Run Instructions for Test Prediction:

1. Installations:
   I. Python 3
   II. Open terminal and pip install dependencies:
      a) Jupyter Notebook
      b) Numpy
      c) Pandas
      d) Tensorflow
      e) Keras
2. Download all the files and folders from git repository
   (https://github.com/SamNgu/grab-challenge-traffic)
3. Replace **test.csv** with your actual **test.csv** file
4. Ensure **coords_mapping.csv** is in current directory
5. Open terminal and run Jupyter notebook
6. Open '**3. Test_Prediction**' Notebook
7. Run the whole notebook from the top to bottom
8. Open **'prediction_output.csv'** from folder for evaluation

Run Instructions for EDA, Data Preprocessing, Model Training & Model Visualization :

1. Follow installations from previous steps, additional installations (using pip) are:
   a) Geohash
   b) matplotlib
2. Open '**1. Data_pre-processing**' Notebook
   a) Ensure **train.csv** is in current directory
   b) Run notebook from top to bottom
   c) Notebook will output the following files in the current directory to be used by the model training step:
      i. full_matrix.npy
      ii. train_matrix.npy
      iii. test_matrix.npy
      iv. coords_mapping.csv
3. Open '**2. Model_Train**' Notebook
   a) Ensure there is 'All_Trained_Models' and 'Top_20_Models' Folder inside the current directory as all the trained models will be output there
   b) Ensure files from the previous steps are in current directory
   c) Run notebook from top to bottom
   d) Notebook will output all the trained models in '**All_Trained_Models**' and the top 20 models into '**Top_20_Models**' Folder
4. Open '**4. EDA & Model Visualization**' Notebook
   a) Ensure all the above steps are done, this notebook is to mainly check the given training data and to visualize the output of the trained models, and whether or not it is training properly.
   b) Run notebook from top to bottom