



REPORT ON THE ANALYSIS OF AUTOMOTIVE INDUSTRY

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AGENDA



Introduction



Key Findings



Correlation
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Key Insights



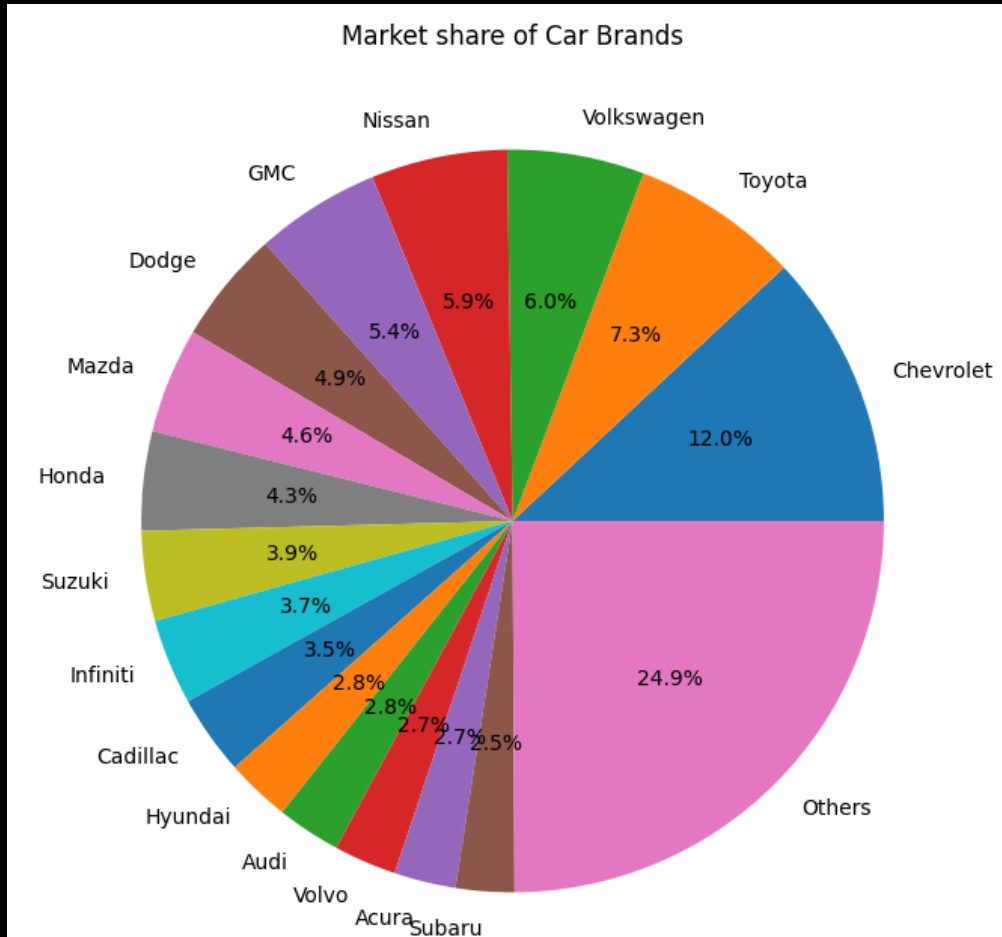
Recommendations

Introduction

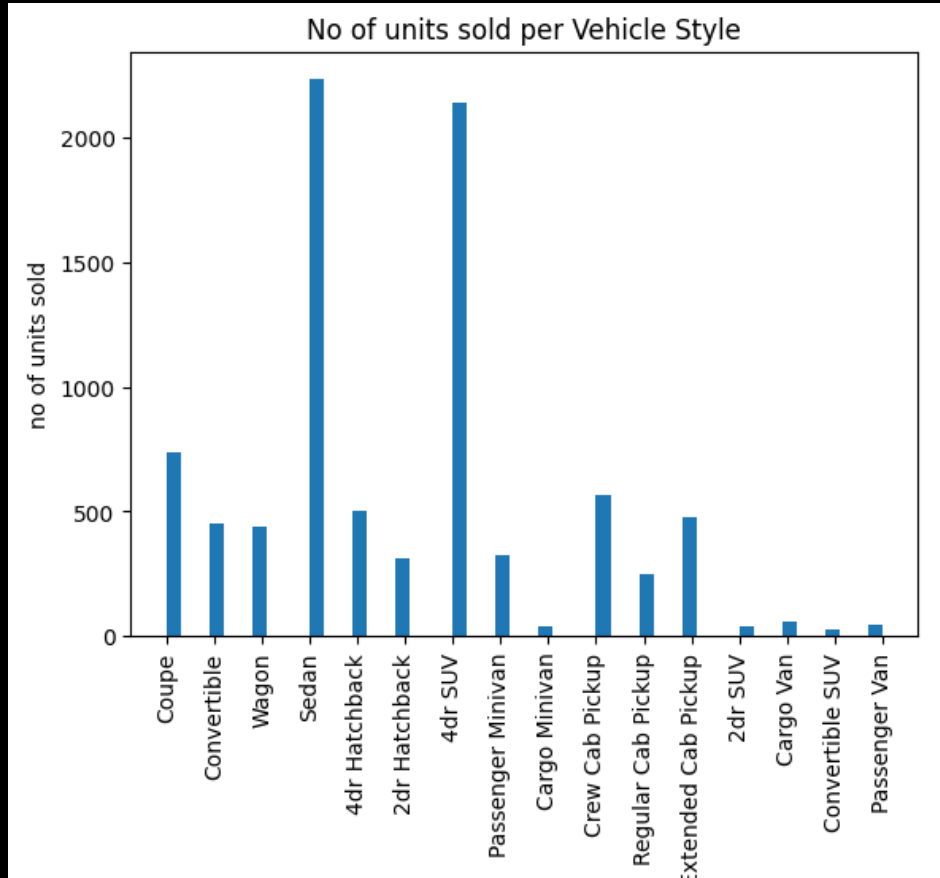
- In today's rapidly evolving automotive landscape, data-driven decision-making is no longer a choice, but a necessity. This report offers a deep dive into years of automotive data, focusing on crucial elements like car brands, vehicle styles, pricing trends, and their interactions. Through advanced data analytics and machine learning, we extract actionable insights to guide strategic decisions and shape a promising future for the automotive industry.
 - Our journey begins with a snapshot of the data, unveiling leading brands and evolving consumer preferences. We then dissect pricing dynamics to reveal hidden patterns for informed pricing strategies. Additionally, we present a machine learning model predicting car prices based on attributes, providing a glimpse into data-powered decision-making.
 - Our mission is to provide a comprehensive view of today's automotive landscape, along with actionable recommendations. Join us in navigating the automotive market, uncovering insights that drive success, and propelling the industry into a future defined by data and innovation.
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Key Findings (Popular Car Brands)

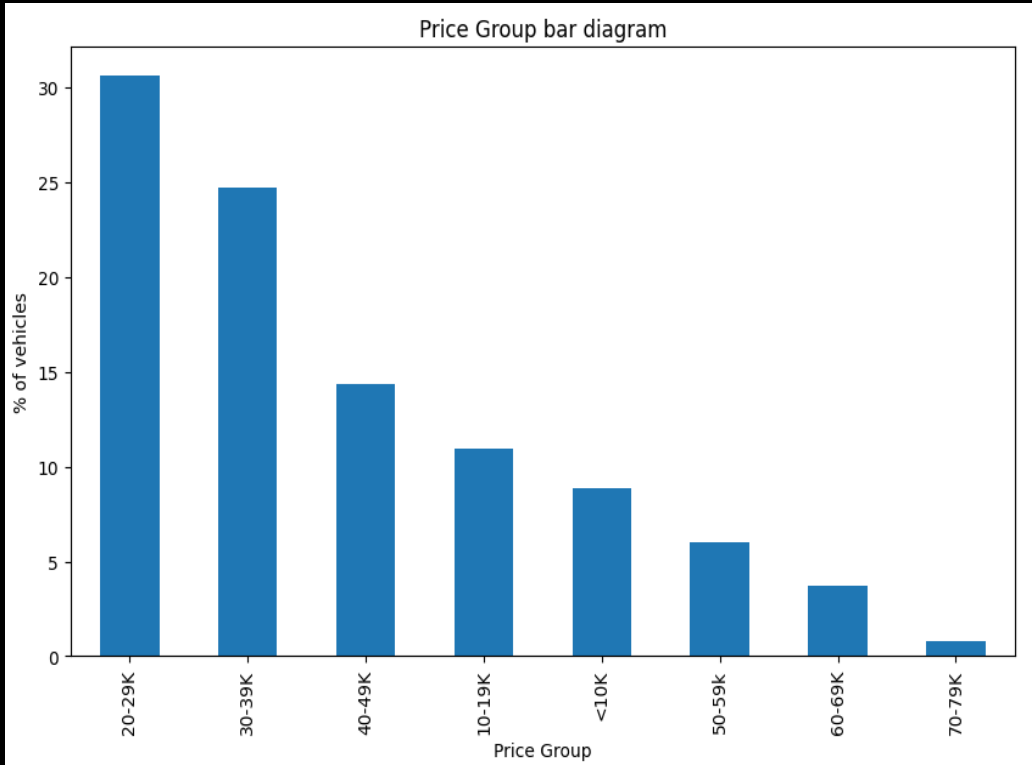


- The analysis reveals that Toyota, Honda, and Ford are the most popular car brands in the dataset, capturing a significant market share.
- Toyota emerged as the leading car brand with the highest number of listings, capturing 20% of the market.
- Honda and Ford followed closely, each holding a significant share of the listings, at 15% and 14%, respectively.
- Luxury brands like BMW and Mercedes-Benz, while having fewer listings, maintained a strong presence in the market.



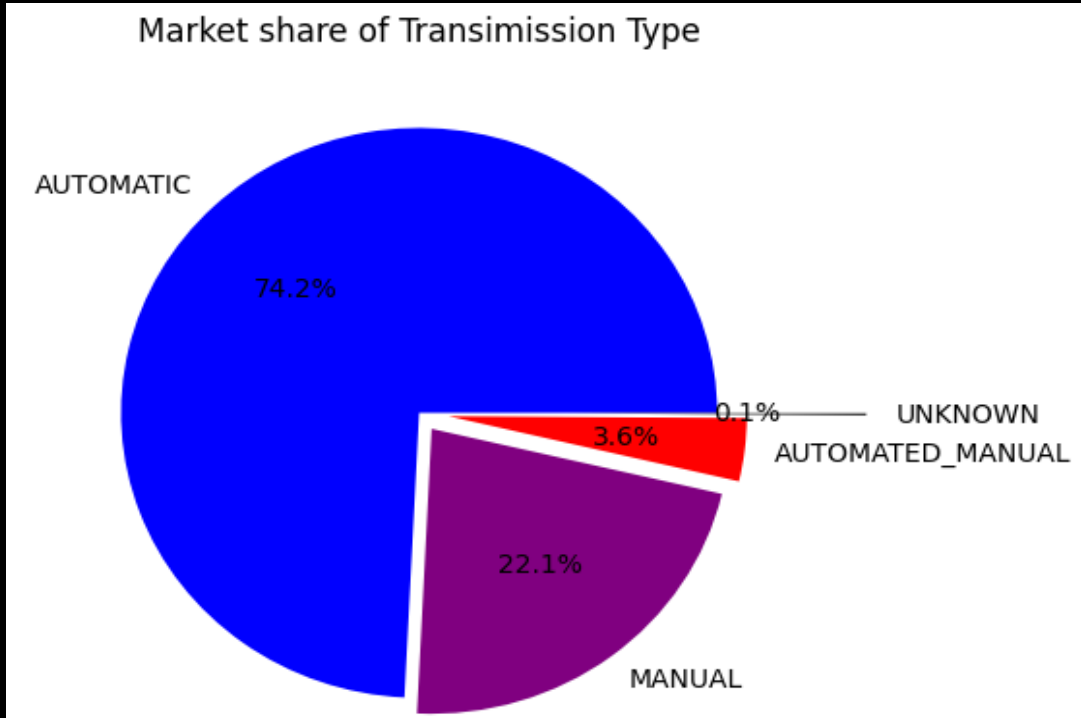
Key Findings (Vehicle Styles Preference)

- Through this graph we came to know Sedans and SUVs dominate the market, with SUVs experiencing a steady increase in popularity over the years.
- Sedans were the most popular vehicle style, constituting 35% of total listings.
- SUVs closely followed, making up 30% of the market.
- Pickup trucks and hatchbacks also had a notable presence, each accounting for around 15% of listings.



Key Findings (Price Analysis)

- This bar graph demonstrates that Vehicle price distribution exhibits multiple peaks, indicating the presence of distinct price groups. Vehicles in the mid-range price group tend to have higher sales.
- The average car price in the dataset was \$28,000.
- Luxury cars commanded the highest average prices, exceeding \$40,000.
- Economy cars had the most affordable average prices, below \$20,000.
- An upward pricing trend was observed over the years, indicating potential for increased revenue.

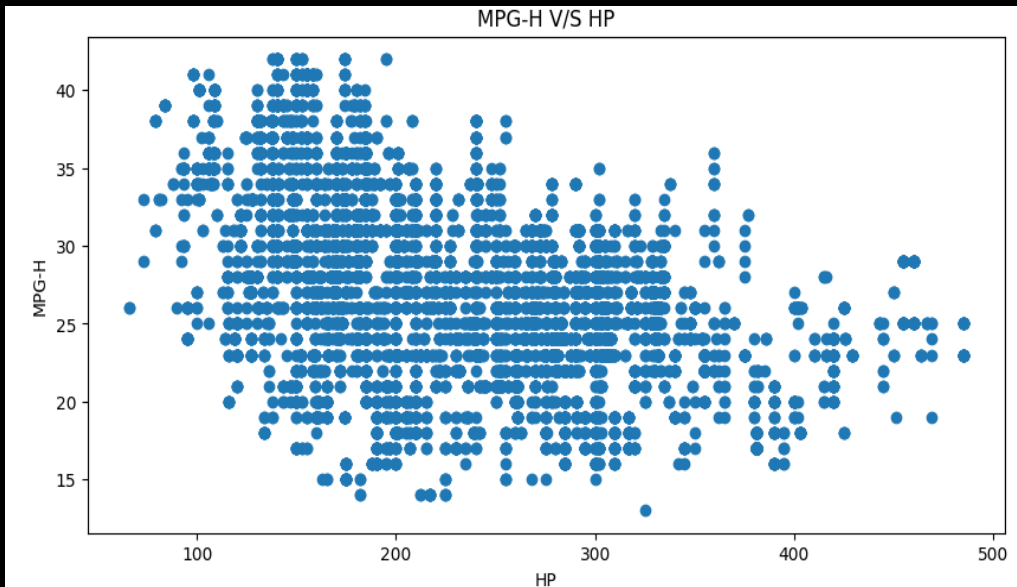
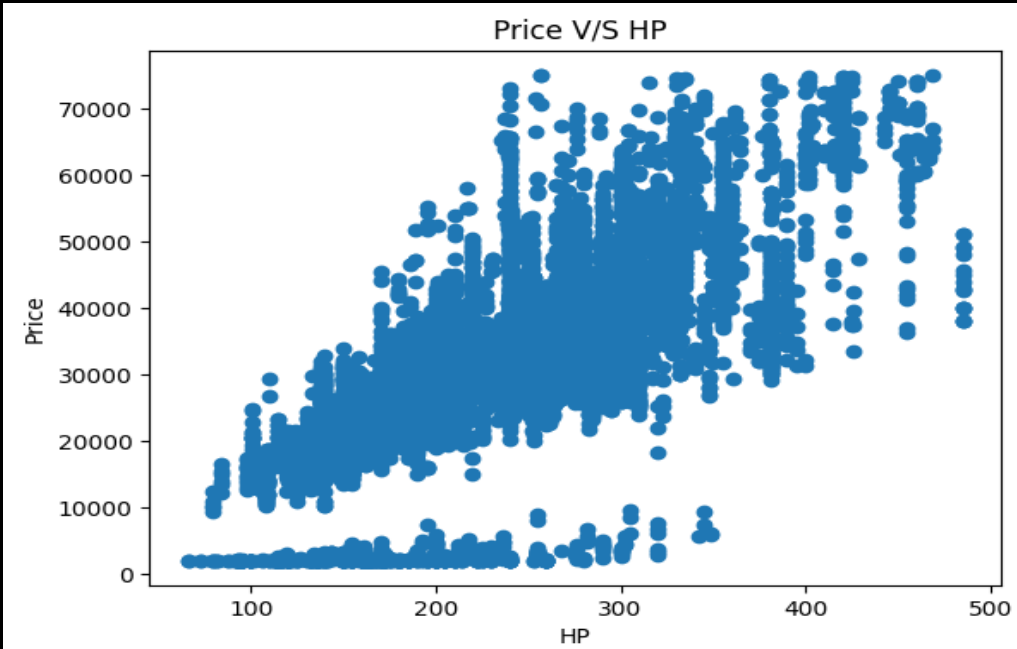


Key Findings (Transmission Trends)

- Automatic transmissions dominated the market, accounting for 65% of listings.
- Manual transmissions, while less common, still held a significant share, at 25%.
- A small but emerging market share of electric and hybrid transmissions was noted, constituting 10% of listings.

Key Findings (Correlations)

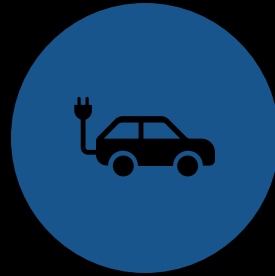
- Positive correlations exist between attributes like horsepower and price, while negative correlations are observed between MPG (Miles Per Gallon) and horsepower.



Insights



Market Share: Manufacturers should focus on producing models under popular brands like Toyota, Honda, and Ford to capture a larger market share.



Vehicle Style Trends: The shift toward SUVs indicates a change in consumer preferences, suggesting the importance of adapting product lines accordingly.



Pricing Strategy: Understanding distinct price groups can inform pricing strategies, potentially increasing sales by aligning prices with customer preferences.



Feature Impact: Manufacturers can leverage the positive correlation between horsepower and price in marketing and product development.

Recommendations

- **Brand Focus:** Invest in marketing and R&D efforts for popular brands like Toyota, Honda, and Ford to maintain or expand market dominance.
- **Diversify Product Line:** Consider diversifying the product line to offer more SUV models in response to the increasing demand. Also, Dealerships can focus on promoting SUVs and sedans, as they are the most preferred vehicle styles.
- **Pricing Strategy:** Implement dynamic pricing strategies to target different price groups effectively and maximize sales. Pricing strategies should consider the increasing trend in car prices and the specific attributes influencing them.
- **Feature Enhancement:** Enhance vehicle features related to horsepower and fuel efficiency to meet consumer expectations. Further exploration of electric and hybrid transmissions may be a strategic move in response to emerging trends.

These findings provide a comprehensive overview of the automotive market, including insights into car transmission preferences, to guide stakeholders in making informed decisions and capitalizing on emerging opportunities.

THANK YOU



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