Used Car Sales

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Introduction

- **Background info:**

The Indian automobile industry is one of the largest and fastest-growing in the world, with both domestic and international players competing fiercely to capture market share. In this highly competitive environment, companies need to understand the dynamics of the market to stay ahead of the competition. One such company is XYZ, which is planning to enter the Indian used-car market. To succeed in this market, they need to understand the factors that affect the pricing of used cars and identify the most important variables that drive sales. In this context, the company has engaged a data analyst to help them analyze the market data and identify the key drivers of success. In this presentation, we will discuss the findings of our analysis and provide insights into the factors that influence the pricing and sales of used cars in India.

- **Questions to answer:**
1. How many used cars were sold in a particular year?
2. What is the average price of used cars sold in a particular location?
3. What is the average number of miles on the used cars being sold in a particular location?
4. What is the most common fuel type of the used cars being sold in a particular location?
5. What is the average selling price of used cars with different seat numbers?
6. What is the average trade-in value for used cars in a particular location?
7. What is the most popular model of used car being sold in a particular location?
8. What is the total value for used cars in a particular location?
9. What is the total revenue generated from used car sales in a given year for central region?
10. What is the total number of used cars sold by make and model in a given year?
11. What is the total number of used cars sold by fuel type (e.g. gasoline, diesel, electric) in a given year?

Overview of the Data

- The dataset is related to used car sales in India and contains information on various factors that impact the pricing and sales of used cars.
  - It includes details such as the name of the car, year of purchase, selling price, total km driven, region, state or province, city, fuel type, seller type, transmission type, owner type, mileage, engine power, max power, seats, and whether the car was sold or not.

- The dataset is expected to help the automobile company XYZ to understand the factors that impact the pricing and sales of used cars in the Indian market and to identify the most important variables that drive sales.

- The dataset contains a mix of numerical and categorical variables and required some preprocessing (in Excel) before it was used for analysis:
  - Converted selling price in Rupees to USD, kilometers driven to miles driven, mileage and engine size to new columns following US Customary measurement units
  - Converted numerical columns into integers for selling price and miles driven
  - Created filters to verify the States column only had 50 States + the Capital
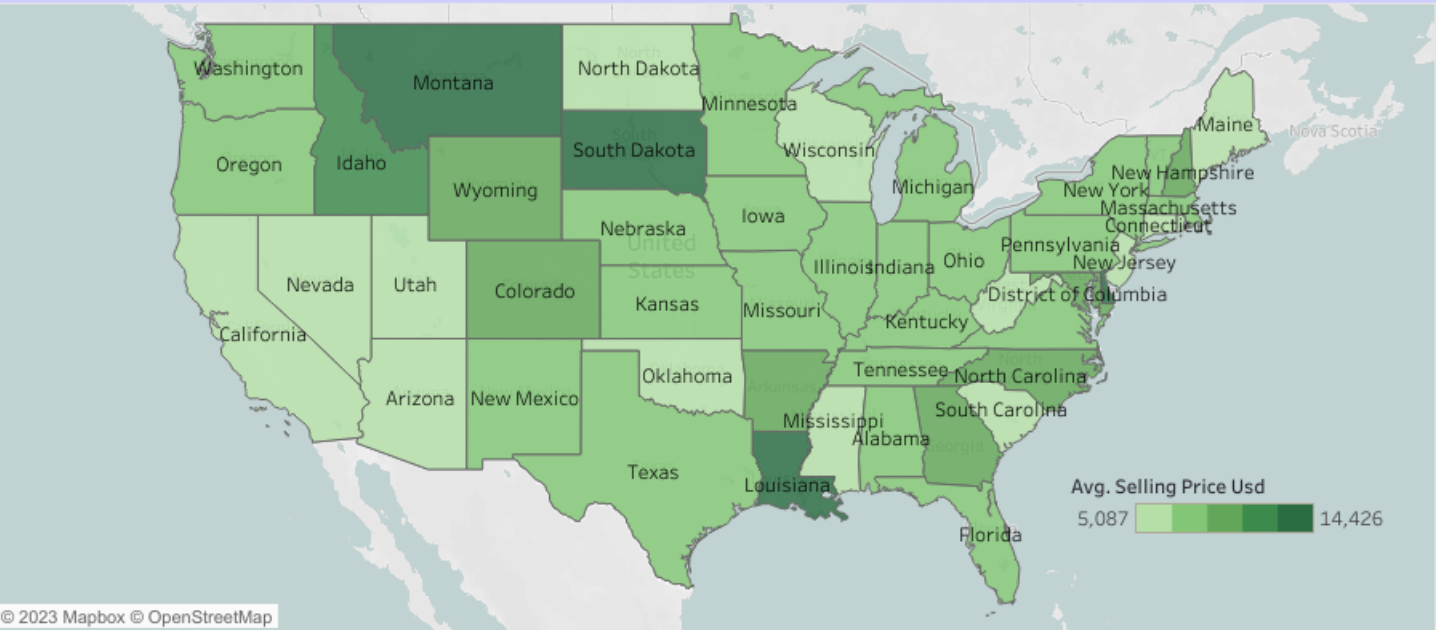
Used Car Sales Dashboard

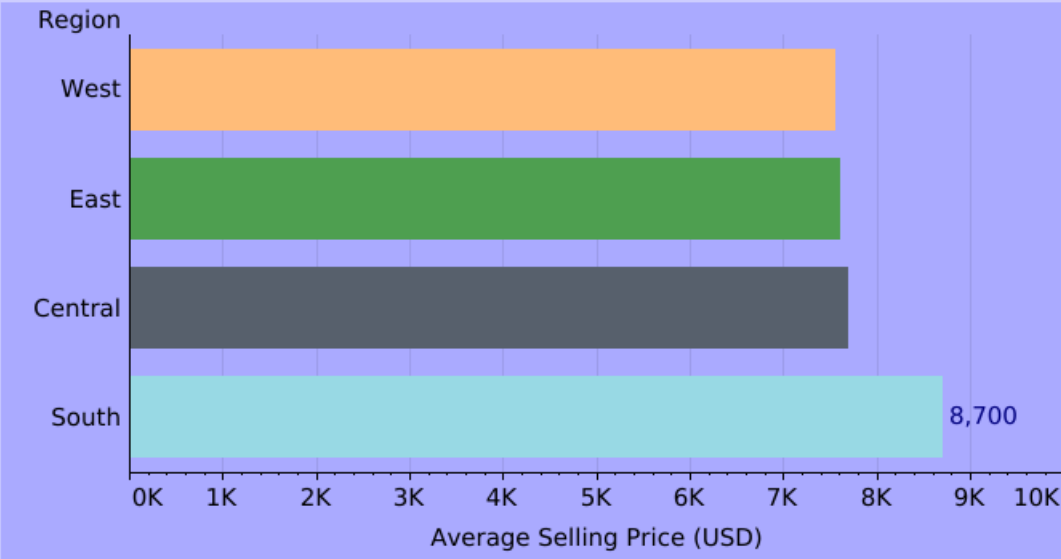## Total Number of Cars Sold Organized by Year (1994-2022)
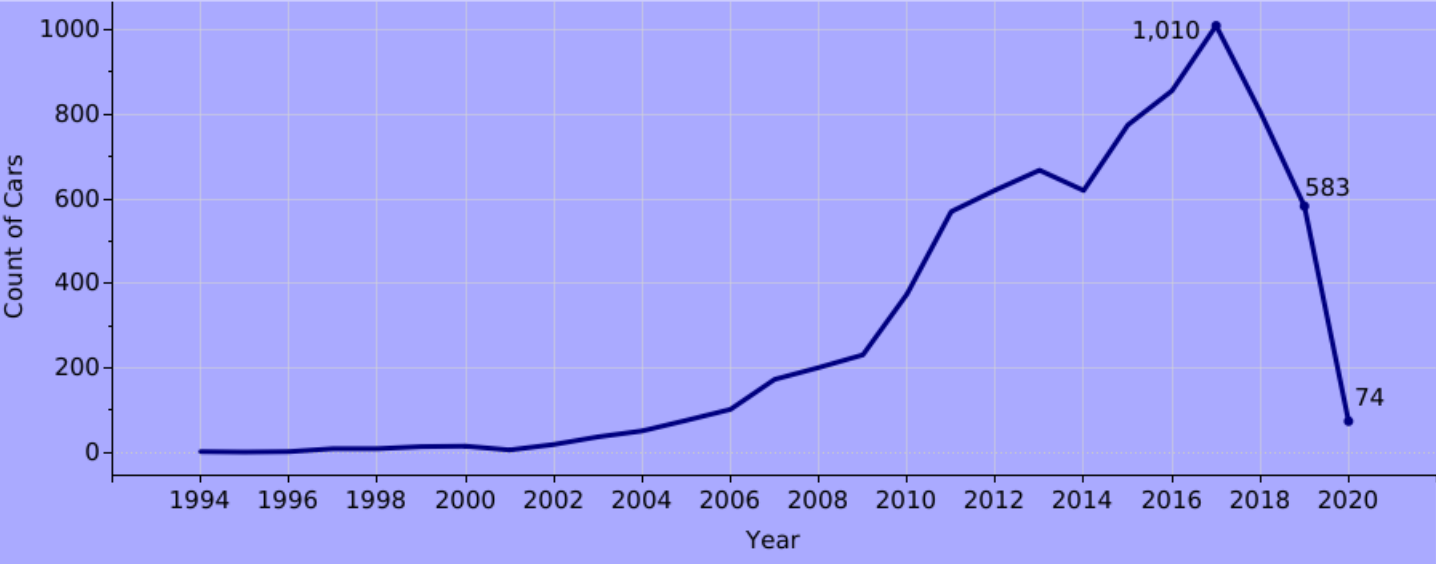
Top 5 Sold Cars based on Model Type

Name

2,367	Maruti

Number of Cars: Maruti 2,367, Hyundai, Mahindra, Tata, Honda
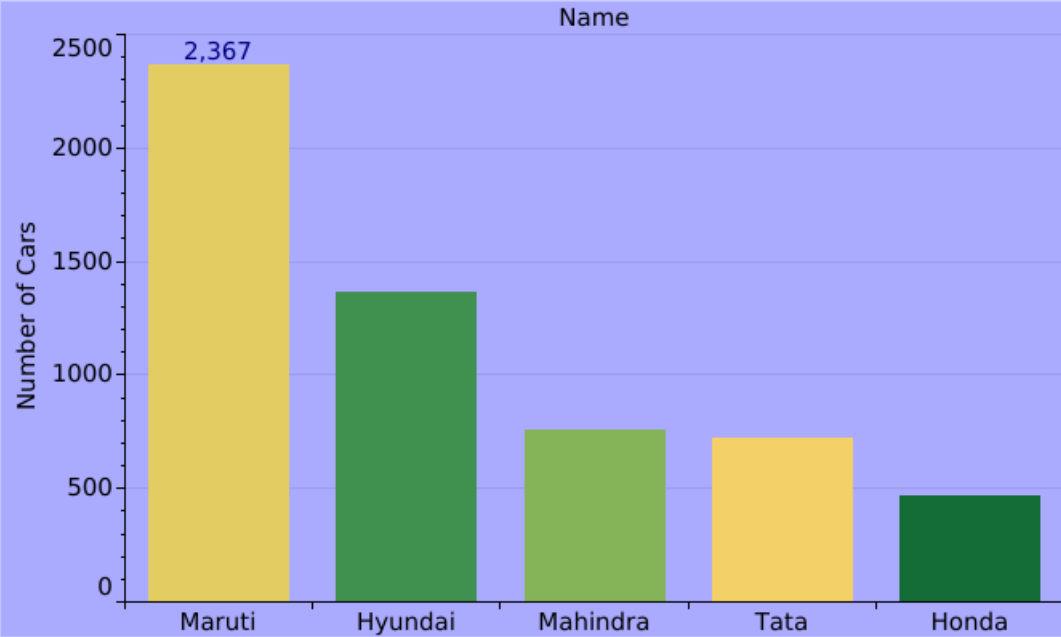
Average Selling Price for Cars Across the United States

Avg. Selling Price Usd
5,087 — 14,426

© 2023 Mapbox © OpenStreetMap

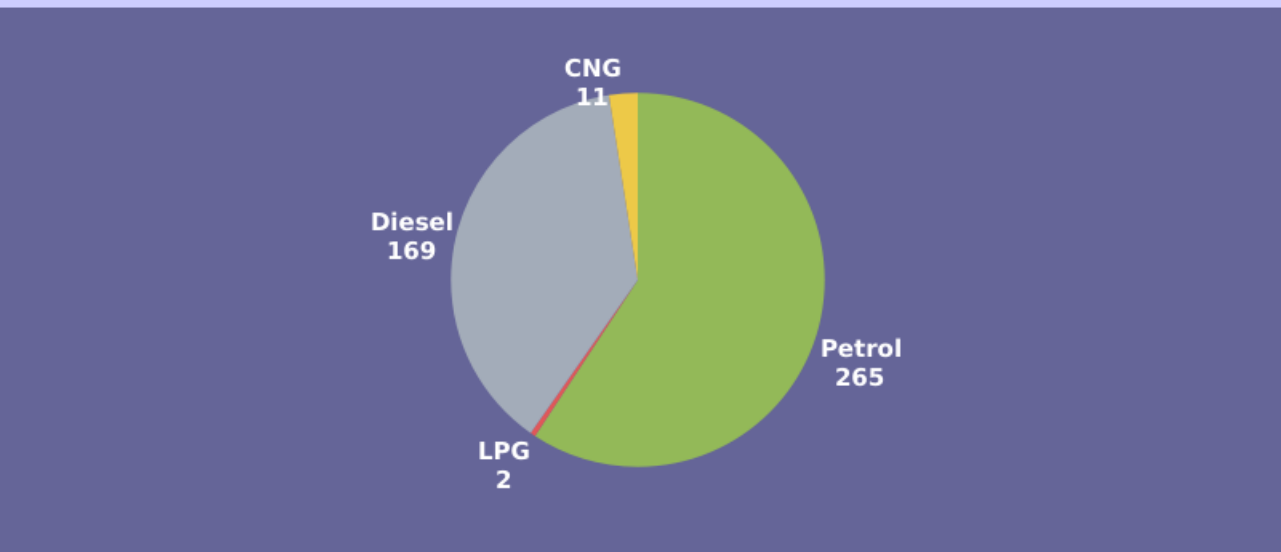## Average Car Sale Price Categorized by Region
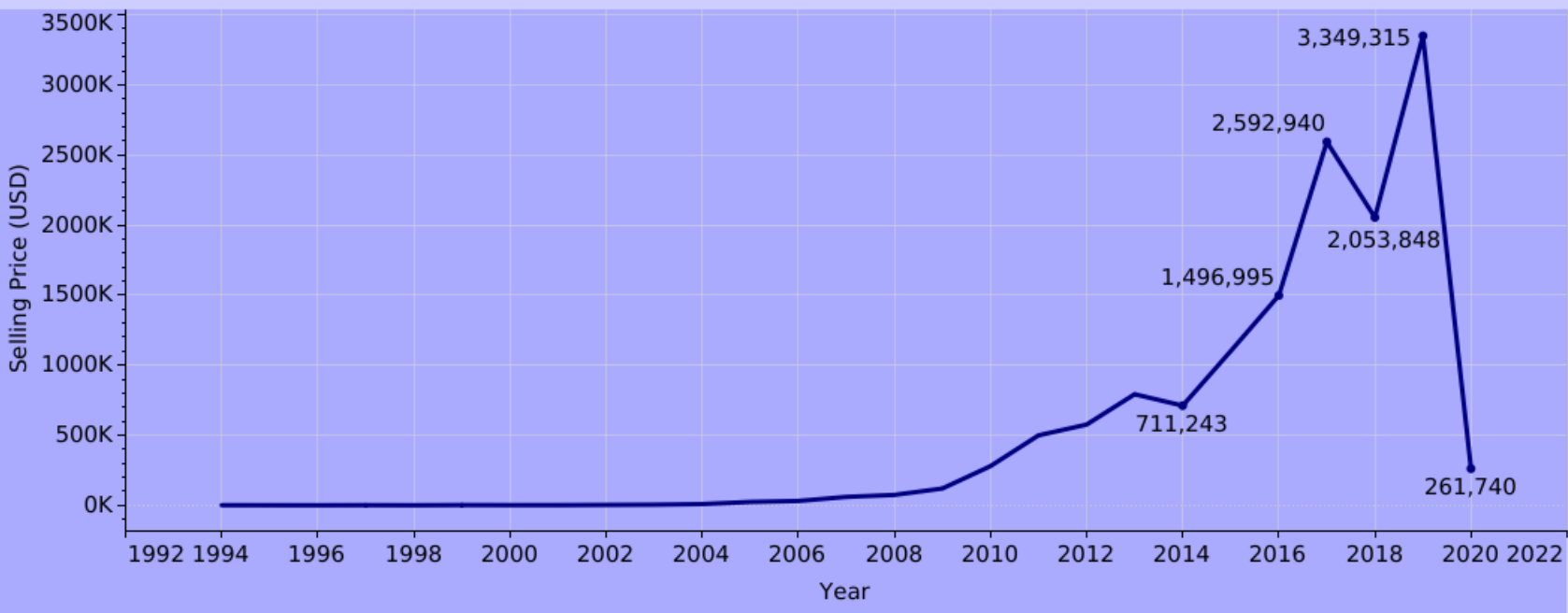

Region
West
East
Central
South 8,700

Average Selling Price (USD)

Used Cars Sold in 2017 and Southern Region

Most Common Fuel Type for the Maruti Model in the Southern Region

Pie chart:
- CNG 11
- Diesel 169
- LPG 2
- Petrol 265

Number of Cars Sold in 2017 by State

Count: 1 — 108

- California 108
- Florida 50
- North Carolina 35
- Illinois 73
- Texas 46
- Georgia 29
- Minnesota 29
- Ohio 42
- Washington 29
- New York 68
- Michigan 37
- Indiana 28
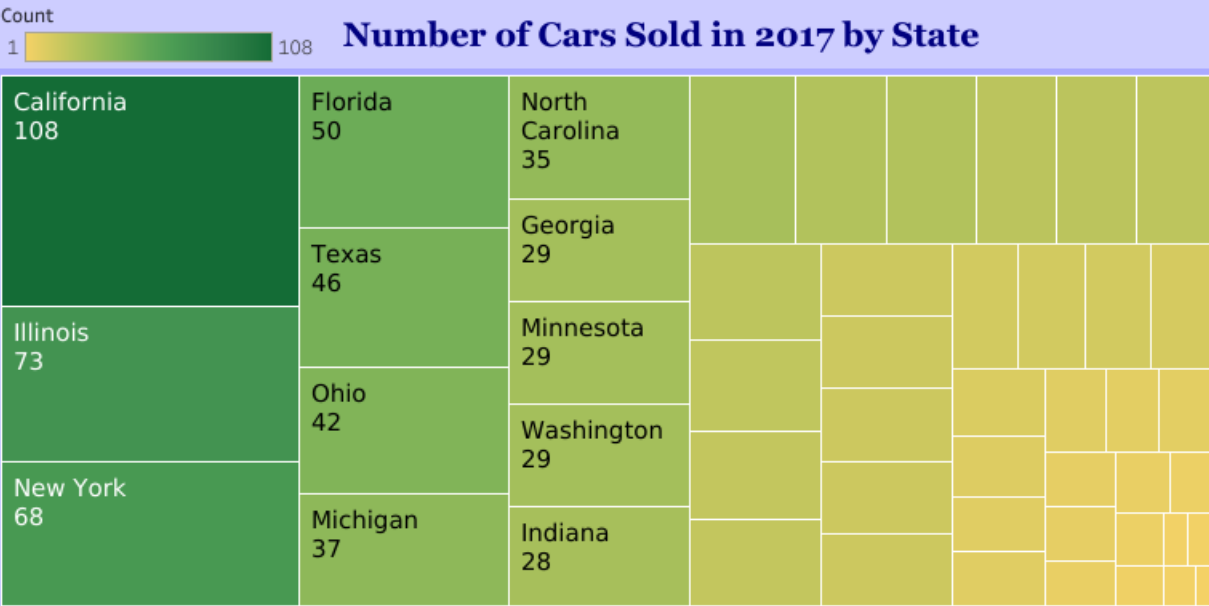
Total Selling Price of Cars from 1994 to 2022 in the Southern Region

Data labels: 711,243; 1,496,995; 2,592,940; 2,053,848; 3,349,315; 261,740

X-axis: Year (1992 – 2022)
Y-axis: Selling Price (USD) (0K – 3500K)

Number of Cars Sold in 2017 Organized by Fuel Type

Fuel:
- Diesel 569
- Petrol
- CNG

Y-axis: Number of Cars (0 – 600)
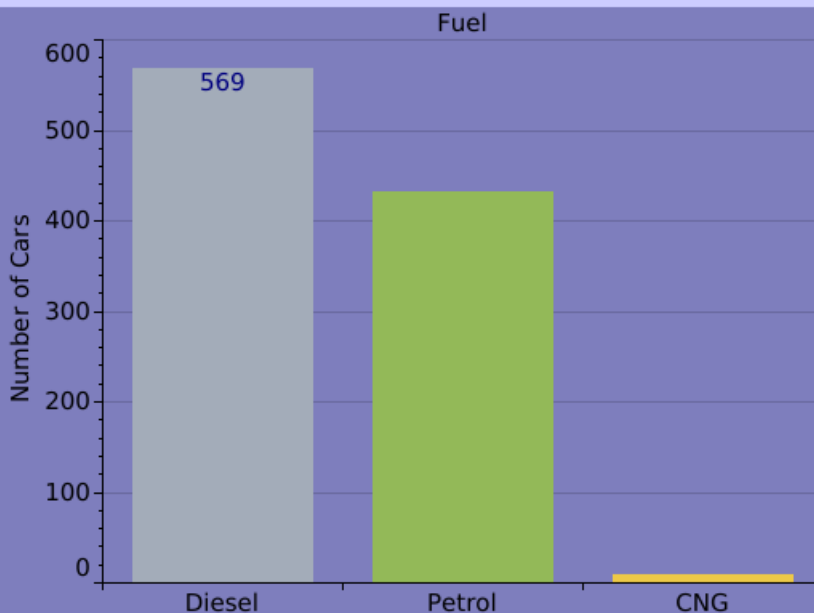
Conclusion

Key findings of the analysis and their implications for car sales

- Understand the factors that influence pricing: The analysis reveals the key factors that determine the price of a used car are the year of purchase, mileage, and fuel type.
  - Car dealerships or manufacturers can use this information to price their vehicles competitively and maximize their profit margins.

- Focus on popular brands and models: The analysis highlights the most popular models in the used car market as Maruti, Hyundai, Mahindra, Tata, and Honda.
  - Dealerships or manufacturers can focus their inventory on these models to increase their sales volume and customer satisfaction.

- Leverage location-based insights: The analysis shows that the Southern region has a higher demand for used cars.
  - Dealerships or manufacturers can use this information to tailor their marketing and sales efforts to those regions and cities to increase their sales.

- Optimize inventory: The analysis provides insights into the most sold cars (Maruti, Hyundai, Mahindra) in the used car market.
  - Dealerships or manufacturers can optimize their inventory to ensure that they have a good mix of these popular cars available for sale.

- Prioritize customer needs: The analysis reveals that the number of seats, fuel type, and mileage are some of the most important factors that influence a used car's selling price.
  - Dealerships or manufacturers can use this information to prioritize customer needs and preferences while designing and marketing their vehicles.

**Overall, by using the insights gained from the analysis of the used car market data, car dealerships or manufacturers can optimize their inventory, pricing, marketing, and sales efforts to increase their sales and revenue.

Next steps

Based on the insights and recommendations from the analysis, the following next steps could be taken by the company:

- Incorporate the insights gained from the analysis into the company's pricing strategy for used cars in the Indian market.

- Focus on selling the most popular car models and brands in the market to increase sales.

- Create marketing campaigns that target specific regions or cities based on the analysis findings.

- Train sales representatives on the factors that influence the pricing of used cars in the market, so they can better advise customers.

- Implement an online platform that makes it easy for customers to search and find used cars based on their preferences.

- Monitor the market and update the analysis periodically to keep up with changes in the market.

- Leverage the analysis to create a competitive advantage over other car dealerships or manufacturers in the Indian used-car market.

**By taking these next steps, the company can improve their sales and gain a stronger foothold in the Indian used-car market.