Project Summary and Business Conclusions

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Project Overview

This project involves analysing car mileage, dimensions, sales data, and customer demographics to derive business insights and conclusions. The analyses were conducted using various statistical methods and visualizations to understand patterns and trends in the data.

Data Sources and Methodology

Data Sources

- Car specifications and mileage data
- Sales and customer demographic data

Methodology:

- Data cleaning and preprocessing
- Statistical analysis
- Visualization
- Interpretation of results

Key Findings - Course 4 Project 1

- Renault performs well in city conditions, while Hyundai is more efficient on highways.
- Premium brands like Aston Martin, Bentley, and BMW have larger dimensions, catering to a premium market.
- Significant correlation between car weights and their dimensions.

Mileage Analysis

Mean City Mileage

Median City Mileage
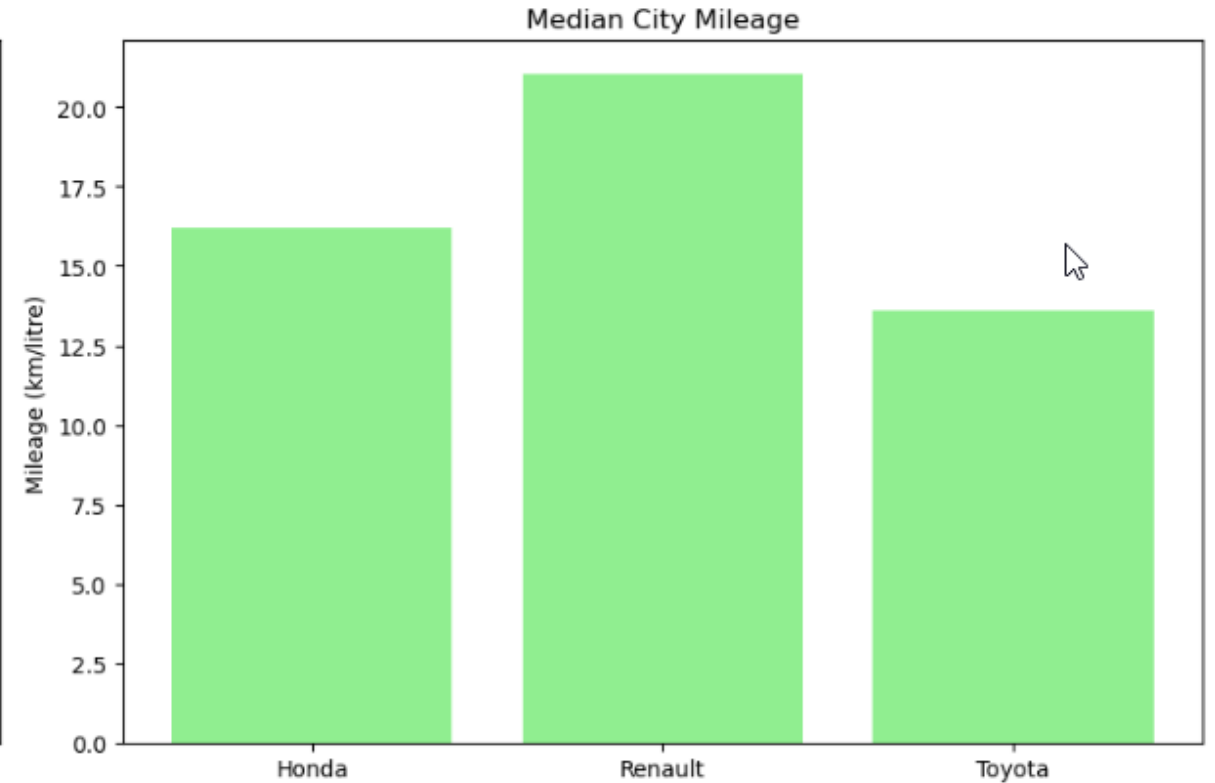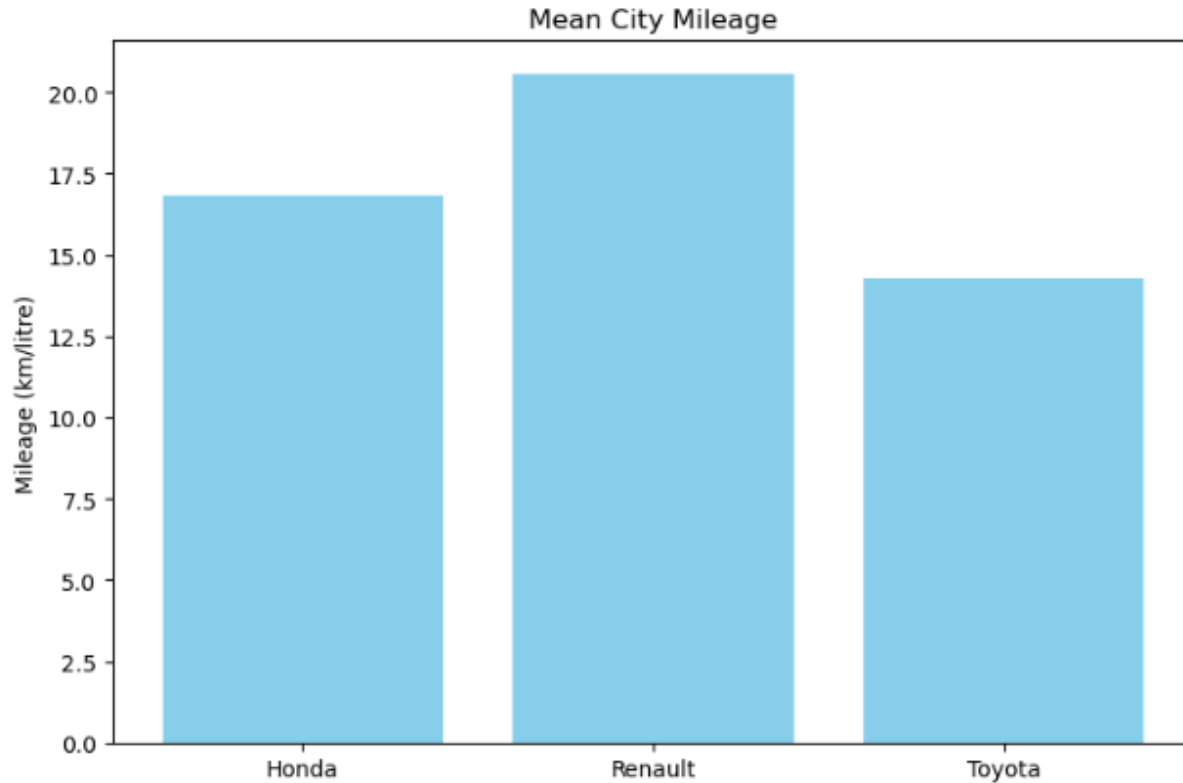
- Renault has the highest city mileage, making it suitable for urban customers.
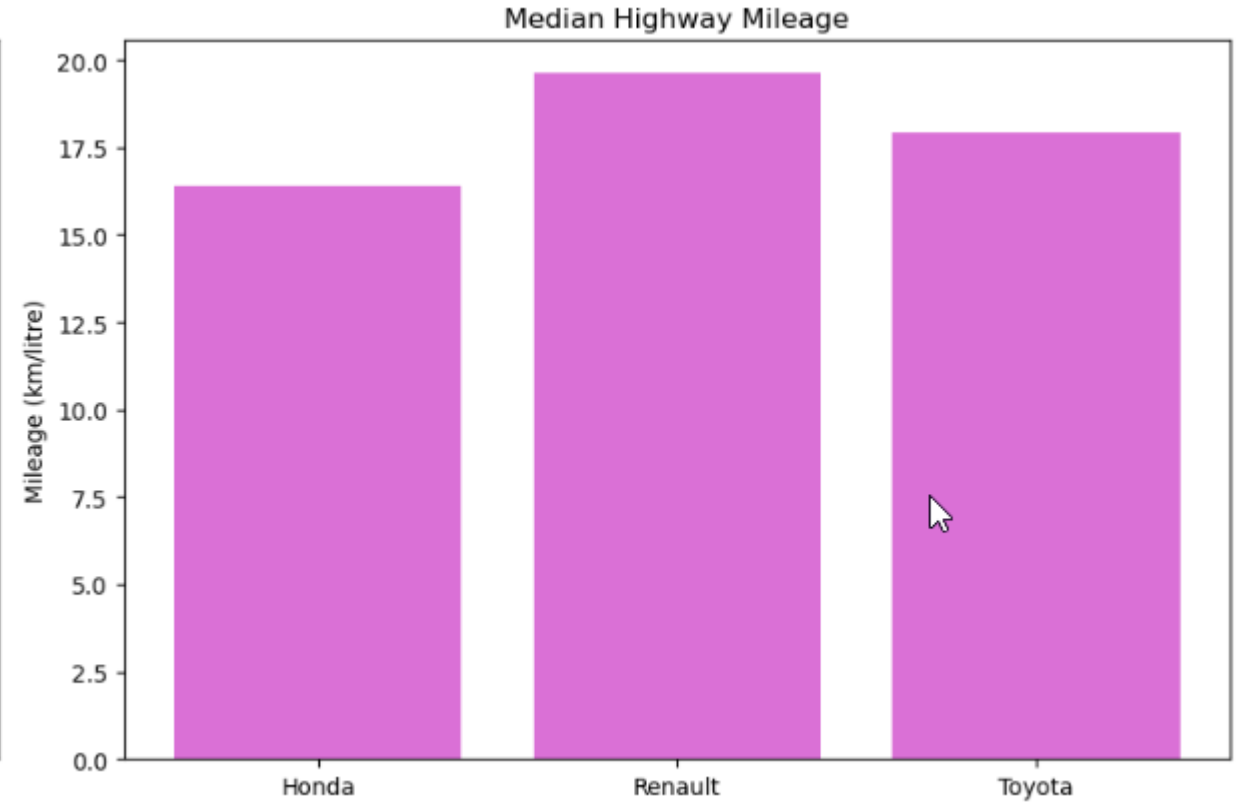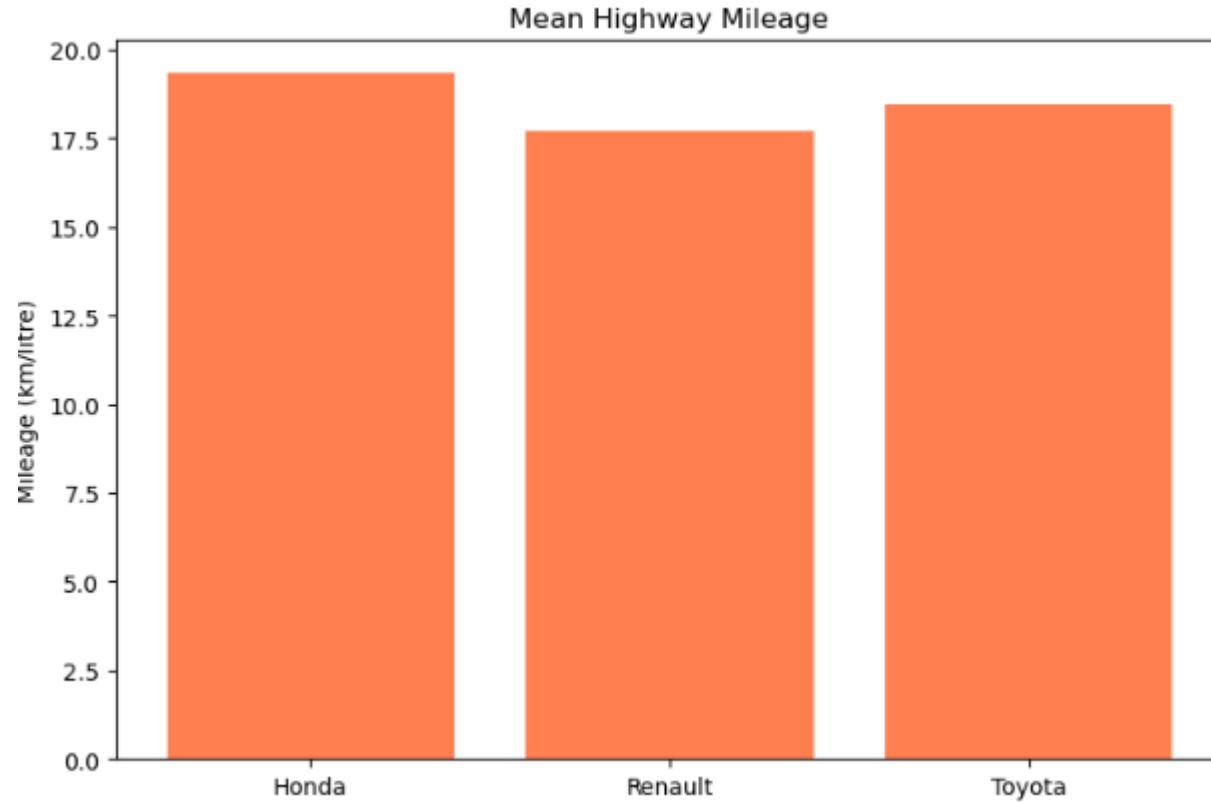
- Hyundai's highway mileage is the highest, appealing to long-distance travelers.

Weight and Dimensions Analysis

- Premium brands have larger heights, lengths, and widths, catering to the luxury market.
- Compact brands focus on city-friendly models with smaller dimensions.

Correlation Analysis

- Strong correlation between car weights and dimensions.

- Larger cars tend to be heavier, indicating a trend towards more spacious and feature-rich models.

Key Findings - Course 4 Project 2

- Sales data analysis reveals trends and opportunities for targeted marketing.

- Customer demographic insights aid in personalized marketing strategies.

- Identifying top-performing products helps in inventory optimization.

Sales Analysis

- Certain months and seasons have higher sales volumes.

- Potential for targeted marketing campaigns during peak times.

- Preparation for peak seasons can boost sales.

Customer Demographics

- Analysis of age groups, income levels, and preferences.

- Development of personalized marketing strategies.

- Improved customer engagement and sales through targeted campaigns.

Product Performance

- Identification of top-performing products.

- Opportunities for inventory optimization.

- Focus on promoting high-performing products while managing lower-performing ones.

Business Conclusions

- Renault should market its superior city mileage for urban customers.

- Hyundai can leverage its highway efficiency to attract long-distance travelers.

Business Conclusions

- Premium brands should focus on luxury and spacious models.

- Compact brands should highlight city-friendly features.