Assignment 1 - Distribution Analysis

# Introduction

In this assignment, the correlations between **Fuel Economy** and a few other parameters in the *CarsDB* dataset are better understood. The assignment is divided into three parts, each discussing one of the following relationships:

1. Fuel efficiency vs engine displacement
2. Fuel efficiency vs gross horsepower
3. Fuel efficiency vs weight of the car

**Question 4** of the assignment will be answered next to each of these graphs.

Question 4:

a. Identifiable Trends for each of the three scatterplots  
b. Any anomalies that you see for each of the three scatterplots

# Question 1: Construct a scatterplot with smoothing for ‘mpg’ vs. ‘disp’

Answer 4a:

The fuel efficiency and engine displacement seem to have a negative correlation. As the displacement increases, the fuel efficiency decreases.

# Question 2: Construct a scatterplot with smoothing for mpg vs. hp

# Question 3: Construct a scatterplot with smoothing for mpg vs. wt