🚗 Automotive Fuel Economy Analysis 🚗

I recently delved into a fascinating dataset containing fuel economy information for 398 cars sold in the US during the 1970s and 1980s. This treasure trove of data provides valuable insights into the trends and correlations surrounding automotive fuel efficiency.

Key Findings:

⿡ Trend Analysis: Examining the fuel economy trends over the years (1970-1982), we observe a consistent increase in miles per gallon (mpg). This upward trajectory signifies a positive evolution in fuel efficiency standards across the automotive industry during this period.

⿢ Correlation Insights:

Horsepower: There exists a notable inverse correlation between horsepower and fuel economy. As horsepower increases, mpg tends to decrease, indicating that higher-powered vehicles typically consume more fuel.

Weight: Similarly, we find a negative correlation between vehicle weight and fuel economy. Lighter vehicles demonstrate higher mpg figures compared to their heavier counterparts.

Top Performing Brands: Analyzing the data, we identify the top 6 brands associated with the best fuel economy: Nissan, Triumph, Honda, Renault, Volkswagen, and Datsun.

Acceleration Variation: Slicing the data by acceleration, we unveil diverse trends in fuel economy, showcasing the nuanced relationship between acceleration and mpg.

⿣ Origin Disparities:

There is a discernible difference in fuel economy based on the origin of the cars produced. Cars originating from the third category exhibit the highest mpg figures, followed by those from the second and first categories.

Further exploration reveals distinct characteristics among cars manufactured in each origin category, with varying cylinder configurations and weight distributions contributing to these differences.

This analysis underscores the multifaceted dynamics influencing automotive fuel economy, providing valuable insights for industry stakeholders and policymakers alike.

Let's drive towards a more fuel-efficient future! 🌿🛣