

LIST OF CONTENTS (SUBMITTED IN SUPPORTING MATERIAL)

1. **Dataset28x28.zip**: This is the **main dataset** that will be used to run the codes.
2. **Dataset300x300.zip**: This is the **secondary dataset only for visualization purpose** for the examiners as 28x28 pixels are very small. This dataset will not use anywhere.
3. **my_utils.py**: This is the **supporting python file** which need to uploaded in **Colab directory** to run the codes. This file is referenced and taken from ECS659U/ ECS659P - NEURAL NETWORKS AND DEEP LEARNING 2021/22 module from Queen Mary university of London.
4. **Vanilla_CNN_Cylinder_head_dataset28x28.ipynb**: This is the main coding file of Vanilla-CNN model. Dataset28x28.zip and my_utils.py files need to be uploaded in Colab directory to run this file. Examiners can access the file directly from below link.

<https://colab.research.google.com/drive/1yrDdTtsMvsyafpCixnCMZkoGqIGikTRY?usp=sharing>

5. **LeNet_model_Cylinder_head_dataset28x28.ipynb**: This is the coding file of LeNet model. Dataset28x28.zip and my_utils.py files need to be uploaded in Colab directory to run this file. Examiners can access the file directly from below link.

https://colab.research.google.com/drive/1aj_GF8_tL8OzypLsYjuRMCRTLhmtK8wn?usp=sharing

6. **Vanilla_CNN_FashionMnist_dataset.ipynb**: This is also a coding file of Vanilla model using FashionMnist dataset. This is done for checking model robustness. Only my_utils.py file needs to be uploaded in Colab directory to run this file. Examiners can access the file directly from below link.

https://colab.research.google.com/drive/1_kSeOnXYJ-8k8evPxsxejk-fdJEHnyMO?usp=sharing

7. **Data_Generator.ipynb**: This file is used to create the whole dataset. Data generator helps in augment the images by different zooms, flips and rotations.

<https://colab.research.google.com/drive/1bilwOH292NZDpbNnI9xIo5GPdaUmNCwM?usp=sharing>

8. **Executable.pdf**: This file contains instructions on how to execute the codes and upload the dataset.
9. **Sample Image URL**: Sample Image is taken from Luckparts.com with their approval. Link is given below:

[Motorcycle Cylinder Head for Moped Scooter 50cc GY6 Engine Chinese cylinder head assambly ATV GO-KART Dirt bike cylinder head | LUCKparts](#)