Code run steps:

1. Download the yolov5 as per the instruction given in Custom\_Object\_Detection\_using\_YOLOv5\_modified\_current.ipynb file.
2. Place the data.YAML file at the root directory
3. Place yolov5m\_modified.YAML file inside model folder of yolov5 folder
4. Place the yolov5m\_modified.pt inside yolov5 folder
5. Evolve the hyperparameters by defining fitness value inside the utils/metrics section and appending –evolve evolve the hyperparameters and output is saved in evolve.csv file.
6. Create 2 separate folders for train and test data.
7. Generate images using different feature extraction techniques.
8. Train the model as per the code given in Custom\_Object\_Detection\_using\_YOLOv5\_modified\_current.ipynb file.
9. Then generate the validated /predicted images and analyze the graphs using Tensorboard which is stored inside run section.