DATA

INSIGHTS

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Done by : Team K

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(Co - Lead)

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Arusa Begum

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Yash Singh

Alok

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Ishan Rathore

Komal shyam Pathade

OBJECTIVES

Our objective is to collect and scrape detailed data on various types of cars for sale in different locations from Cars24.com. We will focus on ensuring data accuracy through meticulous cleaning and processing, with the ultimate goal of delivering valuable insights for potential buyers and sellers.

DATA COLLECTION

Website used

The data was sourced from Cars24.com, a leading site for used car listings.

Key data points

The extraction focused on car model, price, year of manufacture, mileage, fuel type, transmission, and location.

Python libraries utilized

Beautiful Soup was used for HTML parsing, while Selenium was employed to manage dynamic content.

Automated Scraping Process

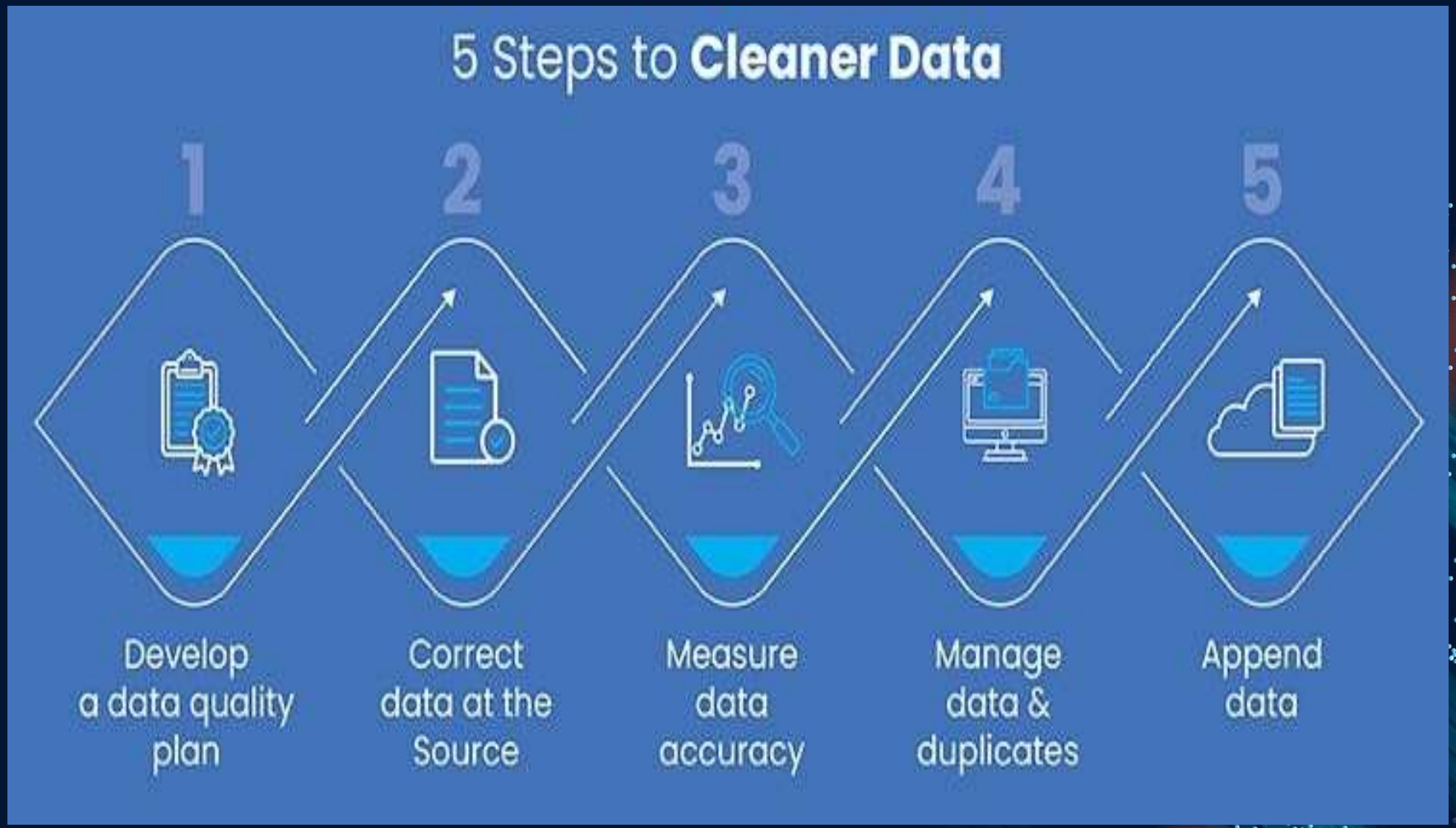
Python scripts were crafted to automate data extraction, ensuring both efficiency and thoroughness.

Data Accuracy

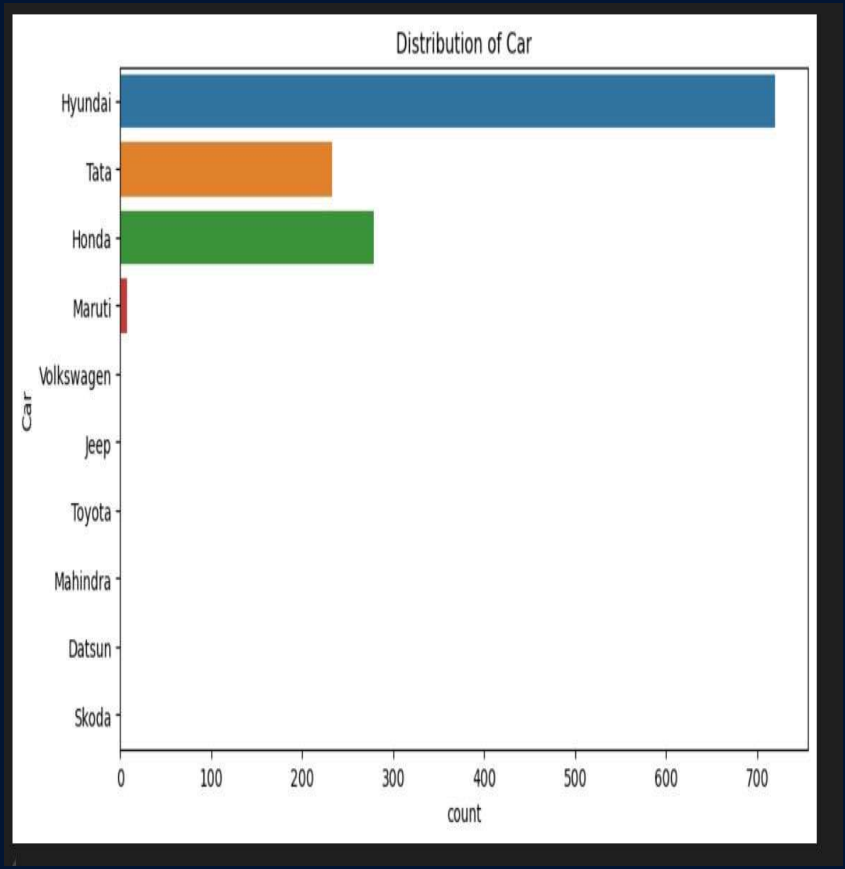
Python scripts were crafted to automate data extraction, ensuring both efficiency and thoroughness.

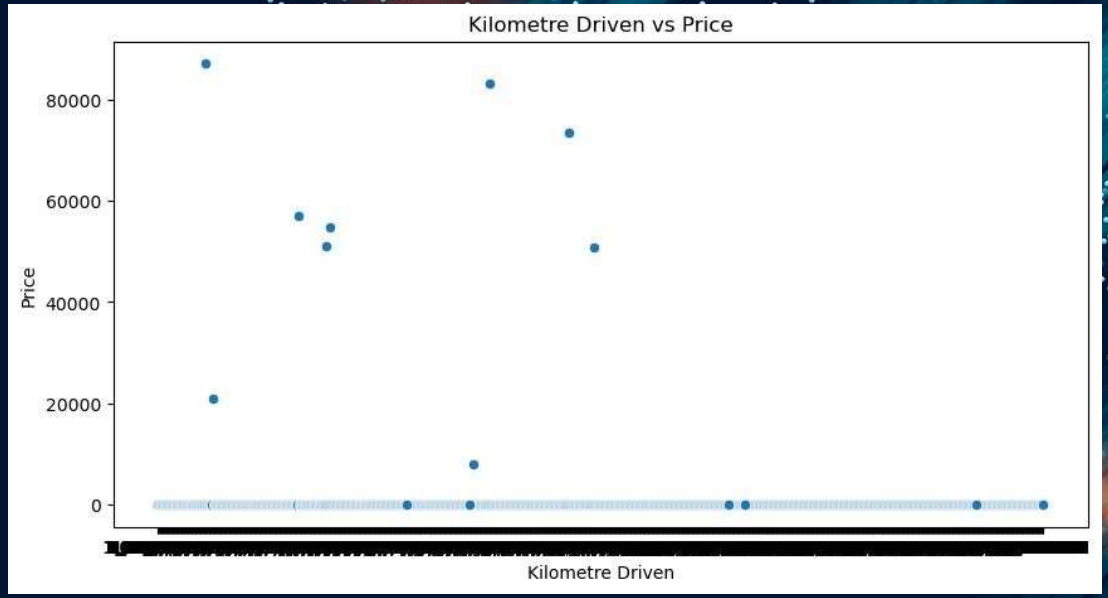
DATA CLEANING

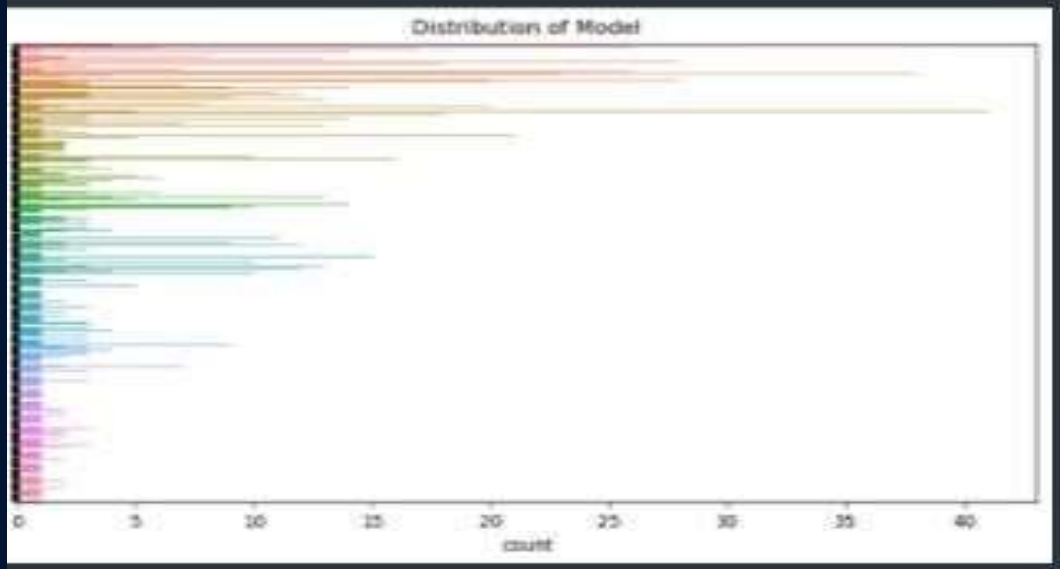
By eliminating duplicate entries, adding missing values, standardizing data formats, fixing data types, and spotting outliers, we improved our dataset through data cleaning. These procedures guaranteed the accuracy, consistency, and dependability of our data for analysis.


5 Steps to Cleaner Data
1
2
3
4
5
Develop a data quality plan
Correct data at the Source
Measure data accuracy
Manage data & duplicates
Append data

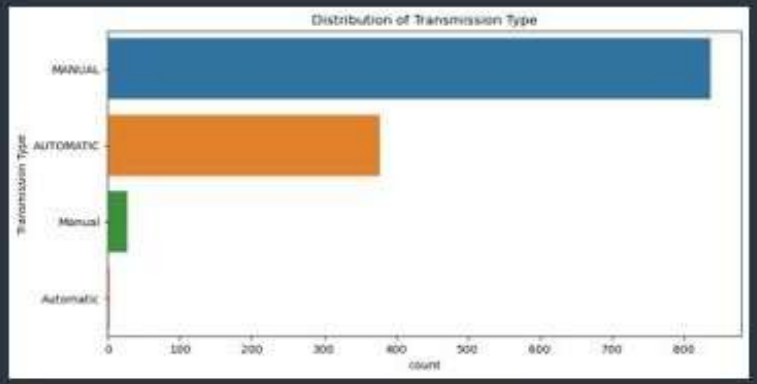
Data Analysis

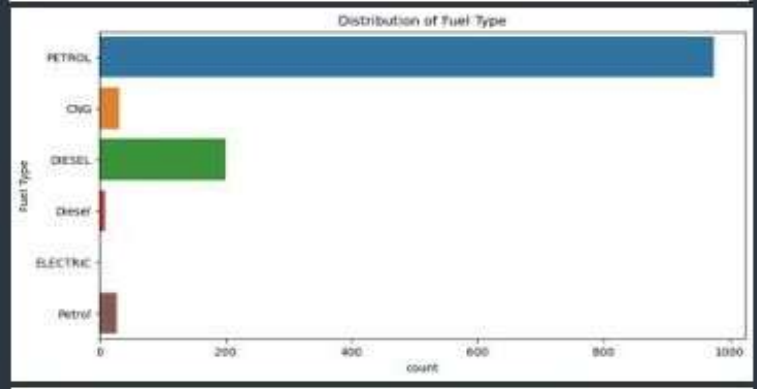


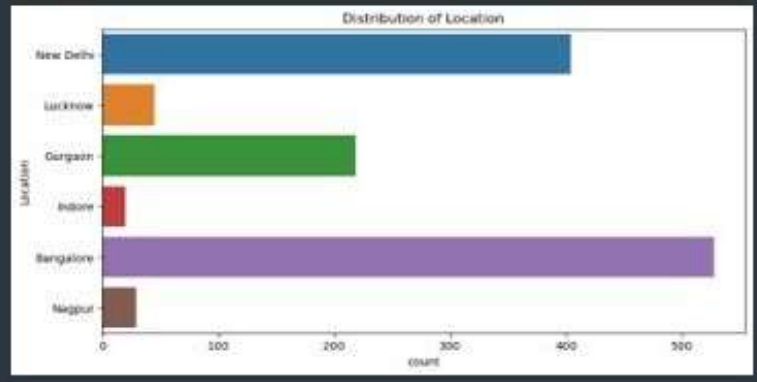


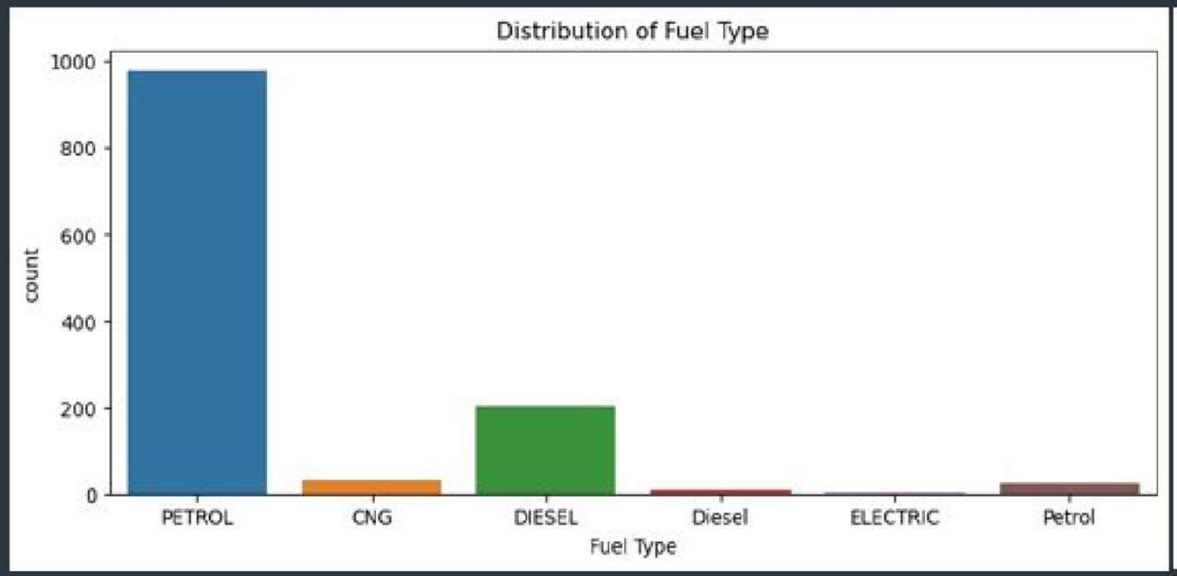

Distribution of Model
0
5
10
15
20
25
30
35
40
count

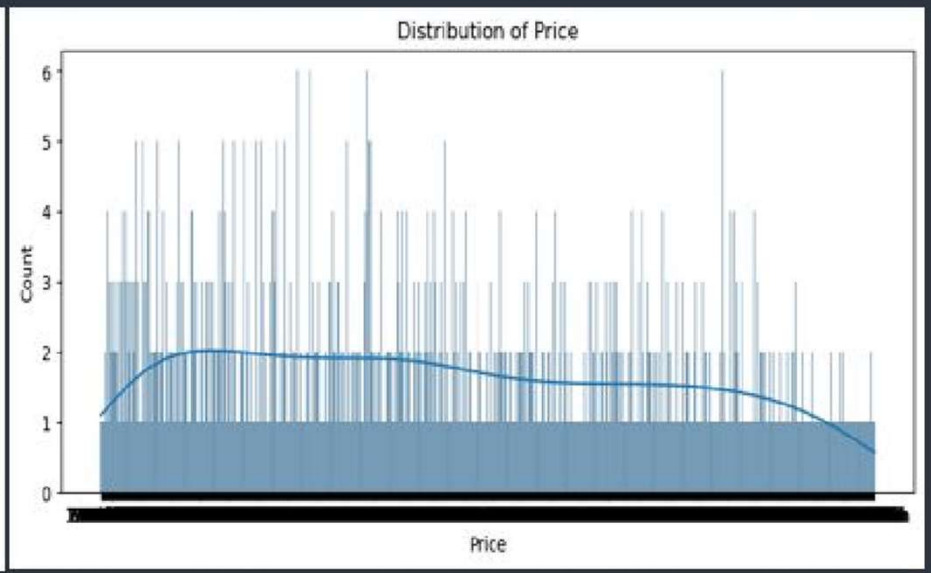
Distribution of Price
0
1
2
3
4
5
6
count

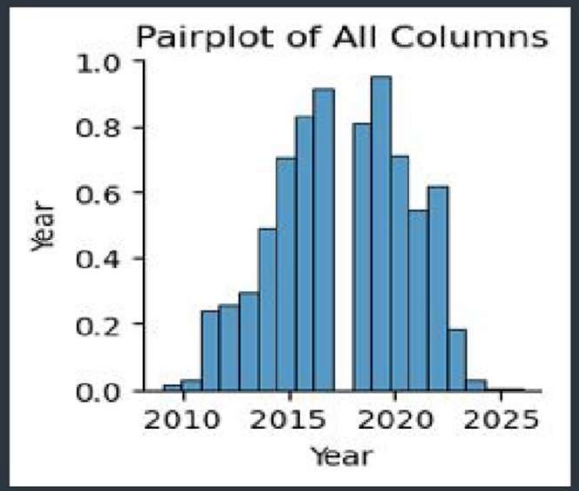

Distribution of Transmission Type
MANUAL
AUTOMATIC
Manual
Automatic
Transmission Type
0
100
200
300
400
500
600
700
800
count

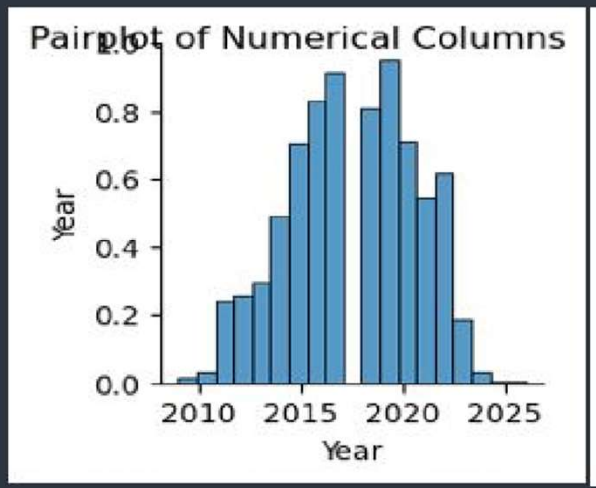

Distribution of Fuel Type
PETROL
CNG
DIESEL
Diesel
ELECTRIC
Petrol
Fuel Type
0
200
400
600
800
1000
count

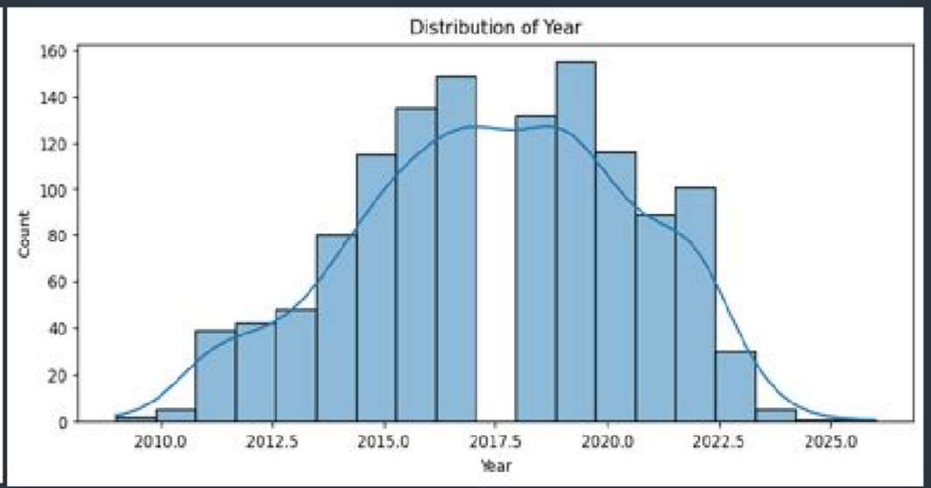

Distribution of Location
New Delhi
Lucknow
Gurgaon
Indore
Bangalore
Nagpur
Location
0
100
200
300
400
500
count


Distribution of Fuel Type
count
Fuel Type
PETROL
CNG
DIESEL
Diesel
ELECTRIC
Petrol


Distribution of Price
Count
Price


Pairplot of All Columns
Year
Year


Pairplot of Numerical Columns
Year
Year


Distribution of Year
Count
Year

Cars24 Dashboard
1233
Count of Model
Year
All
Transmissi...
All
Location
Bangalore
Gurgaon
Indore
Lucknow
Nagpur
New Delhi
Price by Car
3.86 lakh
4.02 lakh
4.53 lakh
5.66 lakh
3.31 lakh
4.17 lakh
Year-wise Car Distribution
2015
Count of Car 115
Count of Cars By Company Name
233 (18.9%)
280 (22....)
720 (58.39%)
Car
Hyundai
Honda
Tata
Price Car Transmission Type Kilometre Driven Year Model
5.24 lakh Hyundai MANUAL 46,562 KM 2018 Xcent S 1.2 CRDI
4.35 lakh Hyundai MANUAL 43,633 KM 2018 Xcent
6.49 lakh Honda MANUAL 46,515 KM 2018 WR-V 1.2L I-VTEC
8.24 lakh Honda MANUAL 38,678 KM 2021 WR-V
7.01 lakh Hyundai MANUAL 33,353 KM 2017 Verna
8.51 lakh Hyundai MANUAL 48,413 KM 2021 VENUE
4.94 lakh Tata MANUAL 49,572 KM 2019 Tiago XZ PLUS PET
4.69 lakh Tata MANUAL 70,736 KM 2019 Tiago XZ PETROL
Total 2487558
HYUNDAI
TATA
HONDA

Cars24 Dashboard
1233
Count of Model
Year
All
Transmission...
All
Location
Bangalore
Gurgaon
Indore
Lucknow
Nagpur
New Delhi
Price by Car
3.86 lakh
4.02 lakh
4.53 lakh
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Year-wise Car Distribution
Count of Cars By Company Name
233 (18.9%)
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Hyundai
Honda
Tata
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4.94 lakh Tata MANUAL 49,572 KM 2019 Tiago XZ PLUS PET
4.69 lakh Tata MANUAL 70,736 KM 2019 Tiago XZ PETROL
Total 2487558
HYUNDAI
TATA
HONDA

Cars24 Dashboard
528
Count of Model
Year
All
Transmission...
All
Location
Bangalore
Gurgaon
Indore
Lucknow
Nagpur
New Delhi
Price by Car
4.53 lakh
4.19 lakh
4.36 lakh
4.58 lakh
5.68 lakh
3.02 lakh
Year-wise Car Distribution
Count of Cars By Company Name
95 (17.99%)
114 (2...)
319 (60.42%)
Car
Hyundai
Honda
Tata
Price Car Transmission Type Kilometre Driven Year Model
4.8 lakh Tata AUTOMATIC 79,684 KM 2015 Tata Zest XTA F-TRON
3.72 lakh Tata MANUAL 75,916 KM 2015 Tata Zest XMS PETROL
4.4 lakh Tata MANUAL 80,078 KM 2016 Tata Zest XMS PETROL
3.69 lakh Tata AUTOMATIC 96,667 KM 2014 Tata Zest XMA F-TRON
7.03 lakh Tata AUTOMATIC 33,984 KM 2020 Tata TIGOR XZA PLUS
4.65 lakh Tata AUTOMATIC 94,257 KM 2017 Tata TIGOR XZA PETRO
5.2 lakh Tata AUTOMATIC 70,793 KM 2018 Tata TIGOR XZA PETRO
6.65 lakh Tata MANUAL 27,603 KM 2020 Tata TIGOR XZ PLUS P
Total 1065168
HYUNDAI
TATA
HONDA

Data Insights And Findings

Popular Models:
Hyundai And Honda

Average :
Manual - rs 7.21 lakhs,
Automatic - rs 7.59 lakhs

Fuel Type Preference:
Petrol cars dominate the listing

Transmissions preference:
The data reveals a significant preference for manual transmission cars.

Challenges

- Dynamic Web : Content adapting scraping techniques to handle dynamic web content
- Data Accuracy ：Ensuring data accuracy and completeness
- Missing Data ：Dealing with incomplete or missing data

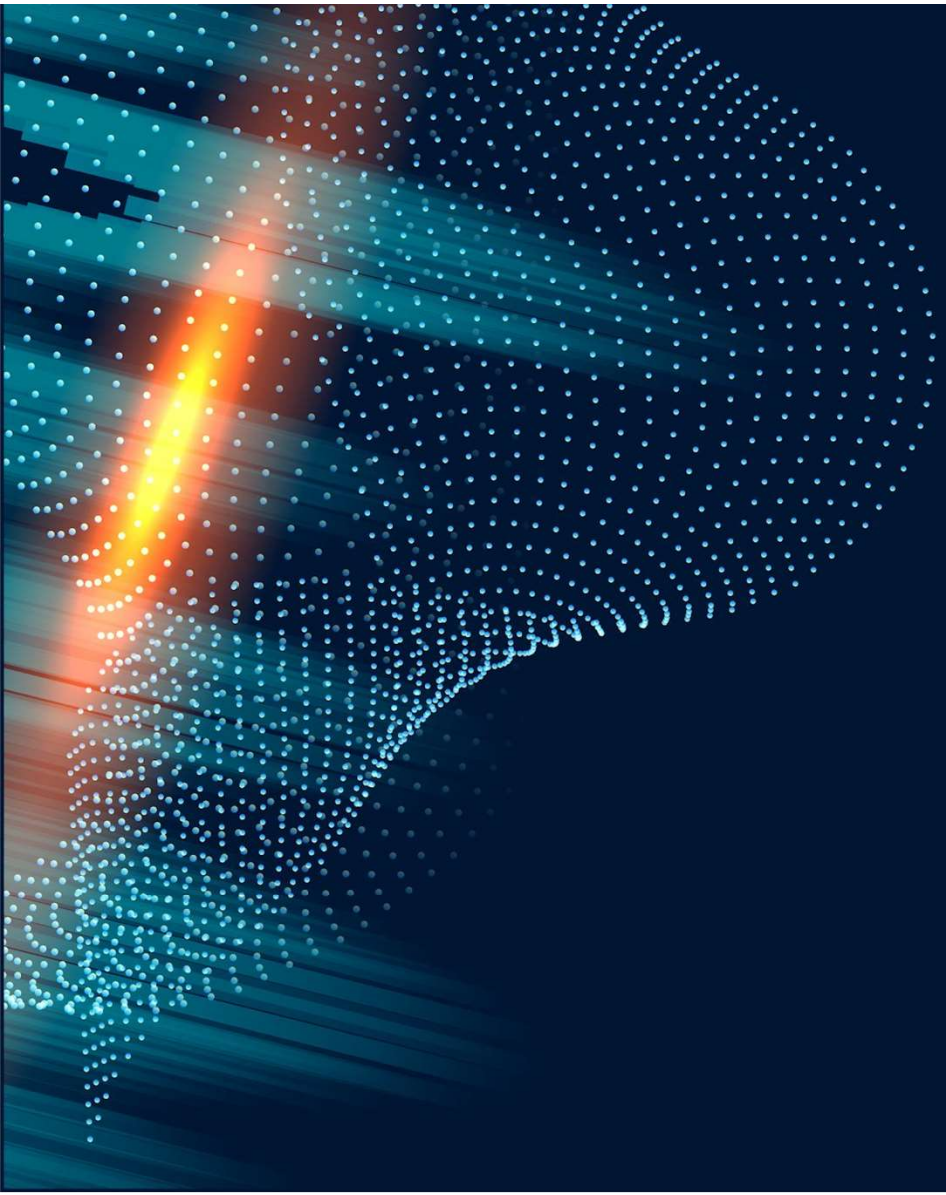
Conclusion

- **Successful Data Collection:**
  Scraped detailed information on Tata cars in NewDelhi,Mumbai,Gurgaon,Lucknow,Banglore,pune,Nagpur from Cars24.com using Python libraries like Beautifulsoup and Selenium.

- **Key Insights:**

  - Most popular models identified.
  - Average pricing trends analyzed.
  - Mileage ranges, fuel type, and transmission preferences determined.
  - **Challenges Overcome:** Managed dynamic web content and ensured data accuracy.
  - **Future Work:** Automate scraping for real-time data updates and continuous analysis.

- **Value**
  - Provides valuable insights for buyers and sellers in the New Delhi,pune,Nagpur,lucknow,Gurgaon,Mumbai car market.



THANKYOU

We are now open to any questions or feedback that you may have.