

In order to run and test the neural networks used, Google Colaboratory has to be used. The Code for this project is divided into 3 parts -

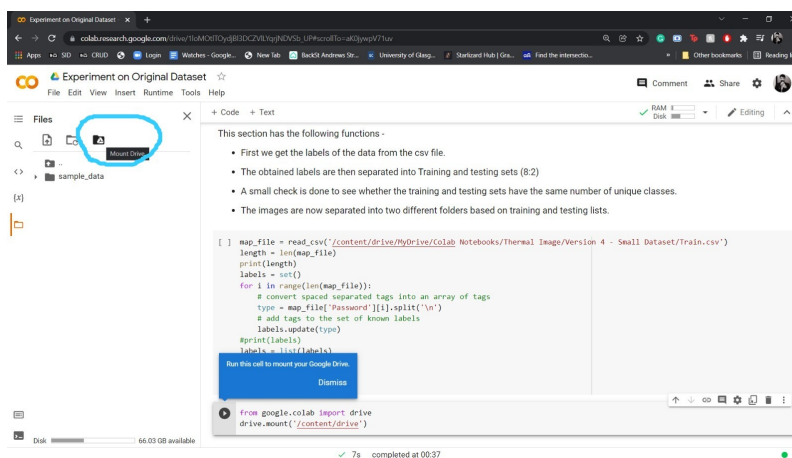
- Image Processing
- Deep Learning using Small Dataset
- Deep Learning using Actual Dataset

PART 1 - Image Processing (Run on Jupyter Notebook)

Instruction - This code can only be run once and this does not apply to the datasets used in this project. Those data have already gone through this process. As this is for one-time use only, a sample raw image has been provided and upon execution, the image changes can be seen in the original folder. Running this code multiple times would yield unusable thermal images.

Part 2 - Deep Learning using Small Dataset (Run on Google Colaboratory)

1. Upload the folder into Google Drive. Open the .ipynb file using Google Colab.
2. Hover over to the folder section and select Mount drive.



3. Upon Mounting google drive please select the relevant folder path for the following places -

- a. `map_file = read_csv('/content/Training.csv')` - Copy the path of the Training.csv file in Part 2.

- b.

```
train_dir = r'/content/drive/MyDrive/Colab Notebooks/Thermal  
Image/Training'  
test_dir = r'/content/drive/MyDrive/Colab Notebooks/Thermal  
Image/Training'
```

Please copy the path of the Image Folder from the Uploaded Folder in Google Drive onto both these lines (3rd box of Subpart 1 of Part 2). No other changes are required in

- c. Now you can run the code.

Part 3 - Deep Learning using Actual Dataset (Run on Google Colaboratory)

1. Please follow the same steps followed for the smaller output.