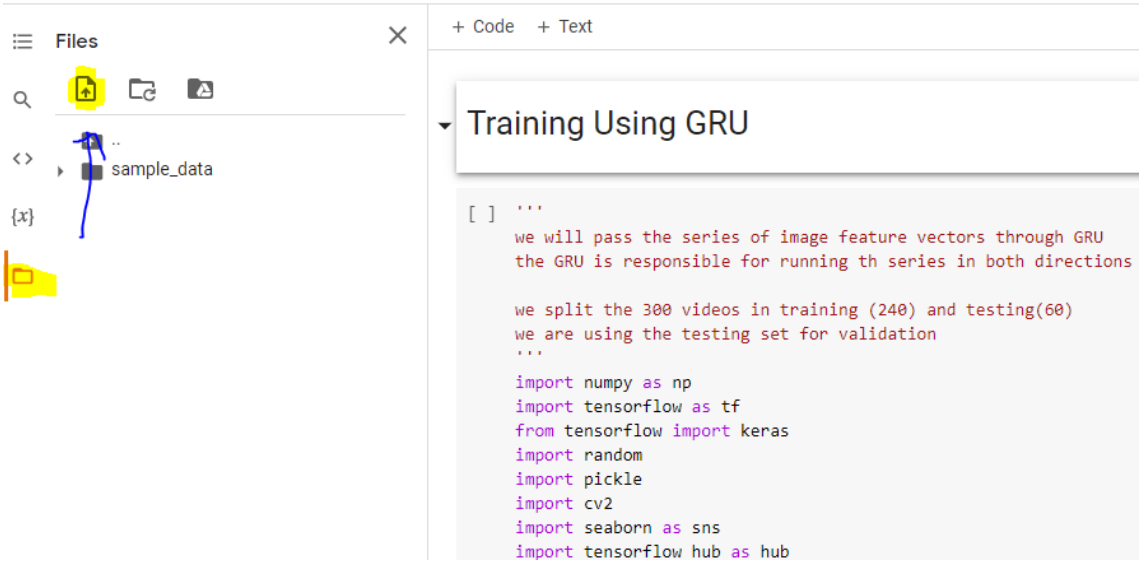


Figure 14: Add dataset Setting

Step 9 - After adding the Dataset files in Google Colab. You can View that files in the drop down below.

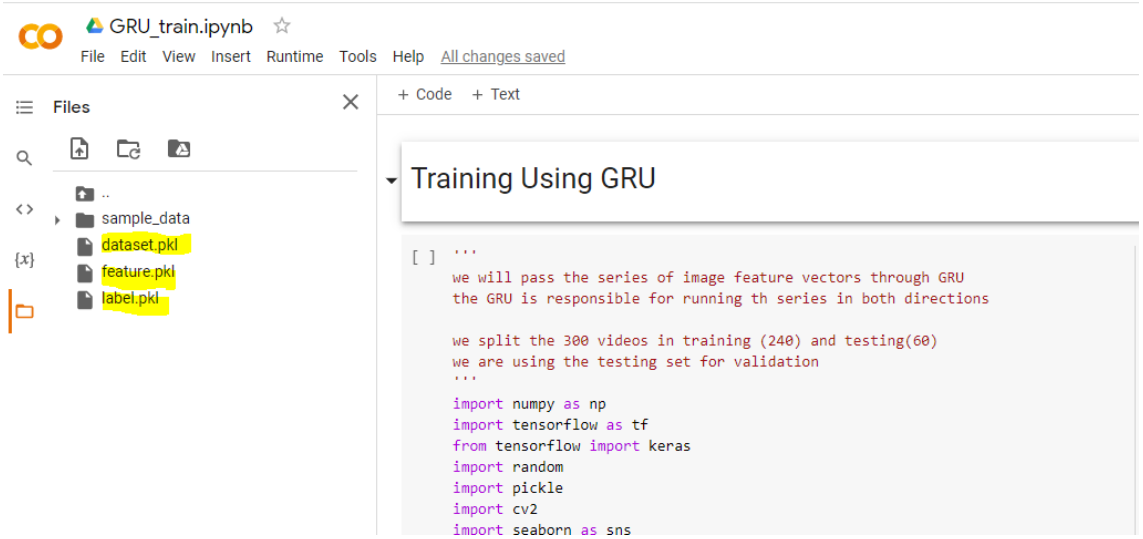


Figure 15: After adding dataset

Step 10 - After we can view the datasets which are mentioned in the figure above. Now We need to Run the Model . Follow the steps mentioned in the below figure.

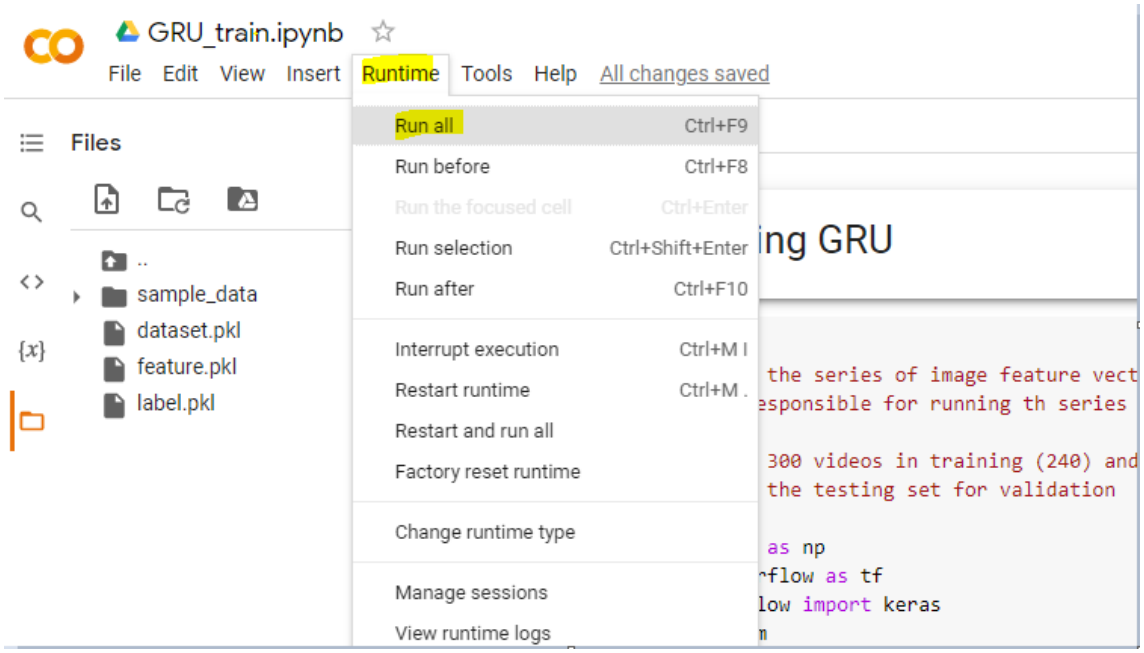


Figure 16: Run the model

Step 11 - Google Colab and GPU will run the model and provide us with the desired output. We can follow the same process in section 2 for other 2 models. At the end, We will choose the right model with more accuracy to implement in the following process. In the figure below we can see the output for GRU.

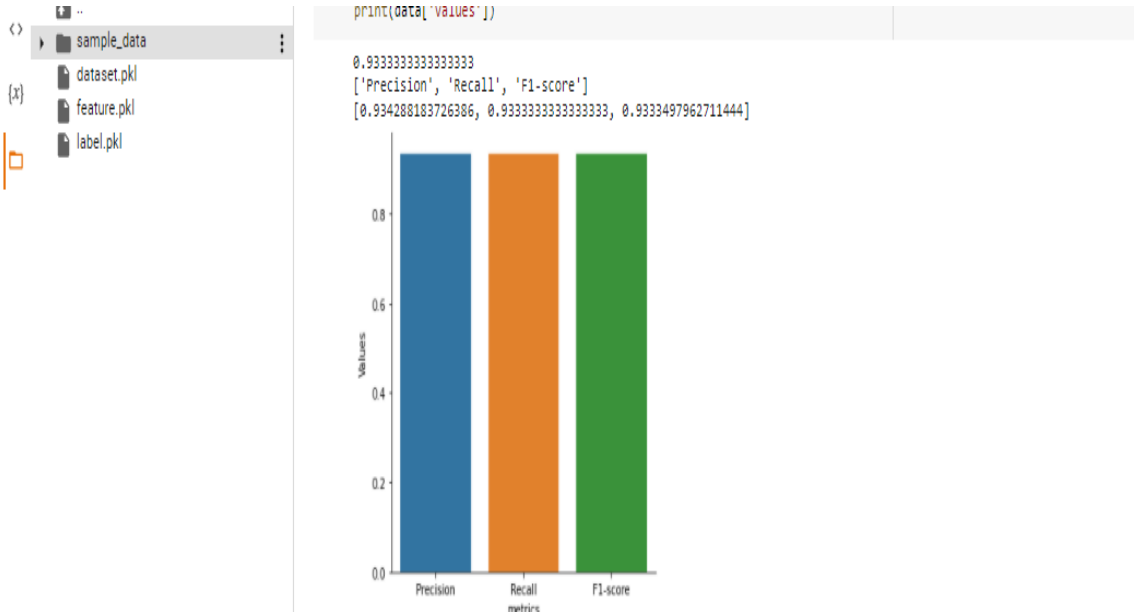


Figure 17: Output of the model

Step 12 - We can save the model to drive and Access it locally.

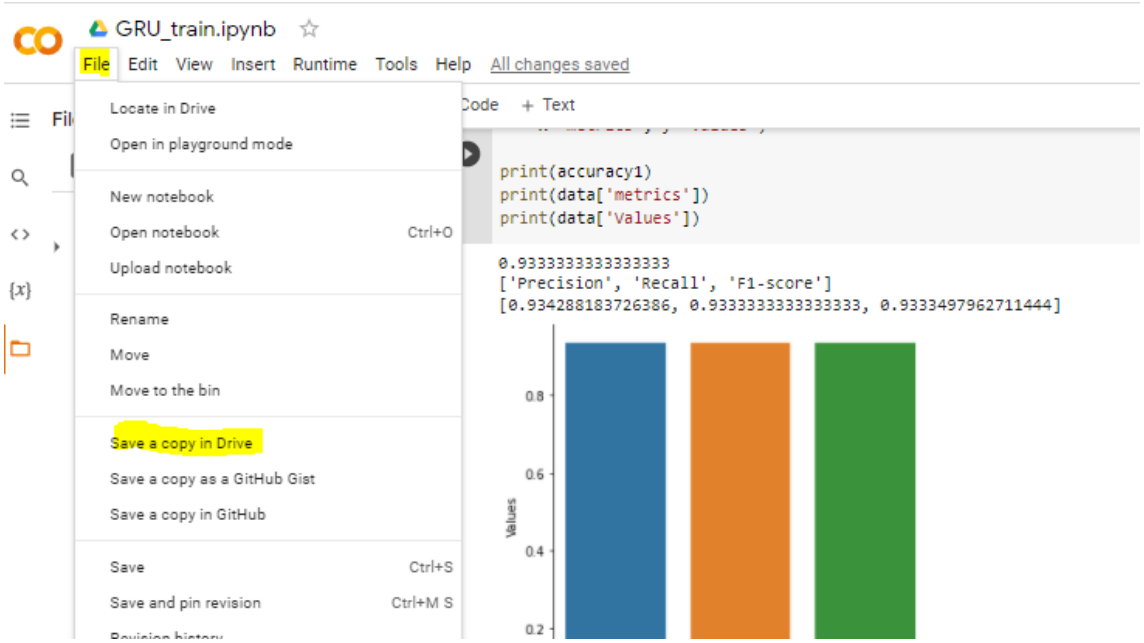


Figure 18: Save the model

# 3 Section 3

Step 1 - Using Google, Navigate and save some Fighting and non-fighting videos.

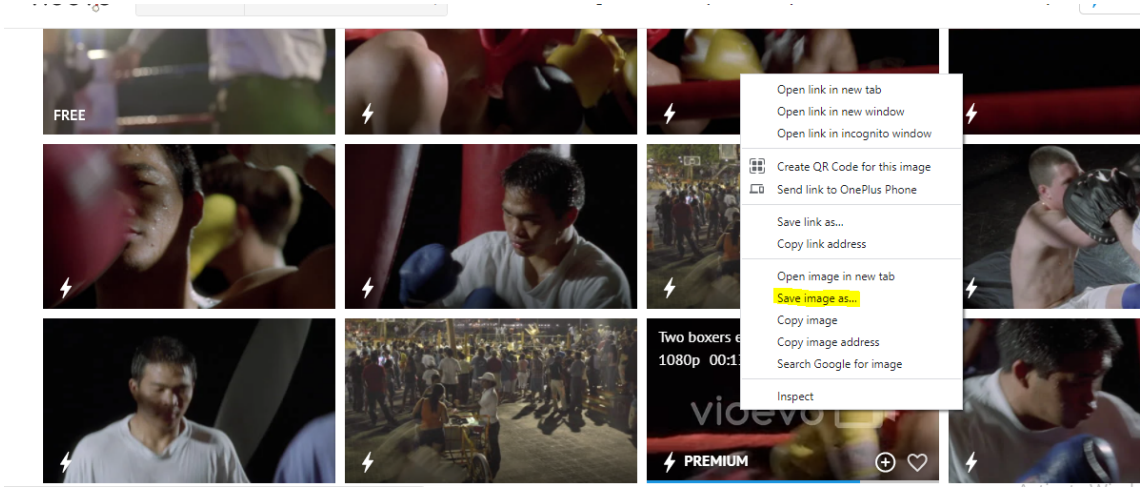


Figure 19: Navigate and save videos

Step 2 - Save the video within the folder of your code and Rename that mp4 file.

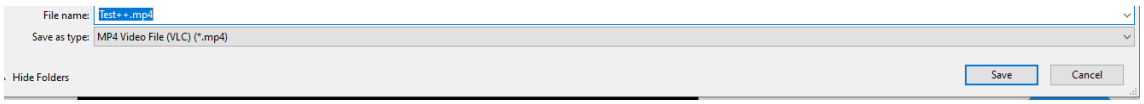


Figure 20: Rename the Video

Step 3 - Go to Terminal Again. Navigate the folder in the terminal.I have put in Example in the figure below.


Figure 21: Navigate folder from the terminal

Step 4 - Run the Demo.py file with the saved videos name at the end.


Figure 22: query to Run the Demo.py file

Step 5 - According the actions in the video, the output is given. As I have mentioned accuracy is 93


Figure 23: Final Output

Step 6 - System Specification

| | |
|---|---|
| Operating System | Windows 10 |
| GPU | NVIDIA Titan RTX |
| RAM | 32 GB |
| Hard Disk | 256 GB |
| Programming Language | Python |
| User Interface | Google Collab |
| Library Implemented | OpenCV, pandas, numpy, matplotlib, random, Keras, TensorFlow |

Table 2 : System Specification

# References