**Data Wrangling Challenges**

**Exercise 1: Working with Existing Data Sources**

**Description:** You work for a car manufacturer and gas prices are on the rise, with no end in sight. The business stakeholders are wanting to make more fuel-efficient models but don’t know what factors contribute to that metric. Your objective is to create a multiple regression model using existing public data to get some answers.

**Steps:**

1. Read Documentation
2. Gather Data
3. Identify Possible Features
4. Build Regression Model
5. Eliminate Features that have a p-value greater than 0.05.
6. **What features have a significant impact on a vehicle’s MPG?**

**Exercise 2: Working with External Data Sources**

**Description:** The stakeholders were impressed by your initial model, though are interested in more modern vehicles. Use the Cars API from APINinjas.com to create a linear regression model predicting the MPG on modern popular vehicles.

**Steps:**

1. Go to **api-ninjas.com** and create an account.
2. Go to your Account Dashboard and get your API key.
3. Open the “API\_extraction” Jupyter notebook and replace the placeholder text with your key.
4. Run the pipeline and make sure the new CSV file was created.
5. Go to the APIDataModel Jupyter notebook and run the model with the new data.
6. **What features have a significant impact on a vehicle’s MPG?**