***DATASET ANALYSIS***

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***INTRODUCTION***

MySQL project titled “CAR DEKHO” which is analysis of second hand car sales with SQL. The data includes information about various car models their selling price, mileage, year,

torque, max power and other features. This report provides an

analysis of a used car datasets, with a focus on identifying basic trends and insights. The analysis includes a description of

the data cleaning process to ensure the accuracy and reliability of the results.

***OBJECTIVE***

**1.Data Collection**

By acquiring a well-structured dataset. This dataset included details such as selling price, seller type, mileage, year, owner, fuel and more. The data was stored in a relational database.

**2.Data Cleaning and Preprocessing**

* Before performing the analysis, the dataset underwent a data cleaning process to correct any inaccuracies and prepare the data for analysis.
* The dataset was checked for duplicates records and removed the duplicates.
* Initially, the dataset contained 7927 rows, after data cleaning it was reduced to 6722.

**3. SQL Queries**

This involved a range of SQL operations, including SELECT, MAX() , MIN() , AVG() , UPDATE, ALTER, WILD CARD OPERATOR, GROUP BY, ORDER BY , AND Aggregation functions.

**DATA ANALYSIS**

* The dataset includes cars from 31 different companies.
* Maruti being the most common brand.
* The range of cars spans from budget friendly models like the Maruti 800 AC to luxury vehicles such as the Volvo XC90 T8 Excellence and BMW.
* The manufacturing years of these cars range from 1994 to 2023, with the majority produced in 2017
* Selling price:

* The price starts at 29,999 for the Maruti 800 AC.
* The most expensive model, the Volvo XC90 T8 Excellence, is priced at 10,000,000.
* Most cars fall within the price range of 29,999 to 600,000.

* Mileage:
* The Volvo XC90 T8 Excellence BSIV boasts the highest mileage at 42.
* The lowest recorded mileage Volvo at 9.
* On average, these cars offer a mileage of 19, catering to both efficiency and performance.
* Torque:
* The Maruti Zen D leads with a maximum torque of 789.
* Tata Nano LX has the lowest torque at 4.
* The average torque across the cars stands at 160, providing a balanced driving experience.
* Ownership:
* A significant portion of the cars are first owner vehicles, reflecting careful ownership and potential for better condition.
* Ownership distribution is as follows:

First owner : 5221 cars

Second owner : 2015 cars

Fourth and above : 153 cars

Test drive cars : 5 cars

* Only 5 cars in test drive , it indicating minimal prior usage.
* Seating capacity:
* The majority of cars are equipped with 5 seats, catering to standard passenger needs.
* An outlier in the dataset, the Tata Winger Deluxe, boasts a remarkable 14 seat capacity, ideal for larger groups or commercial use.
* Kilometers driven:
* The majority of the cars have been driven beyond 100,000km.
* The highest mileage is recorded is by a Maruti Wagon R LXI Minor with an impressive 577,414 km.
* The average mileage across all cars stands at 72,700 km.
* Fuel type:
* Diesel and petrol are the predominant fuel types.
* Breakdown by fuel type:
* Diesel :4298 cars
* Petrol : 3523 cars
* CNG : 52 cars
* LPG : 35 cars
* Electric : 1 car
* Seller type:
* The majority of cars are sold by individual sellers.
* Seller distribution:
* Individual : 6561
* Dealer : 1109
* Trust mark dealers : 236
* Transmission type:
* Manual transmissions dominate the market.
* Breakdown by the transmission type:
* Manual : 6867 cars
* Automatic : 1042 cars

**CONCLUSION**

The dataset reveals a diverse used car market, offering options that cater to all types of buyers, ranging from those seeking economical vehicles to those with a preference for luxury.

Buyers are advised to prioritize low-kilometer vehicles, especially those from the latest manufacturing years. This approach ensures better value retention and helps minimize future maintenance costs.

Power is shown to have a positive correlation with the selling price. This suggests that higher-powered vehicles are more desirable, making them more expensive in the market.