Data Searchers Report

This dataset provides detailed information about car sales, including attributes such as the seller, car make, year, mileage, customer ratings, and more. Through our analysis, we've uncovered several interesting facts that shed light on the most frequent sellers, the popularity of certain car makes, and insights into car condition and customer satisfaction.

The dataset features a number of recurring sellers. The five most frequent sellers in the data set are:
1. EchoPark Automotive Greenville: 36 times
2. Autos of Dallas: 35 times
3. EchoPark Automotive Salt Lake City Delivery Center: 33 times
4. Principle Volvo Cars San Antonio: 25 times
5. Mungenast St. Louis Honda: 19 times

These five sellers dominate the dataset, suggesting their strong popularity and market presence amongst buyers.

There are not that many of cars in the dataset with high mileage. Specifically, the dataset contains only 202 cars that have logged over 100,000 miles out of a total of 9,379 listings in the dataset. This indicates a weak presence of older, used vehicles, which may appeal to buyers looking for more reliable options that'll last them longer in the long run.

Out of the total cars in the dataset, 1,429 cars were manufactured after the year 2020, representing newer vehicles that are likely still under warranty and have relatively low mileage. These newer cars cater to buyers interested in the latest models and innovations in automotive technology, often at a higher price point than older, high-mileage cars.

A total of 336 cars have achieved a perfect customer rating of 5.0, showcasing vehicles that have provided exceptional satisfaction to previous buyers. These highly rated cars could be of particular interest to prospective buyers looking for reliable and well-reviewed vehicles.

I Most Popular Car Listings

Our first high-level question was, "What is the most popular car listing on this platform?" To answer this, we defined "popularity" as the car make with the highest number of listings, under the assumption that the most listed brands are either in high demand or more prevalent on the platform. We generated a bar chart (shown below) that highlights BMW as the most popular car make, with 841 listings.

An interesting observation from our findings is the significant presence of luxury car brands in the top ten. Following BMW, Mercedes-Benz ranks second with 736 listings, while Lexus (445 listings) and Audi (374 listings) also feature prominently. This suggests that the platform attracts

a substantial number of listings for premium car makes, which may reflect either user preferences, market supply, or demand for these vehicles.
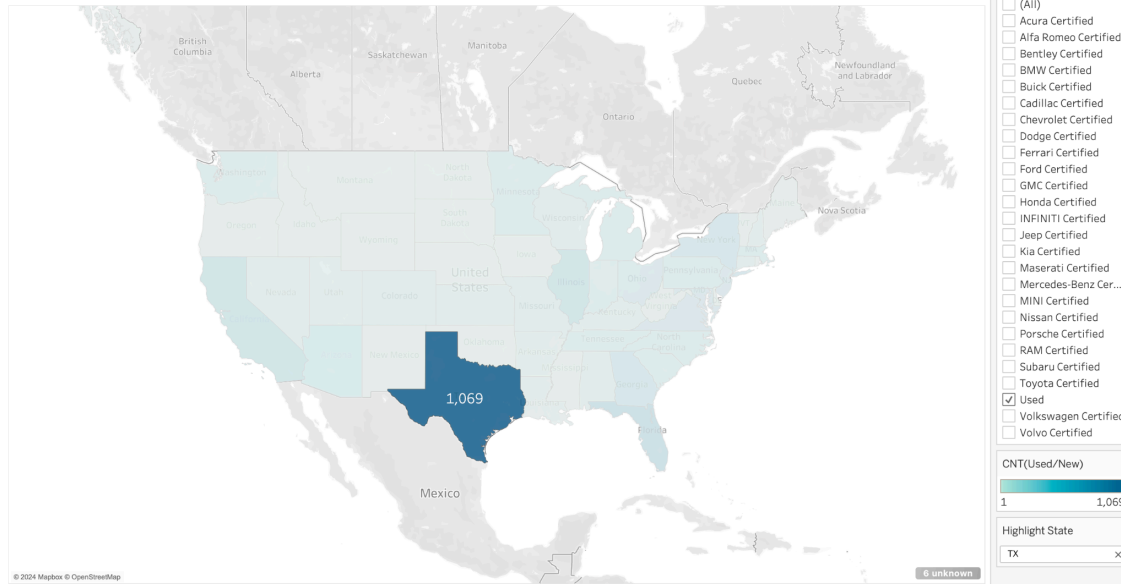
Top 10 Most Popular Car Makes
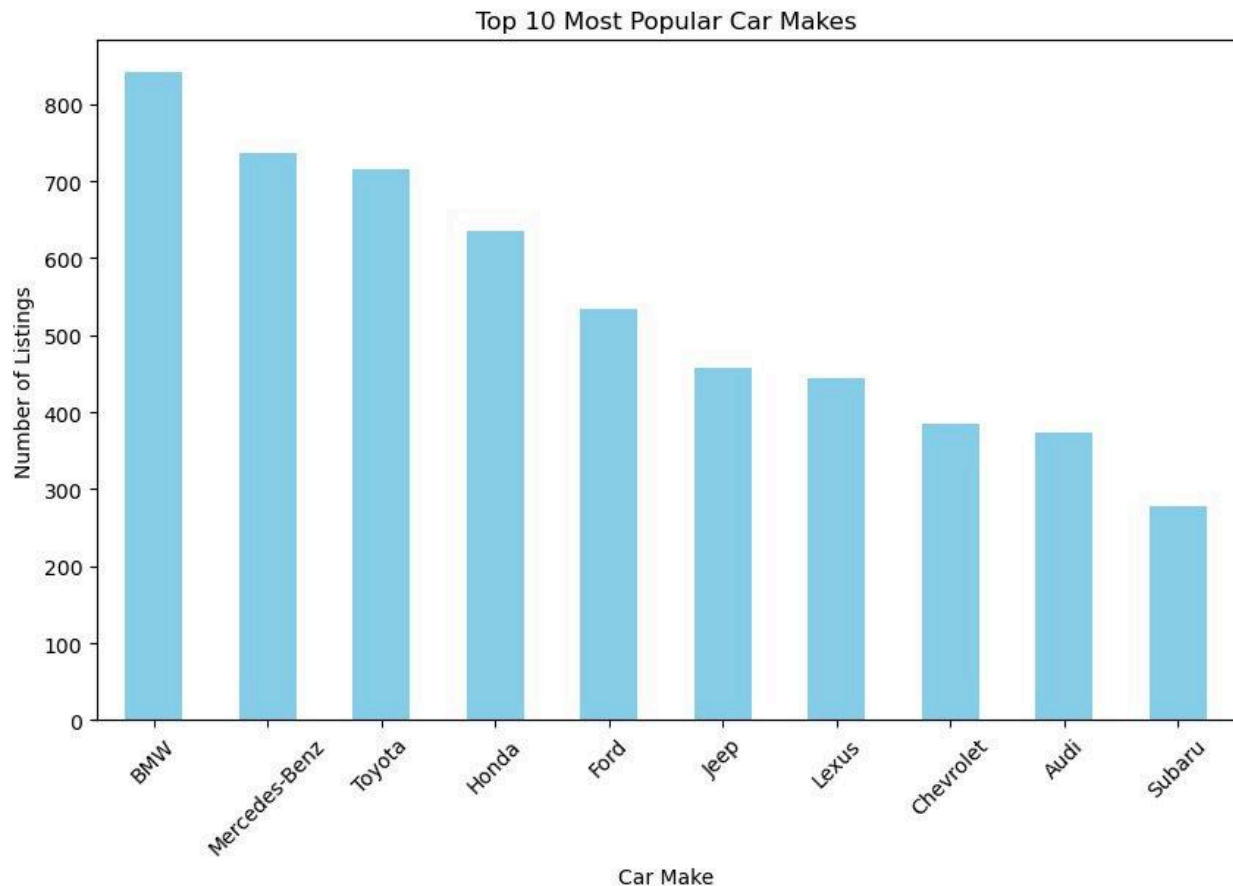
II Premiums for Dealers vs Private Sellers

III Most Used Cars on the Platform

One key objective was to identify where most used and new cars are listed on the platform. For this analysis, we chose to filter data by state. Listings were categorized into two groups: "used" cars and "certified new" cars, which included brands like Acura Certified, BMW Certified, and Mercedes-Benz Certified. For each state, we calculated the total number of listings and visualized the results using a Tableau-generated map.

Our findings reveal that Texas leads in both used and new car listings, followed by Florida in second place and California in third. The accompanying map highlights these trends, with darker shading indicating higher listing volumes, and Texas standing out as the most prominent.

## State with Most Used Car Listings

Used/New
- (All)
- Acura Certified
- Alfa Romeo Certified
- Bentley Certified
- BMW Certified
- Buick Certified
- Cadillac Certified
- Chevrolet Certified
- Dodge Certified
- Ferrari Certified
- Ford Certified
- GMC Certified
- Honda Certified
- INFINITI Certified
- Jeep Certified
- Kia Certified
- Maserati Certified
- Mercedes-Benz Cer...
- MINI Certified
- Nissan Certified
- Porsche Certified
- RAM Certified
- Subaru Certified
- Toyota Certified
- ✓ Used
- Volkswagen Certified
- Volvo Certified

CNT(Used/New)
1 — 1,069

Highlight State
TX

State with Most New Car Listings

Used/New
- (All)
- ✓ Acura Certified
- ✓ Alfa Romeo Certified
- ✓ Bentley Certified
- ✓ BMW Certified
- ✓ Buick Certified
- ✓ Cadillac Certified
- ✓ Chevrolet Certified
- ✓ Dodge Certified
- ✓ Ferrari Certified
- ✓ Ford Certified
- ✓ GMC Certified
- ✓ Honda Certified
- ✓ INFINITI Certified
- ✓ Jeep Certified
- ✓ Kia Certified
- ✓ Maserati Certified
- ✓ Mercedes-Benz Cer...
- ✓ MINI Certified
- ✓ Nissan Certified
- ✓ Porsche Certified
- ✓ RAM Certified
- ✓ Subaru Certified
- ✓ Toyota Certified
- Used
- ✓ Volkswagen Certified
- ✓ Volvo Certified

CNT(Used/New)
1 — 157

Highlight State
TX

IV Effect of Car Mileage on Price

Our analysis demonstrates that mileage has a significant negative impact on car prices on this platform. Cars with lower mileage tend to command higher prices, with a steady decline as mileage increases. Specifically, vehicles in the 0-20k mileage bracket have the highest average price at

Average Price by Mileage Bracket
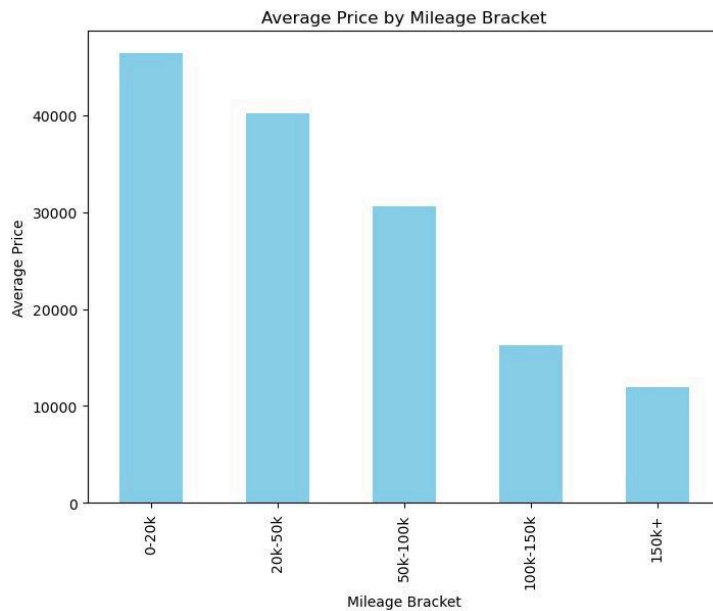
approximately $46,386, while cars with mileage exceeding 150k miles see their average price drop to around $11,963. This stark contrast highlights the strong buyer preference for lower-mileage cars, which are often perceived as more reliable and longer-lasting.

Additionally, the heat map below depicts the impact of mileage on price varies across car brands. Luxury car brands, such as Ferrari and Porsche, retain higher average prices even at higher mileage compared to more mainstream brands. For instance, Ferrari vehicles maintain an average price of $244,900 in the 0-20k bracket and remain significantly higher than other makes across higher mileage brackets. This indicates that brand prestige and vehicle type can mitigate the price depreciation caused by high mileage. Overall, mileage is a strong determinant of car prices, with lower mileage consistently commanding
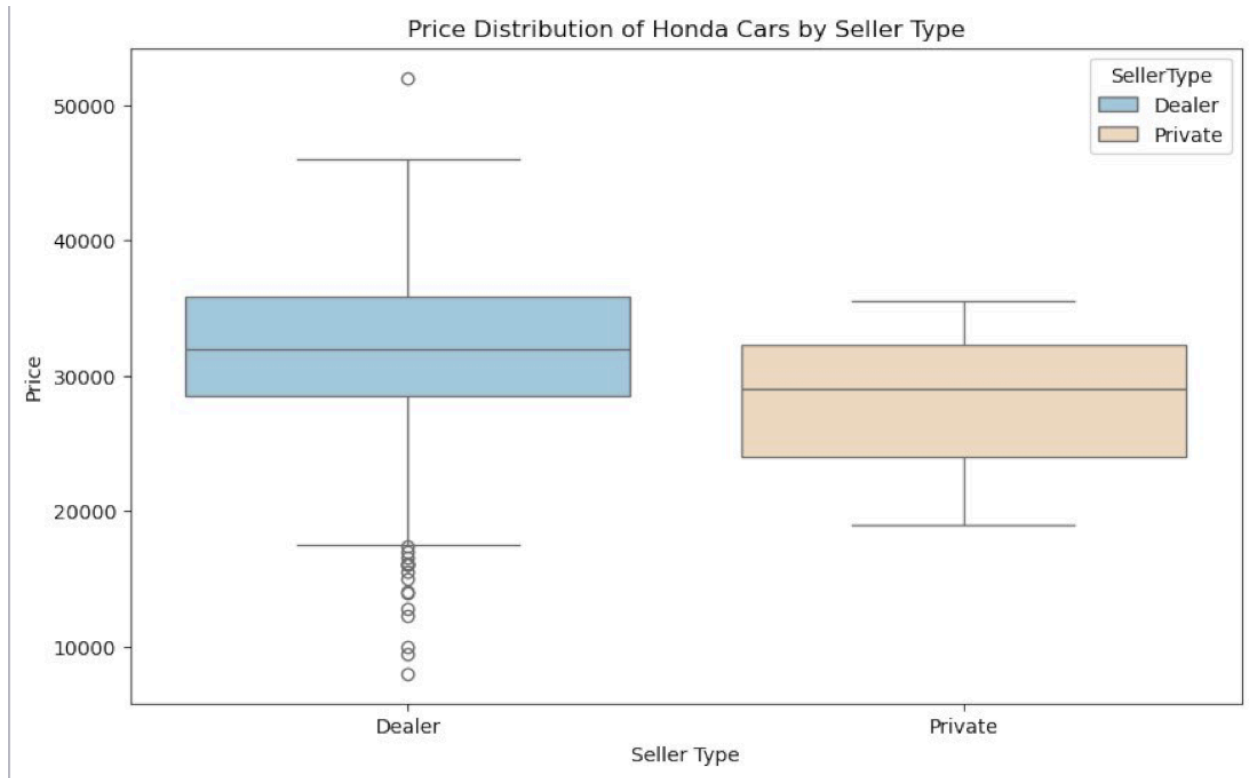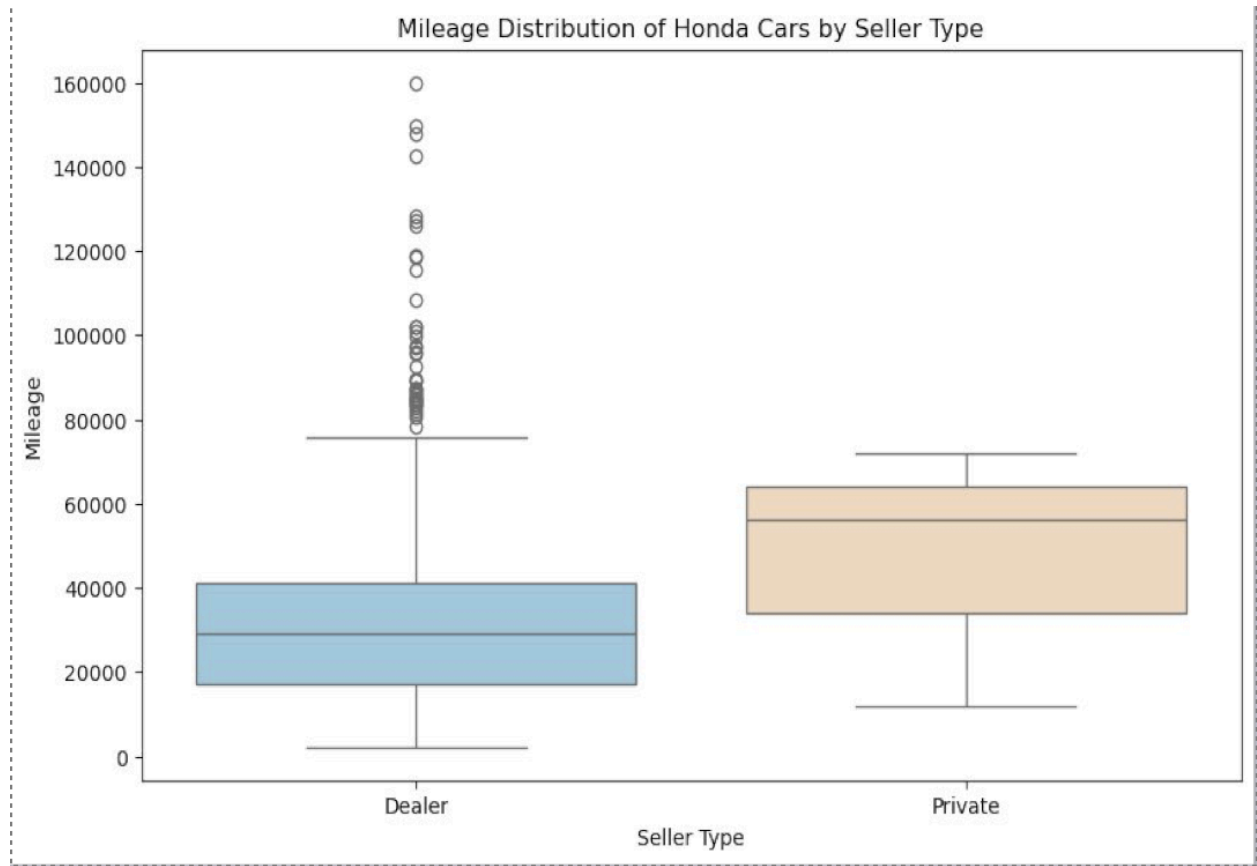
higher prices across most vehicle categories.

Average Price by Make and Mileage Bracket

Car Make	0-20k	20k-50k	50k-100k	100k-150k	150k+
Acura	42928	36768	24118	16314	6495
Alfa	37325	32888	27582		
Audi	51787	48211	33691	14329	11985
BMW	52180	45395	31195	14323	
Bentley	193101		54533		
Buick	26209	29427	23540	9995	
Cadillac	48221	42543	33263	22514	18311
Chevrolet	43485	36879	31964	15875	22498
Chrysler	33370	33175	23270	6875	13997
Dodge	45174	37479	27269	19173	
FIAT			9900		
Ferrari		244900			
Ford	42352	34765	29532	14697	11220
GMC	56154	50479	41897	34132	16975
Genesis	54020	41883			
Honda	34518	31700	26820	16878	21844
Hyundai	33952	29028	21506	10878	5748
INFINITI	42653	36360	33309		
Jaguar	49200	44848	30056		
Jeep	41757	35459	28810	15606	13988
Kia	32458	30069	25112	13480	4995
Lamborghini	268858	267666			
Land	74338	63650	42815	16900	
Lexus	49105	44359	31814	17520	4998
Lincoln	47160	43308	38103	24792	
MINI	26975	23902	16675		
Maserati	59381	49280	43000		
Mazda	31800	29303	22924	10593	7995
Mercedes-Benz	54124	46036	35566	17359	
Mercury			7980	5995	
Mitsubishi	23150	21551	11706	11995	
Nissan	30204	28571	20820	14951	5995
Porsche	109475	60773	41330	34995	
RAM	51736	51047	43979		
Saturn			9868		
Scion			13492	6619	5925
Subaru	32592	30718	24796	21044	8398
Tesla	67809	67448	58259		
Toyota	36389	33571	29392	19171	15955
Volkswagen	34782	30367	24380	11776	7488
Volvo	47308	41600	28203	14891	4498

V Is there a Premium for Dealers selling their Cars compared to Private sellers?

Our findings conclude that there is a small premium for dealers on average when factoring price

Average Price by Seller Type


Price Distribution by Seller Type
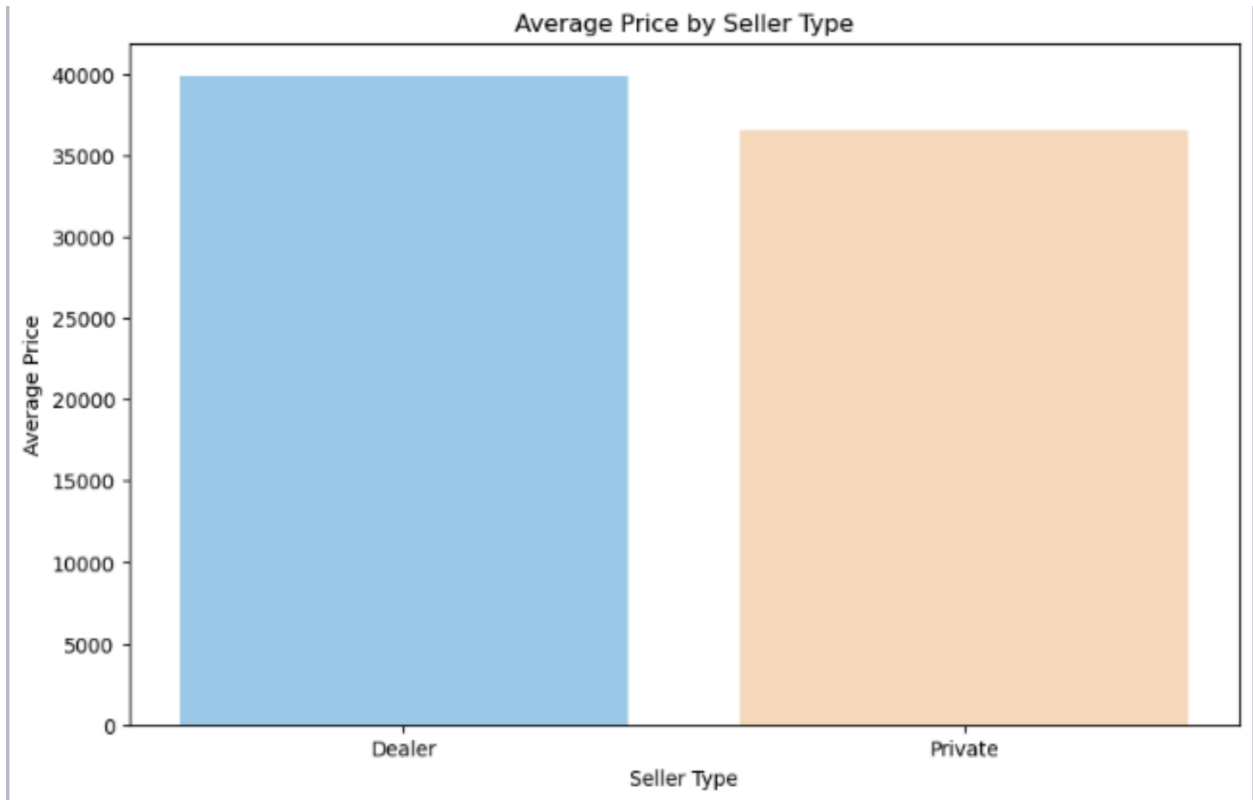
There's also small premium among dealers when comparing Honda listings. Lower mileage can be one of the many factors among other car listings that affect listing price. A dealers average price is higher by around $4000 and average mileage is lower by around 13,000.

Price Distribution of Honda Cars by Seller Type

Mileage Distribution of Honda Cars by Seller Type

VI Premiums based on Cars' Fuel Types

Electric Cars have a significant premium among fuel types. Consumers also rate their Electric car cost lower compared to all other fuel types. Price difference between Electric and Gasoline is $28,000 and the electric car rating is 3.9/5

Average Car Price by Fuel Type

Average Rating for Value for Money Rating
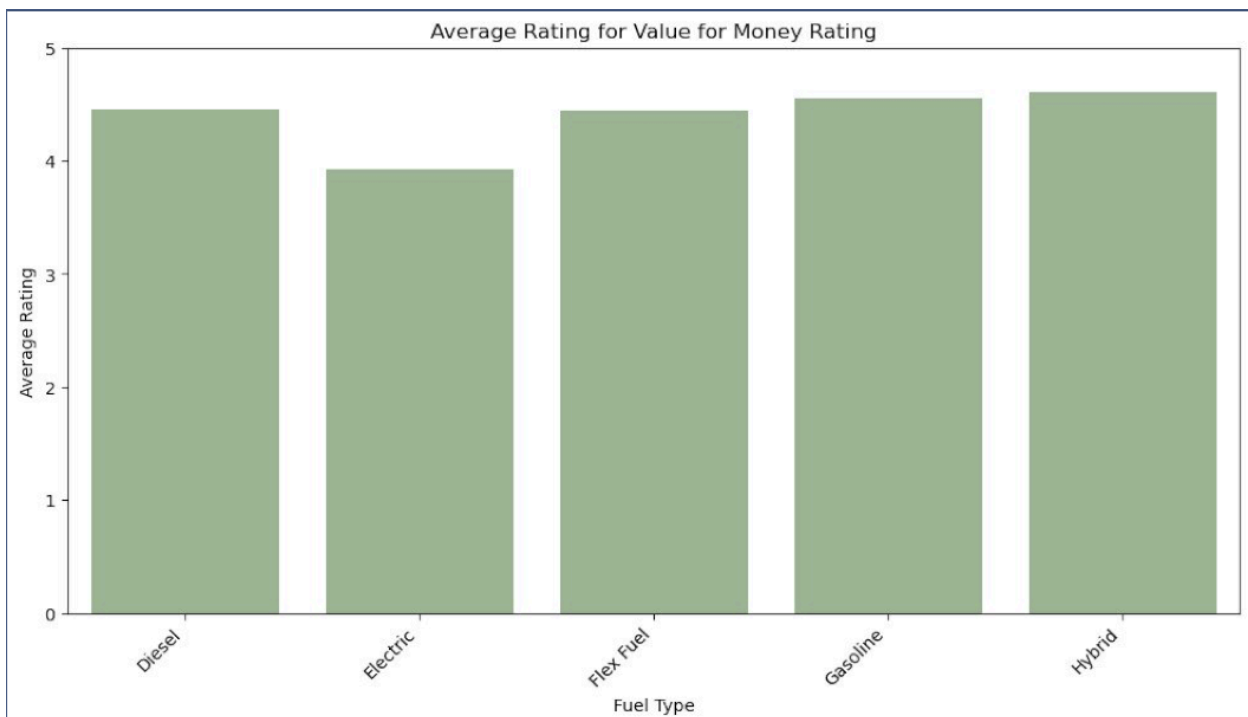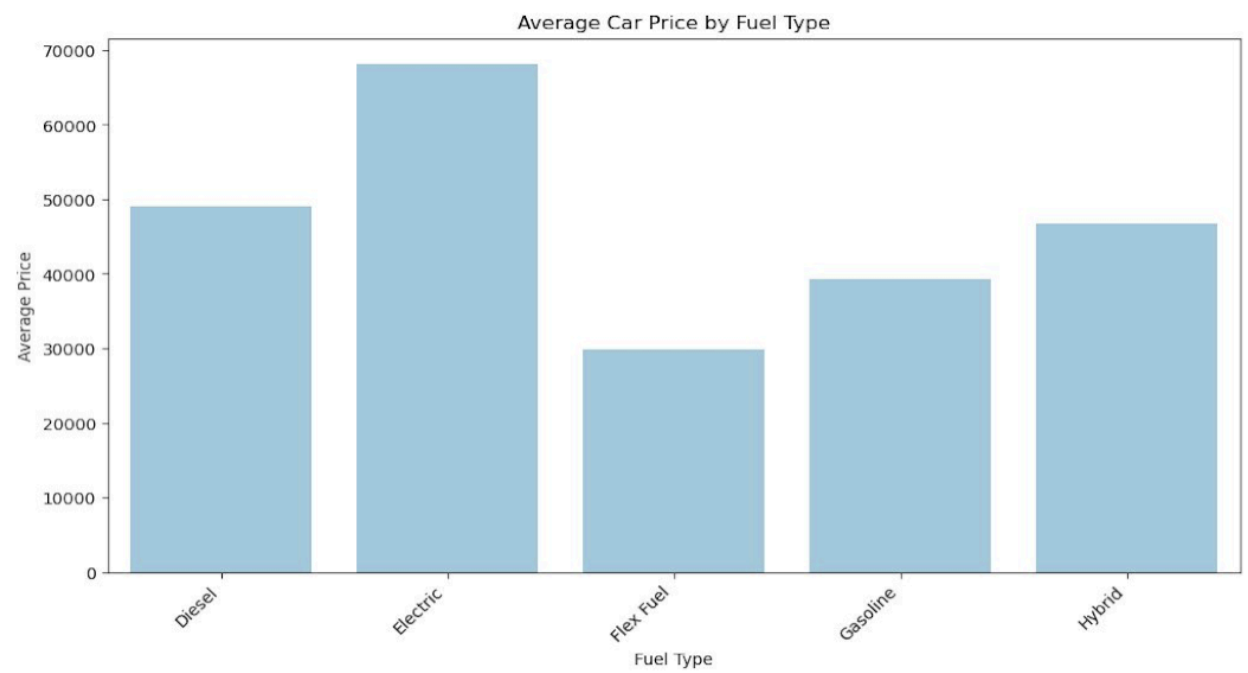
VII Effect of Car Age on Price

This analysis aimed to determine how a car's age impacts its selling price and desirability on the platform. A scatterplot was used to visualize the relationship between age and price, revealing a clear negative linear trend.

Our findings indicate that as a car's age increases, its selling price steadily decreases. For example, the average price for a 2-year-old car is $44,406, dropping to $22,304 by 10 years and further declining to $8,718 at 20 years. The scatterplot highlights this consistent downward trend, with occasional outliers for older cars, likely representing rare or collectible models.

The results emphasize that vehicle age is a critical factor in determining price, with newer cars commanding significantly higher values. These insights provide valuable context for understanding market dynamics and pricing strategies.

Car Age vs. Price
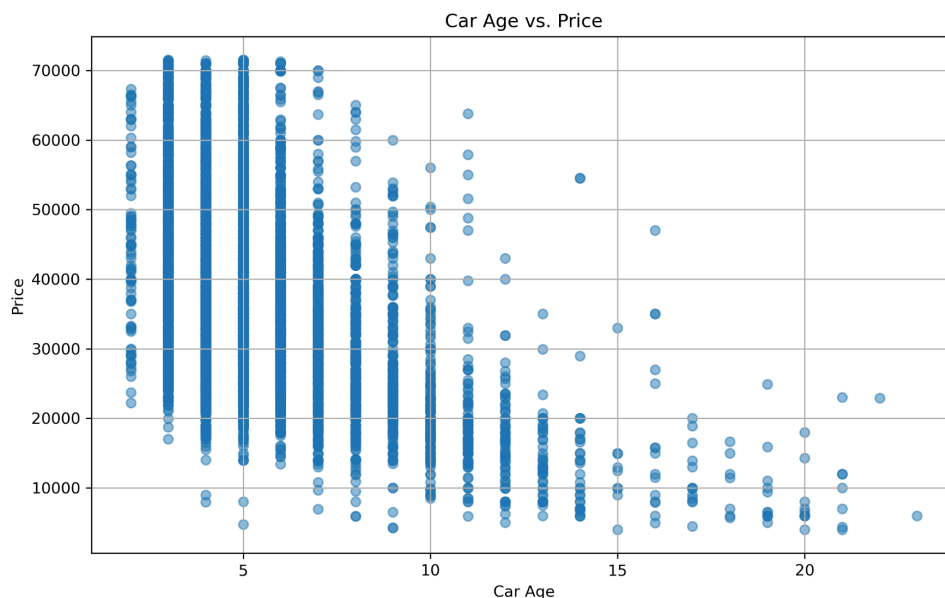
a) Car Availability By Group

To understand car availability on the platform, we analyzed the distribution of listings across four age groups: 0-5 years, 6-10 years, 11-15 years, and 16+ years. The results reveal that over 70% of the listings (5,739) are for vehicles in the 0-5 year age group, making newer cars the most widely available. Cars aged 6-10 years are the second most listed, with 2,068 listings. Older cars are significantly less common, with only 229 listings for vehicles aged 11-15 years and just 59 for those 16 years or older.

This distribution, visualized in the accompanying bar chart, highlights that the marketplace predominantly caters to buyers seeking newer vehicles. This trend aligns with observed patterns in pricing and desirability, emphasizing the platform's focus on recent model availability.

Number of Listings by Car Age Group
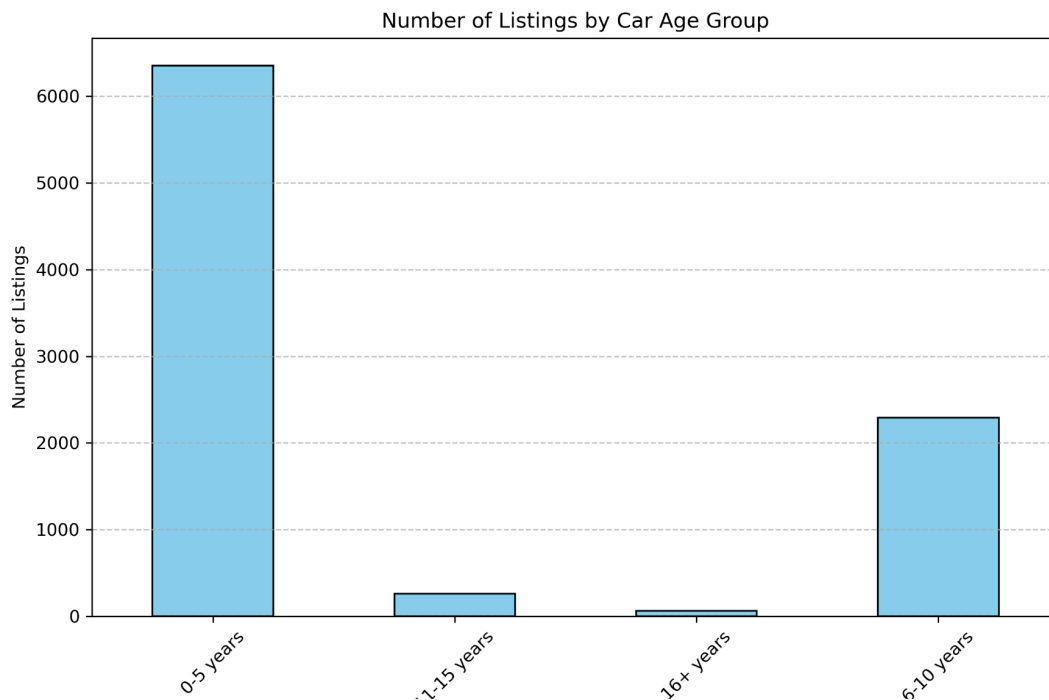
b) Consumer Ratings and Vehicle Age

To explore the relationship between vehicle age and desirability, we analyzed consumer ratings by grouping cars into four age categories: 0-5 years, 6-10 years, 11-15 years, and 16+ years. We calculated the average consumer rating for each group and visualized the results with a bar chart. The findings show minimal variation, with the highest average rating of 4.724 seen in the 6-10 year age group, slightly surpassing the 0-5 year group at 4.714. Older vehicles have slightly lower ratings, averaging 4.552 for the 11-15 year group and 4.507 for vehicles 16 years or older.

These results suggest that consumer ratings remain relatively high across all age groups, with only a slight decline as vehicles age. The data indicates that other factors, such as reliability, might contribute more significantly to consumer satisfaction than a car's age alone.

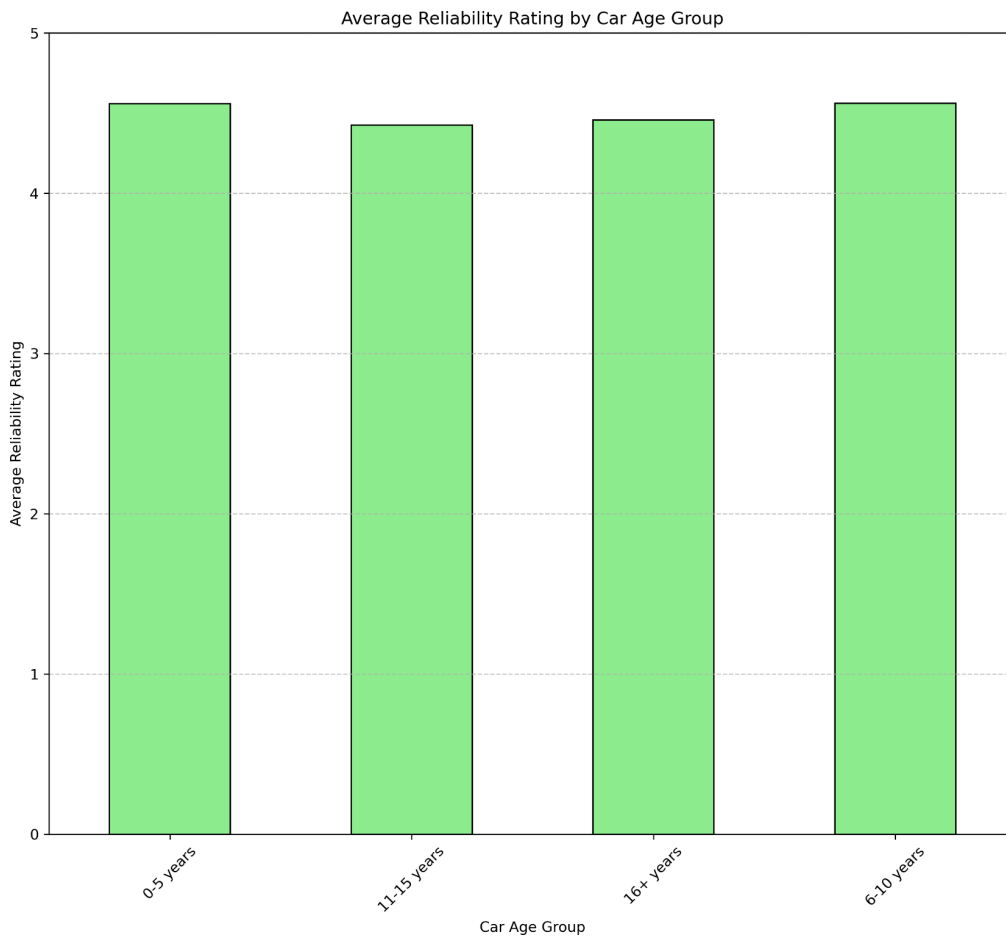Average Consumer Rating by Car Age Group
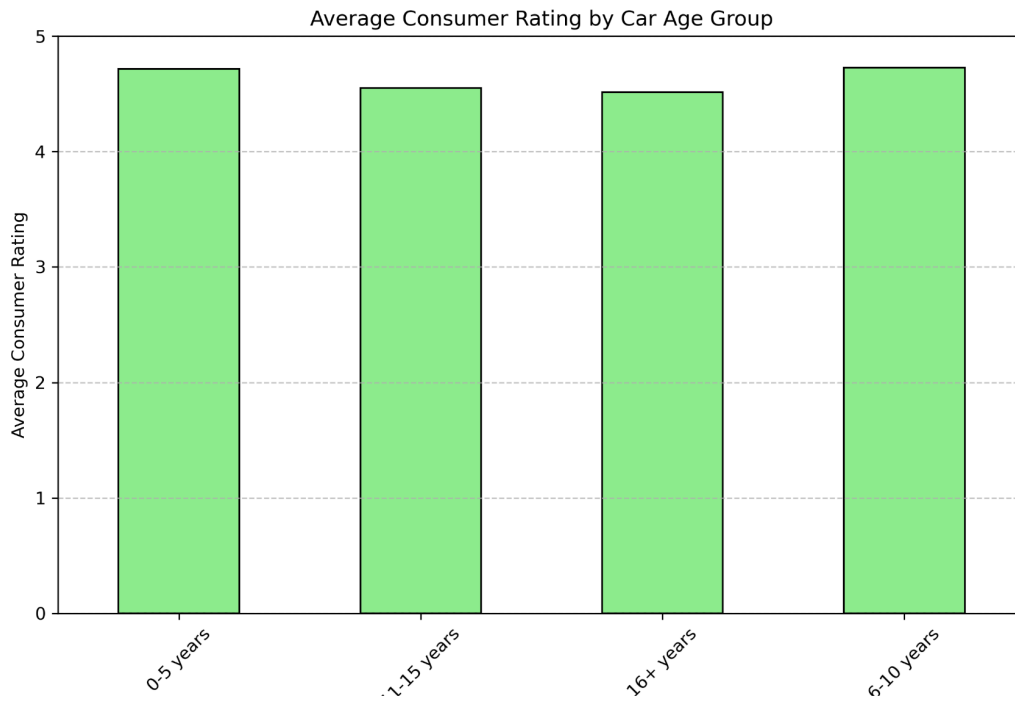
c) Reliability Ratings and Car Age?

To assess how vehicle age affects reliability ratings, we grouped cars into four age categories: 0-5 years, 6-10 years, 11-15 years, and 16+ years. We calculated the average reliability rating for each group and visualized the results using a bar chart. The findings revealed that vehicles aged 6-10 years had the highest average reliability rating (4.734), even surpassing the newest cars in the 0-5 year category (4.689). Ratings steadily declined for older vehicles, with cars aged 11-15 years averaging 4.551 and those over 16 years dropping to 4.490.

These results suggest that cars in the 6-10 year range are perceived as particularly reliable, likely due to their proven performance and lower maintenance costs. In contrast, reliability ratings

decrease for vehicles older than 10 years, reflecting the expected effects of wear and tear.

Average Reliability Rating by Car Age Group

(Bar chart showing Average Reliability Rating on the y-axis, ranging from 0 to 5, against Car Age Group on the x-axis. The bars are green. The groups are 0-5 years (~4.55), 11-15 years (~4.4), 16+ years (~4.45), and 6-10 years (~4.55).)

In conclusion, the dataset offers a comprehensive overview of the cars market. Our team was able to pull and analyze data such as the most frequent sellers in the dataset, the number of cars with high mileage, the cars manufactured after 2020, the most popular car makes, and listing withs perfect customer ratings. Such data provides valuable insight for both buyers and sellers in making informed choices in the car market.