

# Crime prediction and Analysis

→ Crime is the main issues which is growing continuously in intensity and complexity.

→ Crime types :

- \* Kidnapping

- \* Theft

- \* Murder

- \* Rape etc.

→ Factors of Crime :

- \* Poverty

- \* Employment affects

Methodologies :

→ K - Neighbour Classifier

→ Support Vector Machine

→ Decision Tree Classifier

→ Artificial Neural Network.

⇒ Predictive Modelling

Regression

Classification.

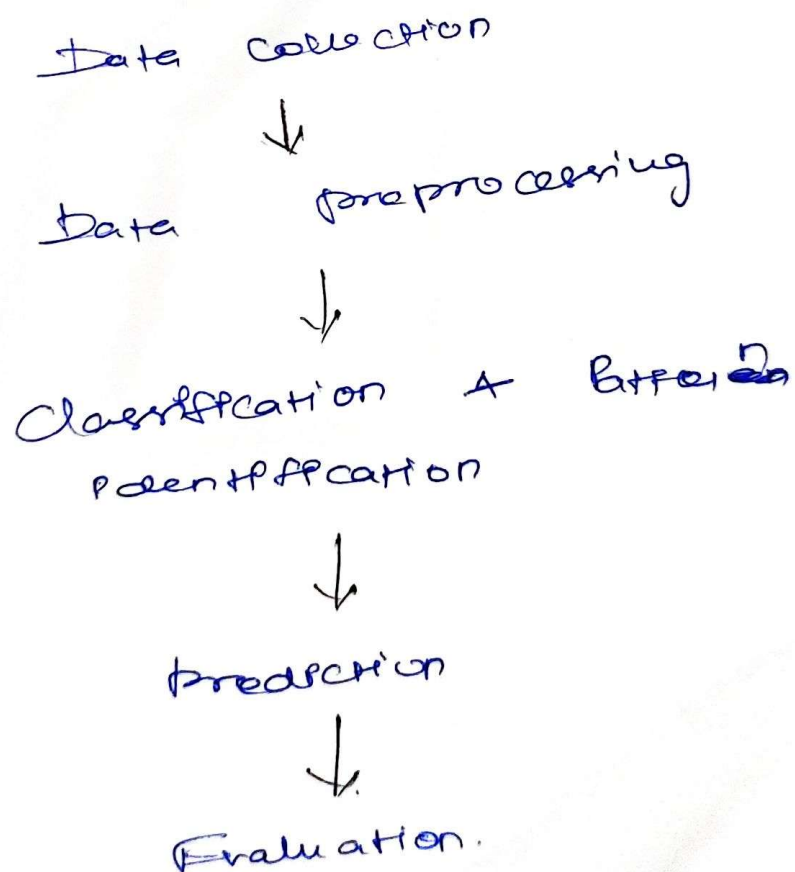
Regression:

→ based on analysis of the relationship that are present between two variables in order to make predictions about continuous variables.

Classification:

→ To assign a particular class labels to a data value as output of prediction.

⇒ Supervised Machine Learning.



## Data Collection :

→ Information is gathered from many sources to develop a Machine Learning Model. Eg: San Francisco city

ii) Data pre processing: → kaggle.com

→ To remove the infinite or null values from data which affects the performance of the Model.

→ Categorical attributes are converted into numeric value

Use Label Encoder.

iii) Training models:

→ Data splitted ratio of 80% for training & 20% for testing. Using sklearn.

iv) Model Evaluation and Metrics.

Metrics Used → accuracy

→ fbeta-score

- precision

## conclusion :

SVM - training time high } Not suitable  
MLP - Accuracy low }

Decision tree  
KNN  
Extra tree classifier } working best with optimal training and good accuracy.