**HW 4:** Shiny Project

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**Motivation:**

The motivation for the dashboard was to get experience summarizing data in multiple ways. I have used the *mtcars* data set from the *datasets* package for past assignments too when all that was needed was to create a ggplot. This time, using Shiny dashboard, along with ggplot and plotly, I was better able to communicate the data to users.

**Objective:**

The objective of the dashboard is to show the relationship between a car’s weight and fuel efficiency, measured in miles per gallon.

**Optionality:**

The dashboard gives the user the option to filter in or out three weight classes of vehicles (light, medium, and heavy). The user can also collapse each block of the dashboard.

**Reasoning:**

The point plot and smoothing spline was used to illustrate the clear relationship between these two variables of interest. Without having to look at any data, the user can quickly see this relationship. The table of values was also used in the dashboard so that a user looking at the plot can answer some relatively simple questions they might have. Questions such as: what’s the average weight of “heavy” cars, what’s the relationship between weight and other vehicle characteristics. In addition, this plot does a fair job at providing a summary of the data set.