

Business Analytics Project

Analysis of “Used Car Dataset in the Indian Car Market”

(ii)Introduction:

a) Purpose of the analysis

The purpose of the report is to analysis secondhand dataset to see what are the parameters that seem to affect the price of already used car. An analysis of a used car dataset in the Indian car market would involve exploring various aspects of the market, including prices, models, brands, and trends.

b) Describe the dataset you have selected

1. **what is the dataset used:** The dataset used is called Used Cars Details Dataset that is

Web scrapped Cars Dataset with Various features of the car and its price.

2. **Link of the dataset:** <https://www.kaggle.com/datasets/rakkesharv/used-cars-detailed-dataset>

3. **Website we got the dataset:** The dataset was taken from Kaggle.

4. **Provide a list of columns of dataset and no of rows:**

Car_Name, Make, Model, Make Year, Color, Body Type, Mileage Run, No of Owners, Seating Capacity, Fuel Type, Fuel Tank Capacity(L), Engine Type, CC Displacement, Transmission, Transmission Type, Power (BHP), Torque (Nm), Mileage(kmpl), Emission and Price.

No of rows: 977 rows

(iii) Analysis Methodology Followed:

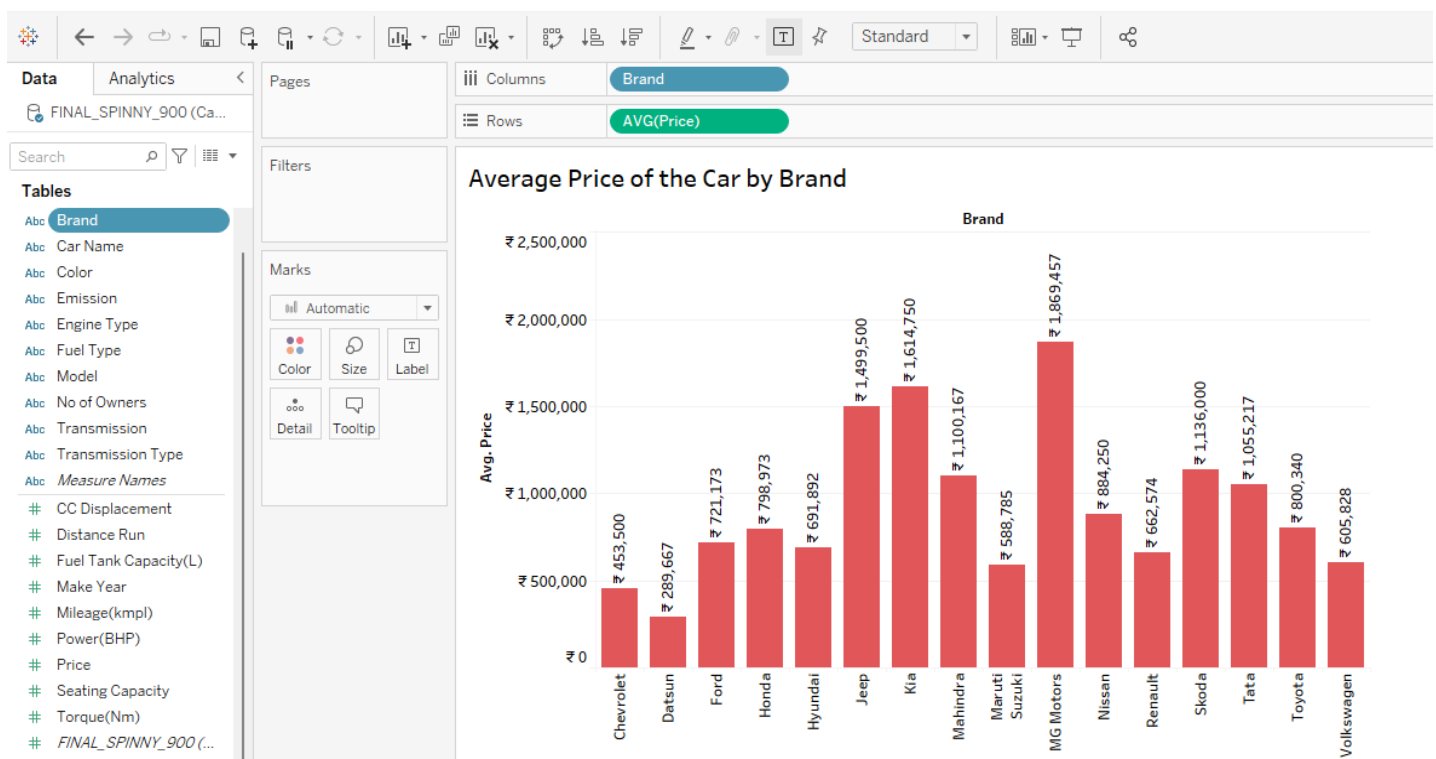
a) Which analytical tool was considered (Power BI or Tableau) and any other info about them?

Tableau was the analytical tool used and it is a data visualization software that allows users to connect, visualize, and share data in a user-friendly and interactive way. Tableau offers several versions, including a free public version and a professional version for individual users, as well as enterprise versions for larger organizations. It has been widely adopted by businesses, governments, and non-profits for data analysis and visualization.

b) Explain the visualization creation process (minimum 4 to 5 sentences) and using a couple visualization screen shots.

The dataset is exported to excel sheet and then it is imported into the Tableau data source tab.

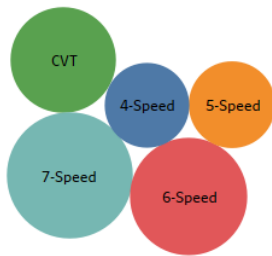
Drag and drop interface allows users to create charts, graphs, and other visualizations by selecting the fields they want to use and dragging them onto the canvas. Once the visualization is created it allows users to customize by adding colors, changing labels and adjusting the layout.



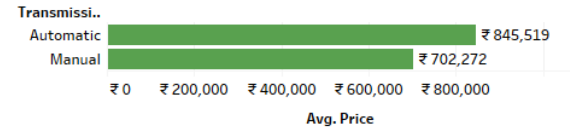
c) Full screenshots of the three dashboards.

Dashboard 1- Average price of the car by various factors

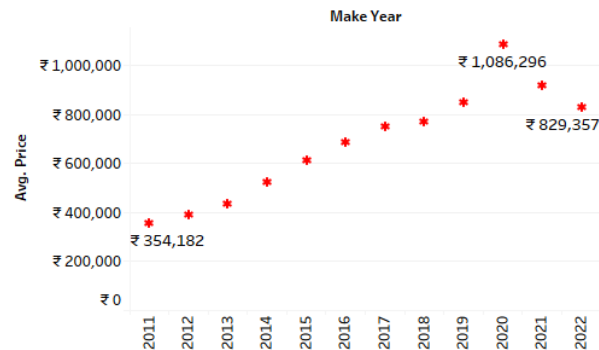
Average Price of the Car by Transmission



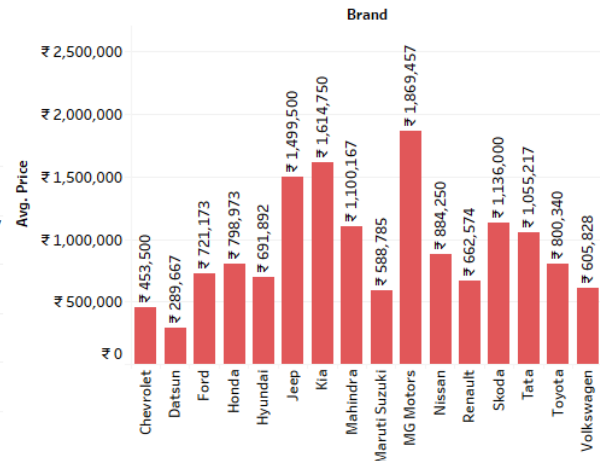
Average Price of the Car by Transmission Type



Average Price of Car by the MFG Year

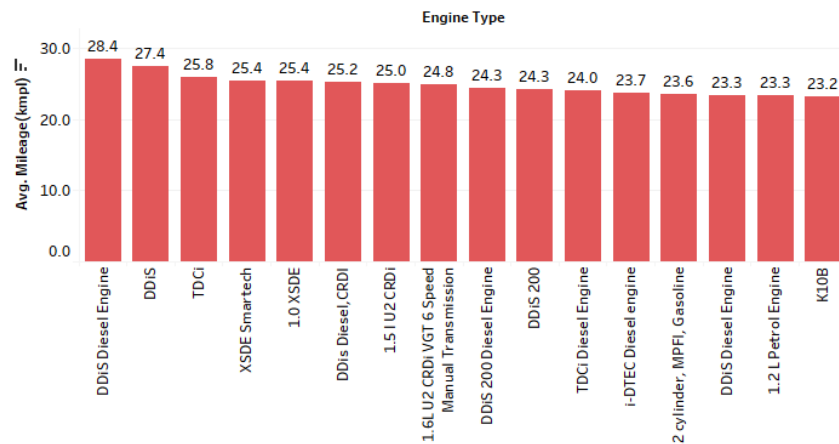


Average Price of the Car by Brand

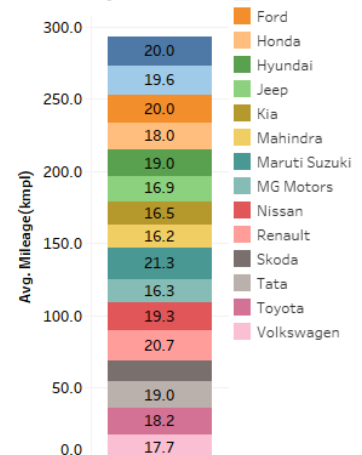


Dashboard 2- Average mileage of the car by various factors

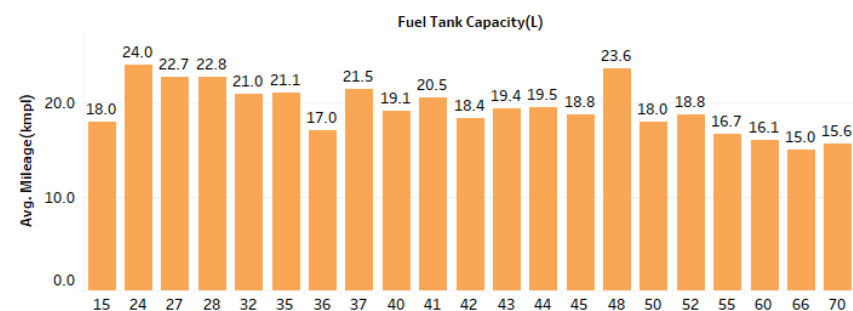
Average Mileage of Car by Engine Type



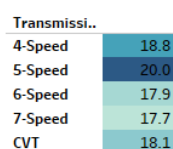
Average Mileage of Car by Brand



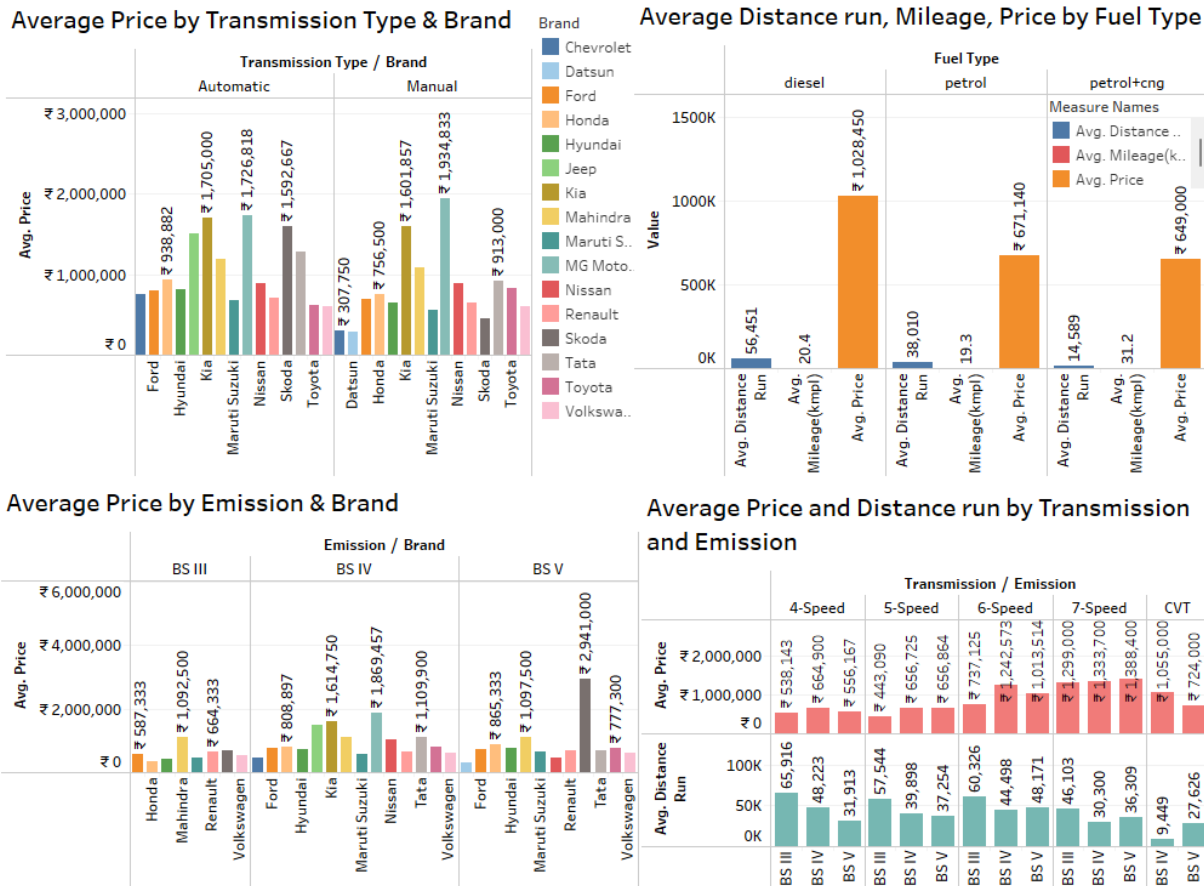
Average Mileage of Car by Fuel Tank Capacity



Average Mileage of Car by Transmission



Dashboard 3- Average price, mileage and distance run of the car by various factors



(iv) Analysis result.

Dashboard 1- Average price of the car by various factors		
Positive Insight	Negative Insight	Any other analysis comment
<ol style="list-style-type: none"> From the dashboard, we see that the 7-speed transmission car has higher price when compared to other transmission while 6-speed follows it. Transmission is directly proportional to the price of the car. Automatic transmission type car's price on average higher than the manual transmission. In cities where the average speed is less, automatic transmission are the most sought after. 	<p>In the manufactured car year report, we see that the price of the car's made in the year 2022 is lower than both 2020 and 2021, further analysis needs to be done to determine the reason.</p>	<p>Another interesting insight is the 6-seater car's price are higher than the 8-seater although this is not visualized in the dashboard I did it in a new sheet</p>

3. The manufactured year of the car directly affects the price of the car. 4. MG motors, KIA and Skoda brands price are higher compared to other brands, another insight to note is out of the three brands, two are new to the Indian car market.		
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Dashboard 2- Average mileage of the car by various factors

Positive Insight	Negative Insight	Any other analysis comment
1. The car with engine that runs on diesel has higher mileage than other fuel run cars. The common reason for this could be because diesel engine is low fuel usage when compared to other fuels. 2. Brands like Maruti Suzuki, Toyota, Nissan, Tata, Ford and Chevrolet give lower mileage and their transmission speed is higher and theses cars are able to attain high speed. 3. Lower speed transmission has higher mileage compared to higher speed transmission and these cars can be considered economical. 4. High and low fuel tank capacity car have lower mileage and the fuel tank capacity in the middle range has higher mileage.	Brands like MG motors, KIA and Skoda gives lower mileage, but their prices are higher, while MG motors and Skoda price are higher, and their Fuel capacity is also high.	The no of previous owner of the car analysis reveals that the price of the first owner's and third owner's price is higher and the mileage is also better.

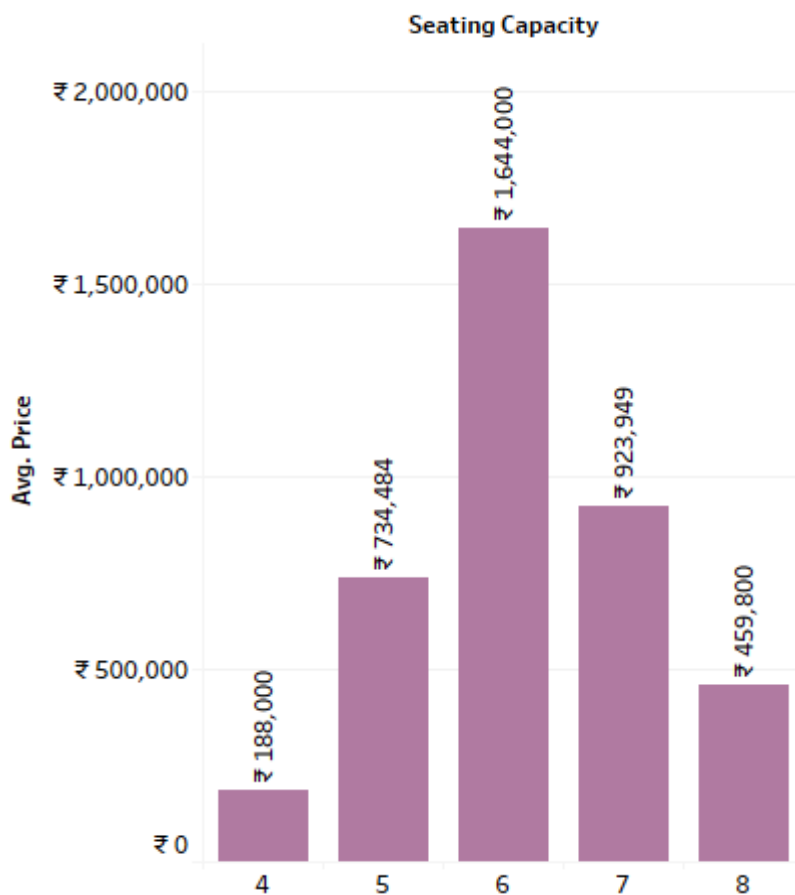
Dashboard 3- Average price, mileage and distance run of the car by various factors

Positive Insight	Negative Insight	Any other analysis comment
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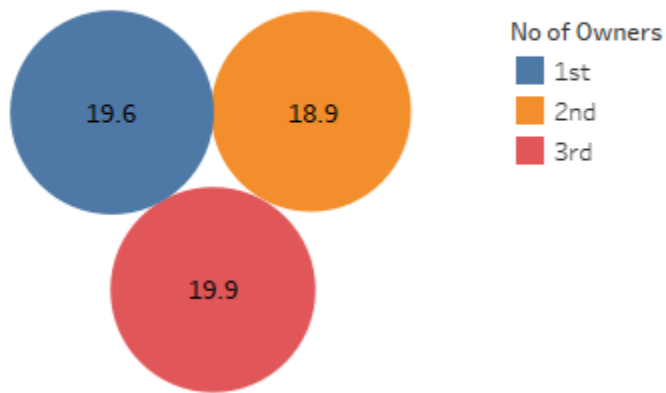
<ol style="list-style-type: none"> 1. The cost of the BS-V is higher as the emission is very low and it needs expensive parts to make it possible. 2. The price of automatic transmission is higher as there is a high demand for this type from consumers. 3. Diesel has a higher price as the cost of fuel is less, but another insight is the mileage of hybrid car (petrol+CNG) is very high and price is low. 4. 7-speed transmission cars are very high priced and lower speed transmission car are lower priced on average even if it has high run-distance. 	<p>BS-III emission price are less compared to the other emission, but it has a direct impact on the environment as the pollution emitted is higher is BS-III.</p>	
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Other analysis visualization:

Price by Seat Capacity of the Car



No of Owners by the Mileage of Car



Conclusion:

Overall, the data points to a rising market for secondhand cars, which is being fueled in part by the lack of new cars as a result of supply chain disruptions brought on by the COVID-19 pandemic. Increased competition and higher used car prices are the results of this, with several models experiencing large price rises in recent months. From the visualization and insights seen in the dashboards above we conclude that Cars with diesel fuel has higher price, and this is mostly due to the price of the fuel. Another factor that influences the price of the cars is the demand from the consumers as this statement is proved as brands like MG motors, KIA and Skoda has higher price although the mileage from them is very less. Pollution emission from BS-III and BS-IV are very high but their price is low which makes the consumer buy these types of cars. Although it benefits the consumer, but it has a negative impact on the environment. Hopefully the EV cars entry into the Indian market is soon and their market share increase in the coming year as the fuel cost is low.