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Data analysis for electric vehicles

Project week#3

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1- Findings from the exploratory data analysis:

Growth of Electric Vehicles: The analysis revealed a consistent increase in the number of electric vehicles over time, indicating a growing adoption and popularity of electric vehicles. This trend signifies a shift towards more sustainable transportation options.

Efficiency and Electric Range: The scatter plot comparing the model year and electric range highlighted a positive correlation between newer models and higher electric ranges. This suggests advancements in battery technology and improved efficiency in electric vehicles over time.

Variation Across Vehicle Makes and Types: The analysis allowed for exploration of variations in efficiency and electric range across different vehicle makes and types. This provided insights into the performance characteristics and offerings of various electric vehicle brands and types.

Outliers and Anomalies: The scatter plot helped identify outliers or anomalies in the data, representing electric vehicles with exceptionally high or low electric ranges. Further investigation into these outliers can provide insights into unique technological advancements or limitations.

2- Insights and patterns observed in the data:

Technological Advancements: The consistent growth in the number of electric vehicles and the positive correlation between model year and electric range indicate ongoing technological advancements in the electric vehicle industry. This suggests that newer models are likely to offer improved efficiency and longer electric ranges.

Market Competition: The variations in efficiency and electric range observed across different vehicle makes and types indicate a competitive landscape within the electric vehicle market. This competition can drive further improvements in technology and provide consumers with a wider range of options to choose from.

Consumer Considerations: The analysis underscores the importance of consumer considerations when selecting an electric vehicle. Factors such as electric range, efficiency, and brand reputation play a crucial role in decision-making. Consumers

should be educated about the variations in electric range and efficiency across different makes and types to make informed choices aligning with their needs.

3- Recommendations based on the analysis conducted:

Promote Electric Vehicle Adoption: To further accelerate the transition to sustainable transportation, it is recommended to continue promoting and incentivizing the adoption of electric vehicles. This can be achieved through government policies, incentives, and public awareness campaigns.

Support Technological Advancements: Encourage research and development in battery technology to improve the efficiency and electric range of electric vehicles. This will help alleviate range anxiety concerns and increase consumer confidence in electric vehicles.

Consumer Education: Educate consumers about the variations in efficiency and electric range across different electric vehicle makes and types. This will enable potential buyers to make informed decisions based on their specific needs and preferences, fostering a better understanding of the available options.