README

The zip file contains **8 python scripts** present in the **code** folder and **7 files** present in the **data** folder

The 8 python scripts present in the code folder are mentioned as follows:

1) **AdaBoost.py**
2) **DecisionTree.py**
3) **NaiveBayes.py**
4) **LogisticRegression.py**
5) **feature_selection.py**
6) **heatmap.py**
7) **plot_predicted_test.py**
8) **theft_density_plot.py**

The 7 files present in the data folder are mentioned as follows:

1) **train.csv**
2) **test.csv**
3) **sf_map_copyright_openstreetmap_contributors.txt**
4) **logisticRegression_test.csv**
5) **naiveBayes_test.csv**
6) **decisionTree_test.csv**
7) **adaBoost_test.csv**

System Requirements:

- Python
- Sklearn
- Numpy
- Pandas
- Matplotlib
- Seaborn

Steps to compile and execute:

1) **AdaBoost.py**

   Place **train.csv** and **test.csv** on the same folder as the python script file

   Command to execute : python AdaBoost.py

   Output: adaBoost_test.csv

2) **DecisionTree.py**

   Place **train.csv** and **test.csv** on the same folder as the python script file

   Command to execute : python DecisionTree.py

   Output: decisionTree_test.csv

3) **NaiveBayes.py**

   Place **train.csv** and **test.csv** on the same folder as the python script file

   Command to execute : python NaiveBayes.py

   Output: naiveBayes_test.csv

4) **LogisticRegression.py**

   Place **train.csv** and **test.csv** on the same folder as the python script file

   Command to execute : python LogisticRegression.py

   Output: logisticRegression_test.csv

5) **feature_selection.py**

   Place **train.csv** on the same folder as the python script file

   Command to execute : python feature_selection.py

Output: 2 bar chart visualizations for district and days

6) **heatmap.py**

Place **train.csv** on the same folder as the python script file

Command to execute : python heatmap.py

Output: 4 heatmap visualizations

7) **plot_predicted_test.py**

Place **logisticRegression_test.csv, adaBoost_test.csv, naiveBayes_test.csv and decisionTree_test.csv** on the same folder as the python script file.

Command to execute : python plot_predicted_test.py

Output: 4 visualizations for predicted class on test dataset by each algorithm

8) **theft_density_plot.py**

Place **train.csv** and **sf_map_copyright_openstreetmap_contributors.txt** on the same folder as the python script file.

Command to execute : python theft_density_plot.py

Output: A density plot of theft crime in SF