**ASSIGNMENT:1**

Use classic [Auto MPG](https://archive.ics.uci.edu/ml/datasets/auto+mpg) Dataset and builds a model to predict the fuel efficiency

### 1) Get the data

### First download the dataset form <https://archive.ics.uci.edu/ml/datasets/auto+mpg>

### ﻿column\_names = ['MPG','Cylinders','Displacement','Horsepower','Weight',

### 'Acceleration', 'Model Year', 'Origin']

2) Clean the data (The dataset contains a few unknown values)

﻿#simple drop those rows.

3) The "Origin" column is really categorical, not numeric. So convert that to a one-hot:

### 4) Split the data into train and test

### 5) Split features from labels

### Separate the target value, or "label", from the features. This label (MPG) is the value that you will train the model to predict.

### 6) Normalize the data

### 7) Build the model

### 8)Train the model

Train the model for 1000 epochs, and record the training and validation accuracy in the history object.

9) Visualize the model's training progress using the stats stored in the history object.

1. Epoch vs mean\_absolute\_error
2. Epoch vs mean\_squared\_error

### 10) Make predictions

Predict MPG values using data in the normalized testing set and plot error.