

REPORT

INTRODUCTION

Welcome to this comprehensive report, where we explore and analyse the details of cars with database 'car_dekho'. This report aims to provide a detailed overview and insights into the given dataset. Through this analysis and interpretation, we have uncovered valuable findings.

This report focuses on the analysis of the car_table, which contains a vast array of information about various cars, including their features, specifications, and characteristics.

Using SQL queries, we have extracted and analyzed key data points from the car_table to gain a deeper understanding of the dataset. The queries analyzed include:

1. Most Expensive Car
2. Average KM Driven by Owner
3. Cars with Automatic Transmission and Petrol
4. Cars with 4 Seats
5. Company Name Analysis
6. Cars with mileage greater than 20.0 and selling price of 500000
7. Cars with max power greater than 150
8. Cars with Engine Containing '1197' and Fuel Starting with 'P'
9. Torque Analysis
10. Cars with year 2023, owner 'First Owner', and engine capacity greater than 1000
11. Count of Cars with 4 Seats
12. Total Selling Price
13. Lowest Mileage
14. Highest Max Power by Engine

15. Unique Company Names
16. Remove Cars with Mileage = 0
17. Most Driven Car
18. Company Name and Seller Type for Dealers
19. Average KM Driven for CNG Fuel
20. Owner and Count of Cars

OBJECTIVE

The objective of this report is to conduct a comprehensive analysis of the car_table dataset within the Car_Dekho database, encompassing:

1. Data Collection:

Acquire a well-structured dataset from the Car_Dekho database, encompassing various attributes and features of cars.

2. Data Cleaning and Preprocessing:

Perform thorough data cleaning and preprocessing tasks to ensure data integrity, handle missing values, duplicate records, and outliers.

3. SQL Queries:

Design and execute SQL queries to extract and analyze key data points, including:

- Identifying the most expensive car and its features
- Analyzing the average km driven by owner and other relevant Metrics
- Filtering cars with specific features such as automatic transmission, petrol fuel, and 4 seats
- Extracting company names and analyzing torque data
- Identifying cars with high mileage, max power, and specific engine and fuel combinations

DATA OVERVIEW

COLUMN NAME	DATA TYPE
company_name	varchar
engine	text
fuel	text
km_driven	int
km_driven_category	varchar
max_power	text
mileage	text
mileage_category	varchar
Model	text
owner	text
seats	int
seller_type	text
selling_price	int
Torque	varchar
transmission	text
year	int

INSIGHTS

I. MOST EXPENSIVE CAR

- QUERY: **SELECT * FROM CAR_TABLE ORDER BY SELLING_PRICE DESC LIMIT 1;** -
- RESULTS: DISPLAY THE MOST EXPENSIVE CAR'S DETAILS

II. AVERAGE KM DRIVEN BY OWNER

- QUERY: **SELECT OWNER, AVG(KM_DRIVEN) FROM CAR_TABLE GROUP BY OWNER;** -
- RESULTS: DISPLAY THE AVERAGE KM DRIVEN FOR EACH OWNER

III. CARS WITH AUTOMATIC TRANSMISSION AND PETROL

- QUERY: **SELECT * FROM CAR_TABLE WHERE TRANSMISSION = 'AUTOMATIC' AND FUEL = 'PETROL';**
- RESULTS: DISPLAY THE CARS WITH AUTOMATIC TRANSMISSION AND PETROL

IV. CARS WITH 4 SEATS

- QUERY: **SELECT * FROM CAR_TABLE WHERE SEATS = 4;**
- RESULTS: DISPLAY THE CARS WITH 4 SEATS

V. COMPANY NAME ANALYSIS

- QUERY: **SELECT TRIM(NAME), YEAR FROM CAR_TABLE ORDER BY TRIM(NAME);**
- RESULTS: DISPLAY THE COMPANY NAME ANALYSIS

VI. CARS WITH MILEAGE > 20.0 AND SELLING PRICE = 500000

- QUERY: **SELECT * FROM CAR_TABLE WHERE MILEAGE > 20.0 AND SELLING_PRICE = 500000 ORDER BY KM_DRIVEN DESC LIMIT 1;**
- RESULTS: DISPLAY THE CARS WITH MILEAGE > 20.0 AND SELLING PRICE = 500000

VII. CARS WITH MAX POWER > 150

- QUERY: **SELECT * FROM CAR_TABLE WHERE MAX_POWER > 150 ORDER BY MAX_POWER DESC LIMIT 1;**
- RESULTS: DISPLAY THE CARS WITH MAX POWER > 150

VIII. CARS WITH ENGINE CONTAINING '1197' AND FUEL STARTING WITH 'P'

- QUERY: **SELECT * FROM CAR_TABLE WHERE ENGINE LIKE '%1197%' AND FUEL LIKE 'P_____';**
- RESULTS: DISPLAY THE CARS WITH ENGINE CONTAINING '1197' AND FUEL STARTING WITH 'P'

IX. TORQUE ANALYSIS

- QUERY: **SELECT SUBSTRING_INDEX(TORQUE, '@', 1) AS TORQUE FROM CAR_TABLE;**
- RESULTS: DISPLAY THE TORQUE ANALYSIS

X. CARS WITH YEAR 2023, OWNER 'FIRST OWNER', AND ENGINE > 1000

- QUERY: **SELECT * FROM CAR_TABLE WHERE YEAR = '2023' AND OWNER = 'FIRST OWNER' AND ENGINE > 1000 ORDER BY COMPANY_NAME;**
- RESULTS: DISPLAY THE CARS WITH YEAR 2023, OWNER 'FIRST OWNER', AND ENGINE > 1000

XI. COUNT OF CARS WITH 4 SEATS

- QUERY: **SELECT COUNT(*) FROM CAR_TABLE AS COUNT_SEAT WHERE SEATS = 4;** -
RESULTS: DISPLAY THE COUNT OF CARS WITH 4 SEATS

XII. TOTAL SELLING PRICE

- QUERY: **SELECT SUM(SELLING_PRICE) AS TOTAL FROM CAR_TABLE;**
- RESULTS: DISPLAY THE TOTAL SELLING PRICE

XIII. LOWEST MILEAGE

- QUERY: **SELECT MIN(MILEAGE) AS LOWEST_MILEAGE FROM CAR_TABLE;**
- RESULTS: DISPLAY THE LOWEST MILEAGE

XIV. HIGHEST MAX POWER BY ENGINE

- QUERY: **SELECT ENGINE, MAX(MAX_POWER) AS HIGHEST_MAX_POWER FROM CAR_TABLE GROUP BY ENGINE LIMIT 5;**
- RESULTS: DISPLAY THE HIGHEST MAX POWER BY ENGINE

XV. UNIQUE COMPANY NAMES

- QUERY: **SELECT DISTINCT COMPANY_NAME FROM CAR_TABLE;**
- RESULTS: DISPLAY THE UNIQUE COMPANY NAMES

XVI. REMOVE CARS WITH MILEAGE = 0

- QUERY: **DELETE FROM CAR_TABLE WHERE MILEAGE = 0;**
- RESULTS: REMOVE CARS WITH MILEAGE = 0

XVII. MOST DRIVEN CAR

- QUERY: **SELECT * FROM CAR_TABLE ORDER BY KM_DRIVEN DESC LIMIT 1;**
- RESULTS: DISPLAY THE MOST DRIVEN CAR

XVIII. COMPANY NAME AND SELLER TYPE FOR DEALERS

- QUERY: **SELECT COMPANY_NAME, SELLER_TYPE FROM CAR_TABLE WHERE SELLER_TYPE = 'DEALER';**
- RESULTS: DISPLAY THE COMPANY NAME AND SELLER TYPE FOR DEALERS

XIX. AVERAGE KM DRIVEN FOR CNG FUEL

- QUERY: **SELECT AVG(KM_DRIVEN) AS AVG_KM_DRIVEN FROM CAR_TABLE WHERE FUEL = 'CNG';**
- RESULTS: DISPLAY THE AVERAGE KM DRIVEN FOR CNG FUEL

XX. OWNER AND COUNT OF CARS

- QUERY: **SELECT OWNER, COUNT(*) FROM CAR_TABLE GROUP BY OWNER;**
- RESULTS: DISPLAY THE OWNER AND COUNT OF CARS

CONCLUSION

IN THIS REPORT, WE EXPLORED THE CAR_TABLE DATASET WITHIN THE CAR_DEKHO DATABASE, UNCOVERING VALUABLE INSIGHTS THROUGH SQL QUERIES. OUR ANALYSIS REVEALED KEY CHARACTERISTICS OF THE MOST EXPENSIVE CAR, AVERAGE KM DRIVEN BY OWNER, AND THE DISTRIBUTION OF CARS WITH SPECIFIC FEATURES SUCH AS AUTOMATIC TRANSMISSION, PETROL FUEL, AND 4 SEATS.

WE ALSO EXTRACTED COMPANY NAMES FROM THE NAME COLUMN AND ANALYZED THE TORQUE DATA. ADDITIONALLY, WE IDENTIFIED CARS WITH HIGH MILEAGE, MAX POWER, AND SPECIFIC ENGINE AND FUEL COMBINATIONS. OUR QUERY RESULTS PROVIDED A COMPREHENSIVE UNDERSTANDING OF THE DATASET, ENABLING US TO IDENTIFY PATTERNS AND CORRELATIONS.

THE FINDINGS OF THIS REPORT CAN BE UTILIZED TO INFORM BUSINESS DECISIONS, OPTIMIZE MARKETING STRATEGIES, AND ENHANCE CUSTOMER EXPERIENCES IN THE AUTOMOBILE INDUSTRY. FURTHERMORE, THIS ANALYSIS DEMONSTRATES THE POWER OF SQL QUERIES IN EXTRACTING VALUABLE INSIGHTS FROM LARGE DATASETS.

I. MOST EXPENSIVE CAR

DISPLAY THE MOST EXPENSIVE CAR'S DETAILS

RESULT: HERE WE RETURN THE MOST EXPENSIVE CAR AS COMPANY_NAME VOLVO, MODEL VOLVO XC90 T8 EXCELLENCE BSIV, AND ALSO SHOWS THE OTHER FURTHER DETAILS OF THE CAR.

II. AVERAGE KM DRIVEN BY OWNER

DISPLAY THE AVERAGE KM DRIVEN FOR EACH OWNER

RESULT: THIS QUERY RETURNS THE AVERAGE KM DRIVEN BY EACH OWNER. FOR EXAMPLE, THE RESULT SHOWS THAT THE AVERAGE KM DRIVEN BY OWNER 'FIRST OWNER' IS 58812.4470 KM, WHILE THE AVERAGE KM DRIVEN BY OWNER 'SECOND OWNER' IS 89858.4243 KM, ETC.

III. CARS WITH AUTOMATIC TRANSMISSION AND PETROL

DISPLAY THE CARS WITH AUTOMATIC TRANSMISSION AND PETROL

RESULT: THIS QUERY RETURNS A LIST OF CARS WITH AUTOMATIC TRANSMISSION AND PETROL FUEL. FOR EXAMPLE, THE RESULT SHOWS CARS FROM COMPANIES LIKE HYUNDAI,RENAULT,MARUTI,ETC

IV. CARS WITH 4 SEATS

DISPLAY THE CARS WITH 4 SEATS

RESULT: THIS QUERY RETURNS A LIST OF CARS WITH 4 SEATS. FOR EXAMPLE, THE RESULT SHOWS CARS FROM COMPANIES LIKE MARUTI,BMW,TATA,ETC.

V. COMPANY NAME ANALYSIS

DISPLAY THE COMPANY NAME ANALYSIS

RESULT: THIS QUERY RETURNS A LIST OF COMPANY NAMES AND THEIR CORRESPONDING YEARS. FOR EXAMPLE, THE RESULT SHOWS COMPANIES LIKE MARUTI(2019), BMW(2018),ETC.

VI. CARS WITH MILEAGE > 20.0 AND SELLING PRICE = 500000

DISPLAY THE CARS WITH MILEAGE > 20.0 AND SELLING PRICE = 500000

RESULT: THIS QUERY RETURNS A CAR WITH MILEAGE GREATER THAN 20.0 AND SELLING PRICE EQUAL TO 500000. FOR EXAMPLE, THE RESULT SHOWS CAR FROM COMPANY NAME IS MARUTI AND SHOW OTHER DETAILS OF SIMILAR CAR.

VII. CARS WITH MAX POWER > 150

DISPLAY THE CARS WITH MAX POWER > 150

RESULT: THIS QUERY RETURNS A CAR WITH MAXIMUM POWER GREATER THAN 150. FOR EXAMPLE, THE RESULT SHOWS CAR FROM COMPANY NAME IS LIKE VOLVO WITH OTHER DETAILS OF SIMILAR CAR.

VIII. CARS WITH ENGINE CONTAINING '1197' AND FUEL STARTING WITH 'P'

DISPLAY THE CARS WITH ENGINE CONTAINING '1197' AND FUEL STARTING WITH 'P'

RESULT: THIS QUERY RETURNS A LIST OF CARS WITH ENGINES CONTAINING THE STRING '1197' AND FUEL STARTING WITH 'P'. FOR EXAMPLE, THE RESULT SHOWS CARS FROM COMPANIES LIKE RENAULT, HYUNDAI, MARUTI.

IX. TORQUE ANALYSIS

DISPLAY THE TORQUE ANALYSIS

RESULT: THIS QUERY RETURNS A LIST OF CARS WITH THEIR CORRESPONDING TORQUE VALUES WITHOUT THE CONDITION WE MENTIONED TO REMOVE. FOR EXAMPLE, THE TORQUE VALUES ARE 96NM, 350NM, ETC.

X. CARS WITH YEAR 2023, OWNER 'FIRST OWNER', AND ENGINE > 1000

DISPLAY THE CARS WITH YEAR 2023, OWNER 'FIRST OWNER', AND ENGINE > 1000

RESULT: THIS QUERY RETURNS A LIST OF CARS FROM THE YEAR 2023, OWNED BY 'FIRST OWNER', AND HAVING AN ENGINE CAPACITY GREATER THAN 1000. FOR EXAMPLE, THE RESULT SHOWS CARS FROM COMPANIES LIKE SKODA AND TATA.

XI. COUNT OF CARS WITH 4 SEATS

DISPLAY THE COUNT OF CARS WITH 4 SEATS

RESULT: THIS QUERY RETURNS THE COUNT OF CARS WITH 4 SEATS. FOR EXAMPLE, THE RESULT SHOWS A COUNT OF 257 CARS OF 4 SEATED.

XII. TOTAL SELLING PRICE

DISPLAY THE TOTAL SELLING PRICE

RESULT: THIS QUERY RETURNS THE TOTAL SELLING PRICE OF ALL CARS. FOR EXAMPLE, THE RESULT SHOWS A TOTAL SELLING PRICE OF 8728838019.

XIII. LOWEST MILEAGE

DISPLAY THE LOWEST MILEAGE

RESULT: THIS QUERY RETURNS THE LOWEST MILEAGE OF ALL CARS. FOR EXAMPLE, THE RESULT SHOWS A LOWEST MILEAGE OF 0.0 KMPL.

XIV. HIGHEST MAX POWER BY ENGINE

DISPLAY THE HIGHEST MAX POWER BY ENGINE

RESULT: THIS QUERY RETURNS THE HIGHEST MAX POWER BY ENGINE. FOR EXAMPLE, THE RESULT SHOWS THE FIRST FIVE HIGHEST MAX POWER OF 75 BHP, 170.63 BHP, 68.05 BHP, 141 BHP, 296.3 BHP..

XV. UNIQUE COMPANY NAMES

DISPLAY THE UNIQUE COMPANY NAMES

RESULT: THIS QUERY RETURNS A LIST OF UNIQUE COMPANY NAMES. FOR EXAMPLE, THE RESULT SHOWS COMPANIES LIKE MARUTI, SKODA, BMW, ETC.

XVI. REMOVE CARS WITH MILEAGE = 0

REMOVE CARS WITH MILEAGE = 0

RESULT: THIS QUERY REMOVES CARS WITH MILEAGE EQUAL TO 0.

XVII. MOST DRIVEN CAR

DISPLAY THE MOST DRIVEN CAR

RESULT: THIS QUERY RETURNS THE MOST DRIVEN CAR. FOR EXAMPLE, THE RESULT SHOWS A CAR WITH A MILEAGE OF 18.6KMPL, COMPANY NAME IS HYUNDAI AND SHOWS OTHER DETAILS OF SIMILAR CAR.

XVIII. COMPANY NAME AND SELLER TYPE FOR DEALERS

DISPLAY THE COMPANY NAME AND SELLER TYPE FOR DEALERS

RESULT: THIS QUERY RETURNS A LIST OF COMPANY NAMES AND SELLER TYPES FOR DEALERS. FOR EXAMPLE, THE RESULT SHOWS COMPANIES LIKE BMW, MG, ETC WITH SELLER TYPES 'DEALERSHIP'.

XIX. AVERAGE KM DRIVEN FOR CNG FUEL

DISPLAY THE AVERAGE KM DRIVEN FOR CNG FUEL

RESULT: THIS QUERY RETURNS THE AVERAGE KM DRIVEN FOR CNG FUEL. FOR EXAMPLE, THE RESULT SHOWS AN AVERAGE OF 65935.3592.

XX. OWNER AND COUNT OF CARS

DISPLAY THE OWNER AND COUNT OF CARS

RESULT: THIS QUERY RETURNS A LIST OF OWNERS AND THEIR CORRESPONDING COUNT OF CARS. FOR EXAMPLE, THE RESULT SHOWS OWNERS LIKE 'FIRST OWNER' , 'SECOND OWNER', 'TEST DRIVE CAR', 'THIRD OWNER', 'FOURTH AND ABOVE OWNER' WITH COUNTS 9425, 3910, 10, 1003, 315 RESPECTIVELY.