## Project Description:

The following project aims to predict mileage per gallon(mps) using various technical specifications (features) as input to the regression algorithms.

## Database Description:

The data is technical spec of cars. This dataset is a slightly modified version of the dataset provided in the StatLib library. In line with the use by Ross Quinlan (1993) in predicting the attribute "mpg", 8 of the original instances were removed because they had unknown values for the "mpg" attribute. The original dataset is available in the file "auto-mpg.data-original".

"The data concerns city-cycle fuel consumption in miles per gallon, to be predicted in terms of 3 multivalued discrete and 5 continuous attributes." (Quinlan, 1993)

Number of Instances: 398

Number of Attributes: 9 including the class attribute

## Attribute Information:

mpg: continuous cylinders: multi-valued discrete displacement: continuous horsepower: continuous weight: continuous acceleration: continuous model year: multi-valued discrete origin: multi-valued discrete car name: string (unique for each instance) Missing Attribute Values: horsepower has 6 missing values

## Libraries Involved:

1. pandas

2. Numpy

3. Seaborn

4. Matplotlib

## Steps Involved:

1. Importing the libraries

2. Loading the dataset

3. Data Preprocessing

4. Study Correlation

5. Univariate Analysis

6. Bivariate Analysis

7. train and test data split

8. Building the model

## Machine Learning Steps Involved

1. Linear Regression

2. Polynomial Regression