

PROBLEM STATEMENT

The automotive industry faces a critical challenge in optimizing sales and customer satisfaction, necessitating a comprehensive understanding of market dynamics. Despite possessing a rich dataset encompassing sales, customer preferences, fuel efficiency, pricing, safety features, and market trends, the lack of a unified strategy impedes the identification and capitalization on potential opportunities. The key issues include the absence of a clear picture regarding the best-selling car models, an incomplete grasp of customer preferences, an unexplored correlation between fuel efficiency and sales, a vague understanding of price sensitivity's impact, and a deficiency in comprehending the interplay of safety and features on customer satisfaction. Addressing these concerns is paramount for the industry to refine its marketing, production, and innovation strategies, ensuring sustained growth in a dynamic market.

OBJECTIVES

The objective of this project is to undertake an inclusive analysis of car sales data set to provide insights into overall sales performance, customer preferences, fuel efficiency impact, price sensitivity, safety features' influence, and market trends.

KEY INSIGHTS:

a) Overview

This project provides an overview of the cars data set by defining the best car make and car model by sales and by units sold.

b) Sales Performance Analysis

- Understand the overall sales performance
- Identify the best-selling car models
- Explore trends over the year

c) Customer Preferences Analysis

- Undertake an analysis of customer preferences by examining the popularity of different car models, makes, body types, and colors.

d) Analysis of Impact of Fuel Efficiency

- Examine the correlation between fuel efficiency (mileage) and sales figures
- Identify fuel-efficient models that attract more customers.

e) Price Sensitivity Analysis

- Define the impact of pricing on sales
- Analyse the relationship between car prices and customer ratings in order to understand whether high-priced models result into improve customer satisfaction.

f) Analysis of Impact of Car Features

- Assess the effect of the following features on customer ratings and sales performance:
 - safety features
 - entertainment features
 - overall car features

g) Market Trend Analysis

- Identify market trends by analyzing the popularity of various car models over the years
- Investigate whether there are body types or fuel types are gaining traction in the market

METHODOLOGY

SQL, CSV Dataset, MySQL Workbench