Presentation - TEAM P - JEEP

Slide 1: Title Slide

- **Title**: Analysis of Jeep Cars from Cars24
- **Subtitle**: Data Extraction and Analysis
- **Website URL**: Cars24

Slide 2: Data Extraction

- **Title**: Data Extraction
- **Description**: This step involved gathering data from the Cars24 website. Using web scraping techniques, the following data points were extracted for used Jeep cars available in Mumbai:

  Total available used cars for jeep in mumbai is: 8

  - **Car Name object**
  - **Year of Manufacture int64**
  - **Kilometers Driven(in km) int32**
  - **Fuel Type object**
  - **Transmission object**
  - **Price(in Lakhs) float64**

Slide 3: Data Cleaning

- **Title**: Data Cleaning
- **Description**: The extracted data required cleaning to ensure accuracy and usability. The following steps were performed:
  - **Removal of Unwanted Text**: Unwanted text and characters were removed from the data.
  - **Data Type Conversion**: Data types were converted to appropriate formats (e.g., integers for Year of Manufacture, floats for Price).
  - **Storage**: The cleaned data was stored in a CSV file for further analysis.

Slide 4: Summary Statistics

- **Title**: Summary Statistics
- **Description**: Descriptive statistics provide a summary of the key metrics in the dataset. Key statistics include Price(in Lakhs)

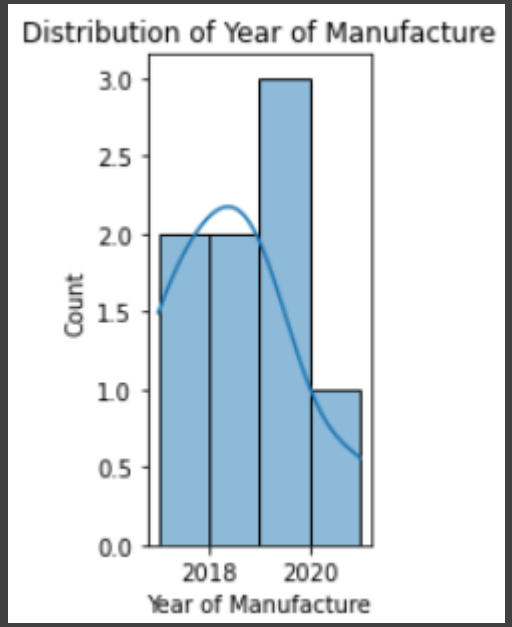
```
Summary Statistics:
       Unnamed: 0  Year of Manufacture  Kilometers Driven(in km)  \
count     8.00000              8.000000                  8.000000
mean      3.50000           2018.500000              43964.250000
std       2.44949              1.309307              27895.273664
min       0.00000           2017.000000              10405.000000
25%       1.75000           2017.750000              30578.500000
50%       3.50000           2018.500000              37808.500000
75%       5.25000           2019.000000              50074.500000
max       7.00000           2021.000000              99924.000000

       Price(in Lakhs)
count         8.000000
mean         12.282500
std           2.579384
min           9.320000
25%          10.007500
50%          12.015000
75%          14.870000
max          15.420000
```

Slide 5: Distribution Plots Overview

- **Title**: Distribution Plots
- **Description**: Distribution plots help visualize the spread and frequency of different variables in the dataset. The following key variables were analyzed:
  - **Year of Manufacture**: To understand the age distribution of the cars.
  - **Kilometers Driven**: To see how much the cars have been used.
  - **Price**: To assess the pricing distribution of the cars.

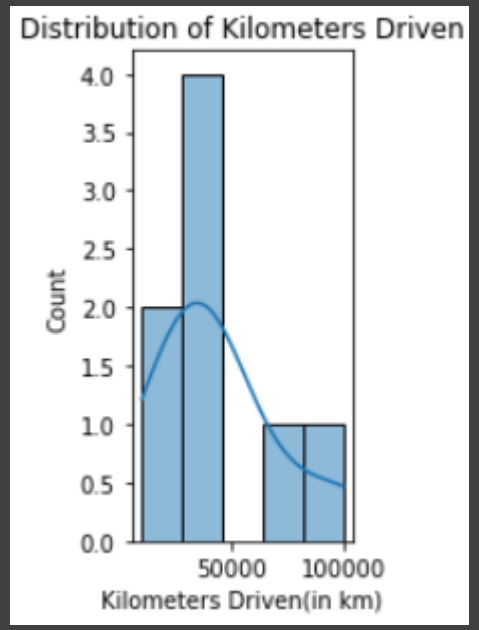
Slide 6: Year of Manufacture Distribution

- **Title**: Distribution of Year of Manufacture
- **Description**: This plot shows the distribution of the years in which the cars were manufactured. It helps in understanding the age range of the cars available on Cars24.



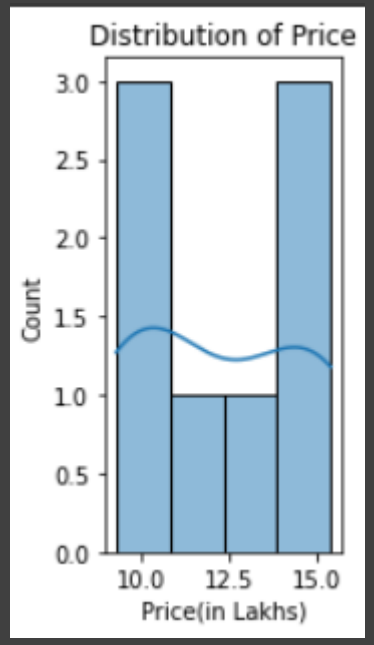
Slide 7: Kilometers Driven Distribution

- **Title**: Distribution of Kilometers Driven
- **Description**: This plot displays how many kilometers each car has driven. It provides insights into the usage patterns of the available cars.



Slide 8: Price Distribution

- **Title**: Distribution of Price
- **Description**: This plot shows the distribution of car prices. It helps in understanding the pricing trends and identifying any outliers in the dataset.

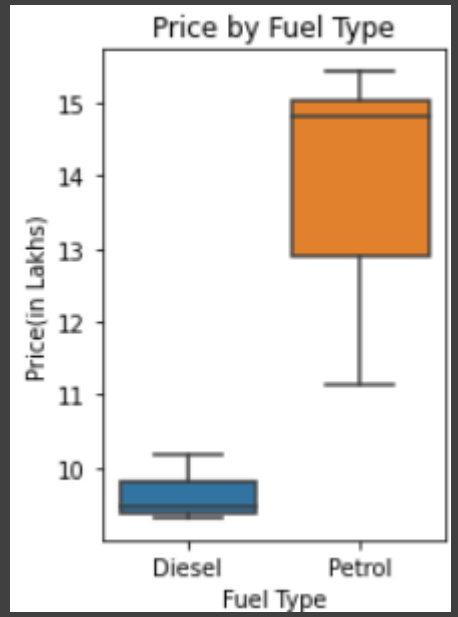


Slide 9: Box Plots Overview

- **Title**: Box Plots
- **Description**: Box plots provide a visual summary of the data's central tendency, dispersion, and outliers. The price distributions were analyzed based on:
    - **Fuel Type**: Comparison of prices between different fuel types (Petrol vs. Diesel).
    - **Transmission**: Comparison of prices between different transmission types (Manual vs. Automatic).

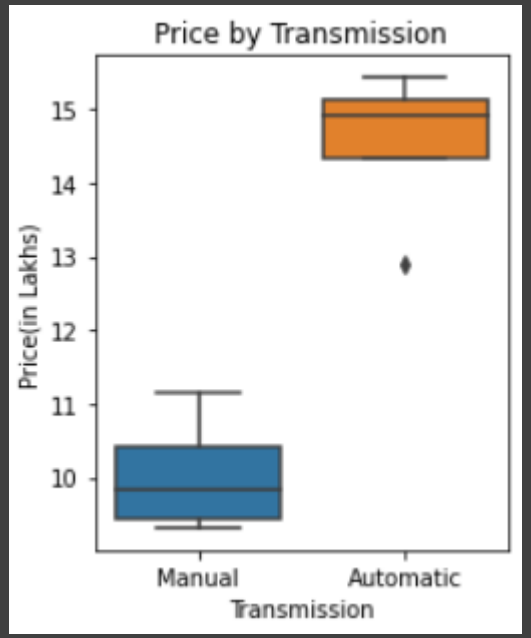
Slide 10: Price by Fuel Type

- **Title**: Price by Fuel Type
- **Description**: This box plot compares the prices of cars based on their fuel type. It highlights any price differences between petrol and diesel cars.



Slide 11: Price by Transmission

- **Title**: Price by Transmission
- **Description**: This box plot compares the prices of cars based on their transmission type. It shows the price differences between manual and automatic cars.



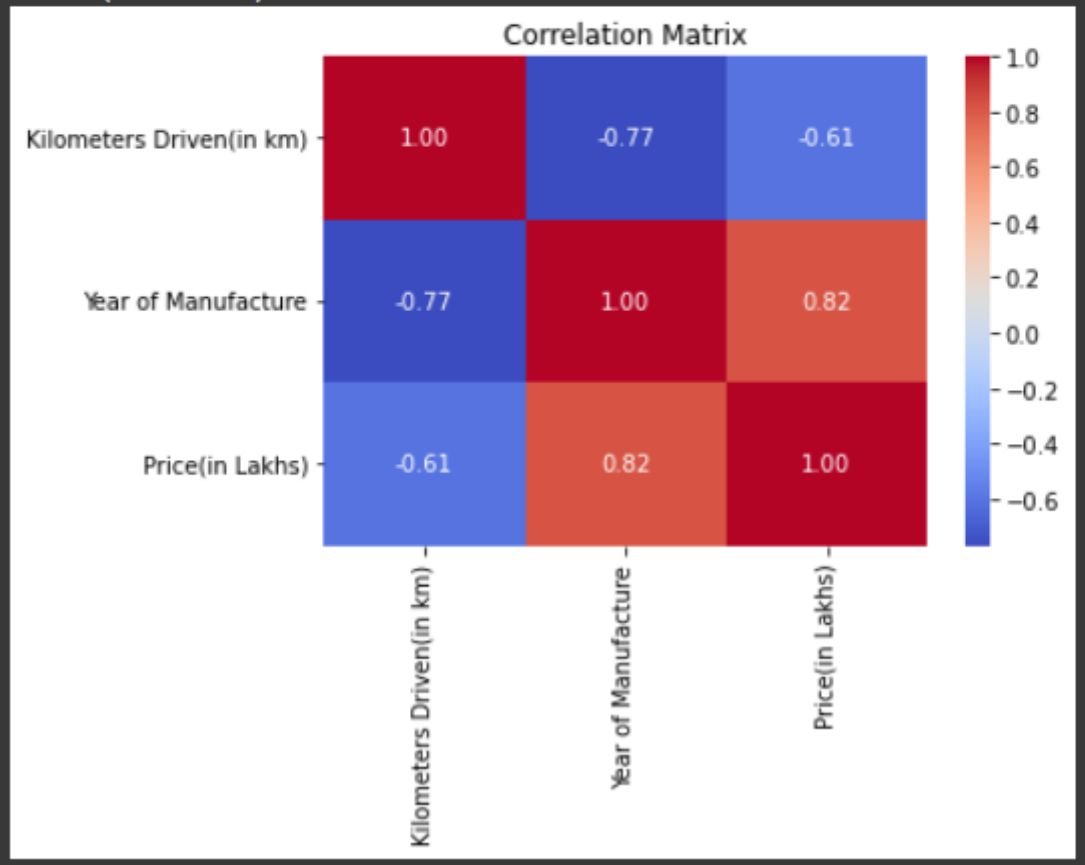
Slide 12: Correlation Analysis Overview

- **Title**: Correlation Analysis
- **Description**: Correlation analysis examines the relationships between different variables. Key variables analyzed include:
  - **Kilometers Driven**: The total kilometers driven by the car.
  - **Year of Manufacture**: The year the car was manufactured.
  - **Price**: The listed price of the car.

Slide 13: Correlation Matrix

- **Title**: Correlation Matrix
- **Description**: The correlation matrix visualizes the relationships between the key variables. Strong positive or negative correlations indicate a significant relationship between the variables.

```
Correlation Matrix:
                          Kilometers Driven(in km)  Year of Manufacture  \
Kilometers Driven(in km)                  1.000000            -0.770983
Year of Manufacture                      -0.770983             1.000000
Price(in Lakhs)                          -0.608742             0.817667

                          Price(in Lakhs)
Kilometers Driven(in km)        -0.608742
Year of Manufacture              0.817667
Price(in Lakhs)                  1.000000
```



Slide 14: Insights

- **Title**: Insights
- **Key Findings**:
  - - The average price of the cars is around 12.28 lakhs.
  - - The dataset contains cars mainly from the years 2017 to 2021 .
  - - Diesel cars have a different price distribution compared to petrol cars, as shown in the box plots.
  - - Automatic and manual transmission cars also show different price distributions.
  - - The correlation matrix shows the relationships between kilometers driven, year of manufacture, and price.