Exploratory Data Analysis (EDA) on Automobile Dataset

# Introduction

This document provides a summary of the Exploratory Data Analysis (EDA) conducted on an automobile dataset. The analysis aimed to uncover patterns and insights about car prices, engine specifications, fuel types, and more. The results have been shared in a human-readable format suitable for professional platforms such as LinkedIn.

# Key Highlights

* • Data Cleaning: Missing values were handled, data types corrected, and the dataset was preprocessed for analysis.
* • Top Variables Studied: Price, horsepower, engine size, fuel type, car make, and body style.
* • Price Trends: Larger engines and higher horsepower typically resulted in higher car prices.
* • Fuel Efficiency vs. Price: Cars with better fuel economy were generally more affordable.
* • Car Makes: Luxury brands like BMW and Mercedes-Benz topped the price range, while Toyota and Honda offered cost-effective alternatives.
* • Body Styles: Sedans dominated the dataset, with convertibles and hatchbacks showing distinct price characteristics.
* • Correlations Found: Strong positive relationships between engine size, horsepower, and price.

# Skills Applied

* • Data cleaning and preprocessing
* • Visualizations using Seaborn and Matplotlib
* • Correlation heatmaps and scatter plots
* • Insight generation and storytelling with data

# Tools Used

* • Python (Pandas, Matplotlib, Seaborn)
* • Jupyter Notebook

# Conclusion

This EDA project provided a solid foundation for understanding key factors influencing automobile prices and performance. It also offered hands-on practice with Python libraries and data storytelling, reinforcing essential data science skills.