In this project we will build an image classifier from scratch.

* Pre-processing
  + Choose dataset CIFAR 10 <https://www.cs.toronto.edu/~kriz/cifar.html>
  + Read dataset
  + Splitting into training/validation/test
* Feature extraction
  + Local VS Global features
    - Extract features from whole image or blocks
  + Extract different types of image features
    - Colour Histogram RGB
    - Edge Histogram
    - Block based
    - DCT
    - LBP
    - HoG
    - Haar
    - SIFT
    - Implement Data Augmentation
* Build the classifier
  + K-Nearest Neighbour
  + Logistic Regression
  + Implement Neural Network from scratch
* Evaluate and compare performance of the different classifiers implemented
  + implement Precision, Recall, F1-score
  + Draw Precision/Recall curves / ROC curve etc
* Create GUI for user to interact with system

CIFAR-10 and CIFAR-100 datasets