# Exploratory Data Analysis (EDA)

## Objective

This exercise is designed to help you apply data visualization skills in Exploratory Data Analysis (EDA) to discover patterns, trends, and relationships within a dataset.

## Instructions

This exercise is open-ended, allowing you to explore and experiment with different analysis techniques based on your learning from LMS videos. Use the techniques and examples provided in your videos as guidance, but feel free to go beyond them as you uncover new insights.

## Dataset

* **Dataset Name**: Car Dataset
* **Dataset Link :** - [Car dataset](https://drive.google.com/file/d/1_Ofk4uVus47oYK8dAqKHKgH1on5yEGxE/view?usp=sharing)

## Tasks

### 1. Data Inspection and Summary Statistics

Load the dataset and examine its structure (e.g., columns, data types, and any initial observations). Generate summary statistics to understand key features of the data.

### 2. Data Cleaning

Refer to the previous exercise for completed methods on handling missing values and outliers. This step ensures data consistency by addressing any gaps or extreme values

### 3. Univariate Analysis

Visualize individual variables to understand their distribution (e.g., histograms for numerical data, bar charts for categorical data). Make notes on any unique features or trends you observe.

### 4. Bivariate and Multivariate Analysis

Explore relationships between variables by visualizing pairs of variables or groups of variables (e.g., scatter plots, heatmaps). Document any significant patterns or correlations that emerge from your analysis.