Booking Data Analysis with SQL and PowerBI

Overview

1. Introduction

2. Analysis

3. Conclusion

Introduction

This project uses SQL and PowerBI to analyze Ola's booking data, focusing on Booking status, PickUp and drop locations, ratings etc. The goal is to clean and transform data to find useful insights, such as number of successful bookings, average distance travelled, incomplete rides etc. These insights will help improve various stratergies and customer satisfaction.

Analysis

Retrieve all successful bookings

This query retrives all the successful bookings from the given data. Identifying such data can useful for showing the authenticity, measuing the success rate, for operational planning and customer satisfaction.

```sql
-- 1) Retrieve all successful bookings
SELECT
    *
FROM
    bookings
WHERE
    Booking_Status = 'Success';
```

Find the average ride distance for each vehicle type

This query looks for the average distance travelled by each vehicle based on its type. This data is essential to know what type of vehicle has travelled how long and we can also determine the most favourable vehicle type of the customer.

```sql
-- 2) Find the average ride distance for each vehicle type
SELECT
    Vehicle_Type, AVG(Ride_Distance) AS Average_ride_dist
FROM
    bookings
GROUP BY Vehicle_Type;
```

Get the total number of cancelled rides by customers

This query calculates the total number of rides cancelled by customers. This is helpful to identify the customer's behaviour pattern, driver allocation, impact on revenue and improve cancellation policies.

```sql
-- 3) Get the total number of cancelled rides by customers
SELECT
    COUNT(*)
FROM
    bookings
WHERE
    Booking_status = 'Canceled by Customer';
```

List the top 5 customers who booked the highest number of rides

This query retrives the top five customers who have booked the highest number of rides. This data implies high value customers. The company can also plan subsriptions or suggest them higher-value services for additional services. And they can have a feedback from them as well.

```sql
-- 4)  List the top 5 customers who booked the highest
SELECT
    Customer_ID, COUNT(Booking_ID) AS Total_rides
FROM
    bookings
GROUP BY Customer_ID
ORDER BY Total_rides DESC
LIMIT 5;
```

Find the maximum and minimum driver ratings for Prime Sedan bookings

This query calculates the maximum and minimum ratings for Prime Sedan car bookings. This helps the company to understand the what is the maximum and minimum rating for the particular car and plan stratergies to improve the ratings.

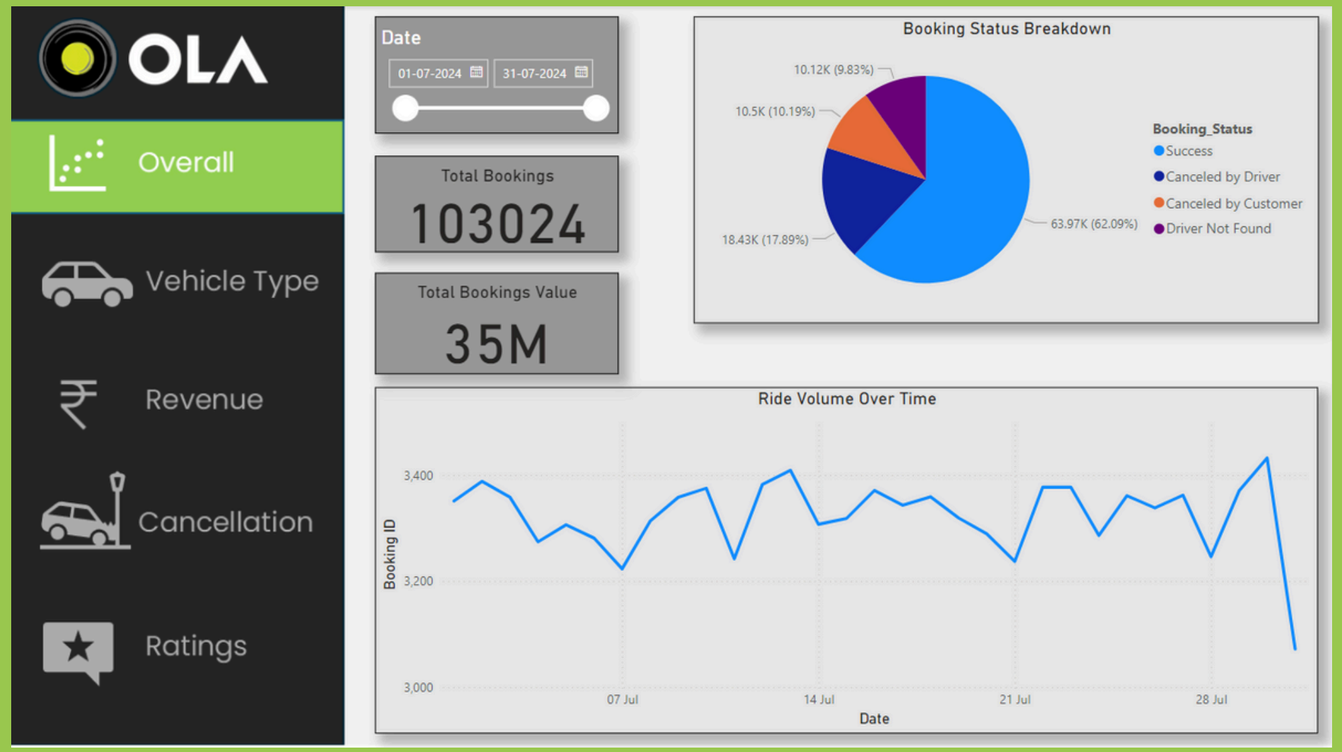
```sql
-- 6) Find the maximum and minimum driver ratings for
SELECT
    MAX(Driver_Ratings), MIN(Driver_Ratings)
FROM
    bookings
WHERE
    Vehicle_Type = 'Prime Sedan';
```

Find the average customer rating per vehicle type

This query calculates the average rating by customers for each vehicle type. From this the company can understand which type of vehicle is more likely choosen by the customers and then can improve the services as needed.

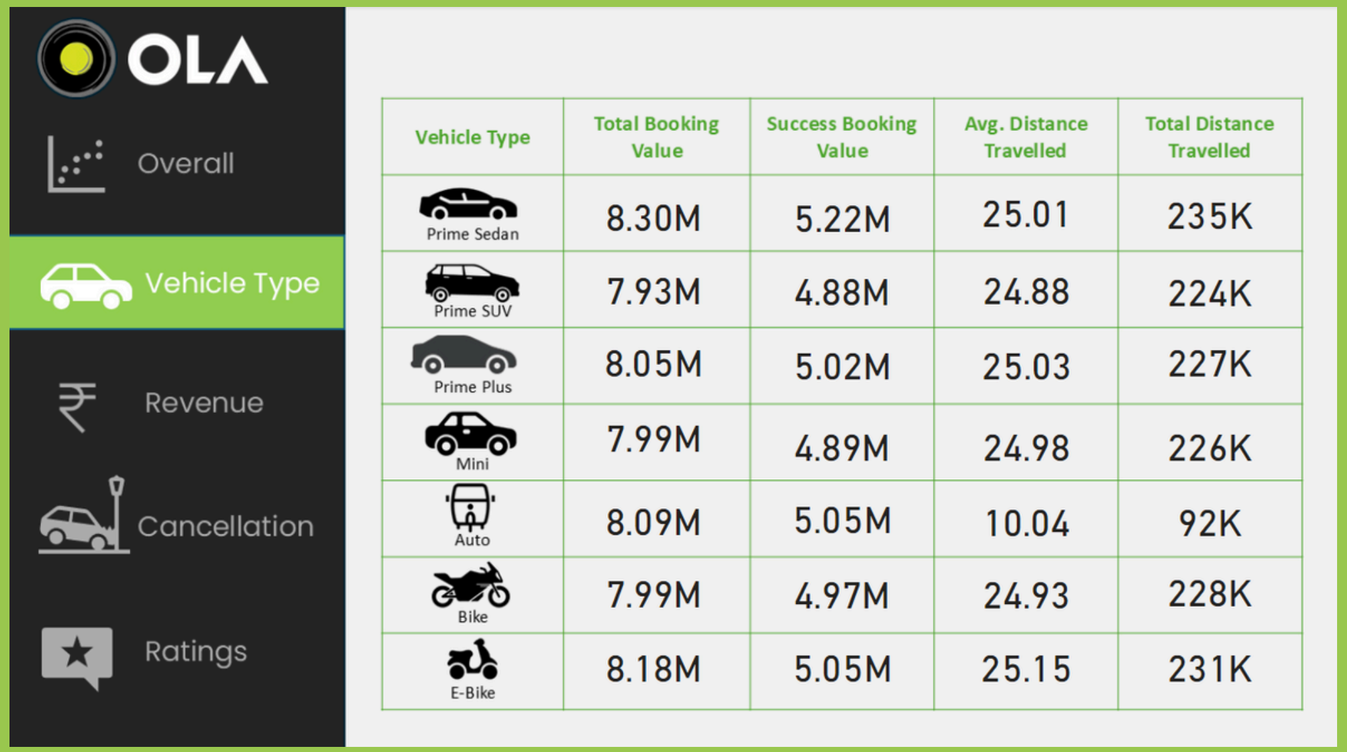
```sql
-- 8)  Find the average customer rating per vehicle type
SELECT
    Vehicle_Type, AVG(Customer_Rating) AS Avg_Cust_Rating
FROM
    bookings
GROUP BY Vehicle_Type;
```

Insights from dashboards



This dashboard shows the total bookings done and the total booking value for the successful rides. It also shows the breakdown of booking status with 62% success rate, 17.89% for booking cancellation by drivers, 10.19% booking cancellation by customers and remaining by drivers not found. It also shows a graph for ride volume for each day

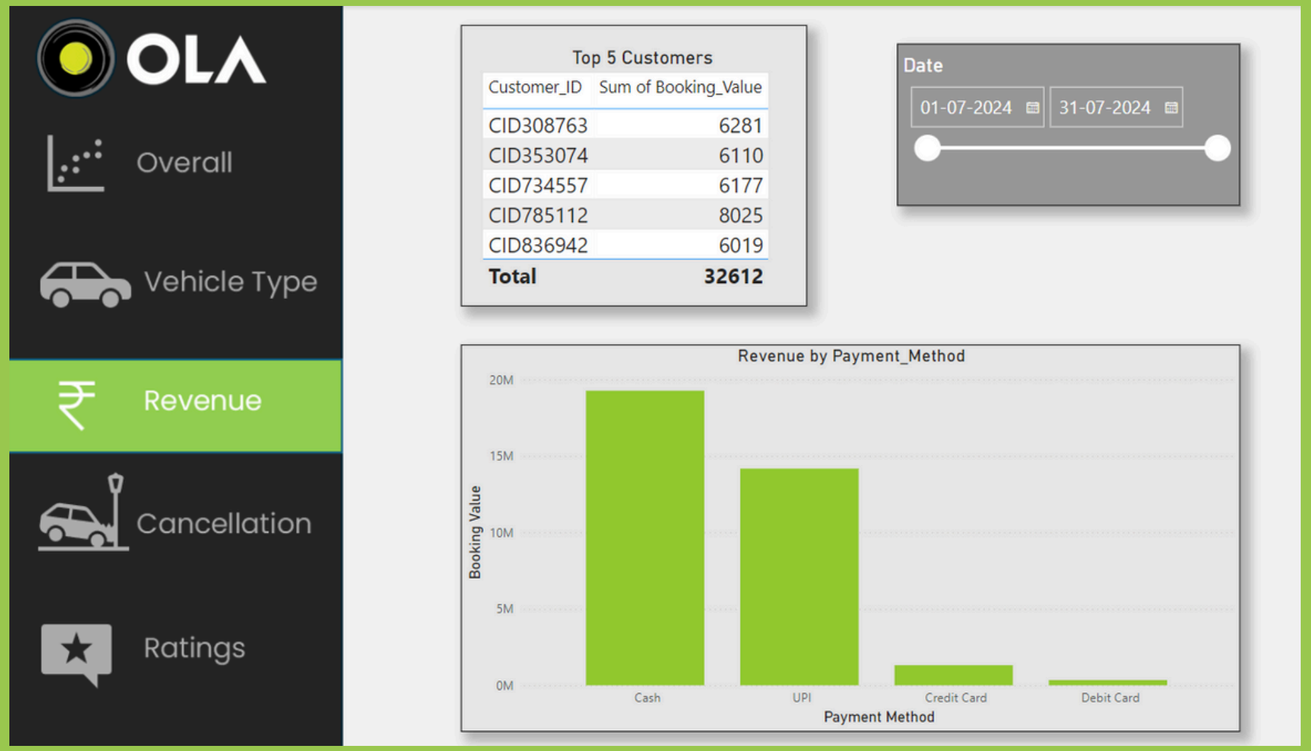
Insights from dashboards



Vehicle Type	Total Booking Value	Success Booking Value	Avg. Distance Travelled	Total Distance Travelled
Prime Sedan	8.30M	5.22M	25.01	235K
Prime SUV	7.93M	4.88M	24.88	224K
Prime Plus	8.05M	5.02M	25.03	227K
Mini	7.99M	4.89M	24.98	226K
Auto	8.09M	5.05M	10.04	92K
Bike	7.99M	4.97M	24.93	228K
E-Bike	8.18M	5.05M	25.15	231K

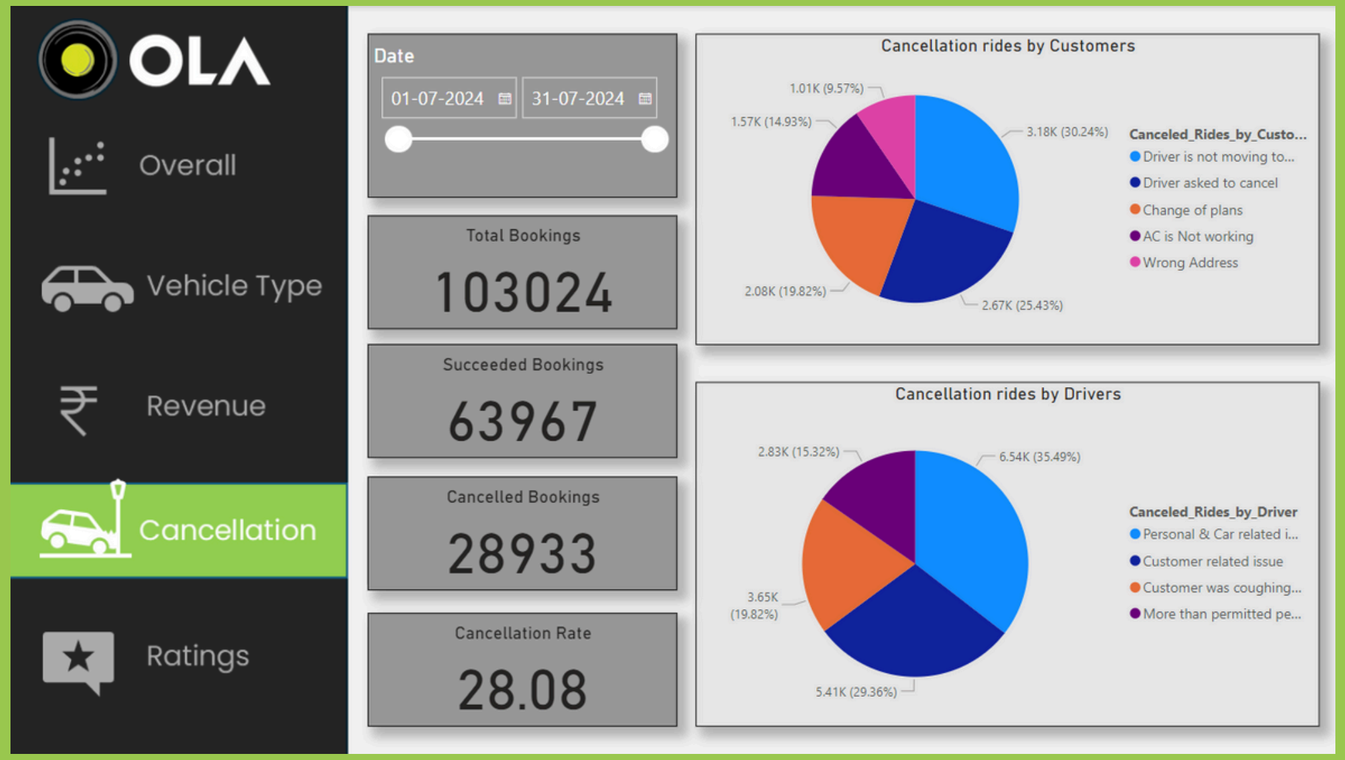
This dashboard shows the total booking value, Successful booking value, Average distance travelled and total distance travelled by each type of vehicle.

Insights from dashboards



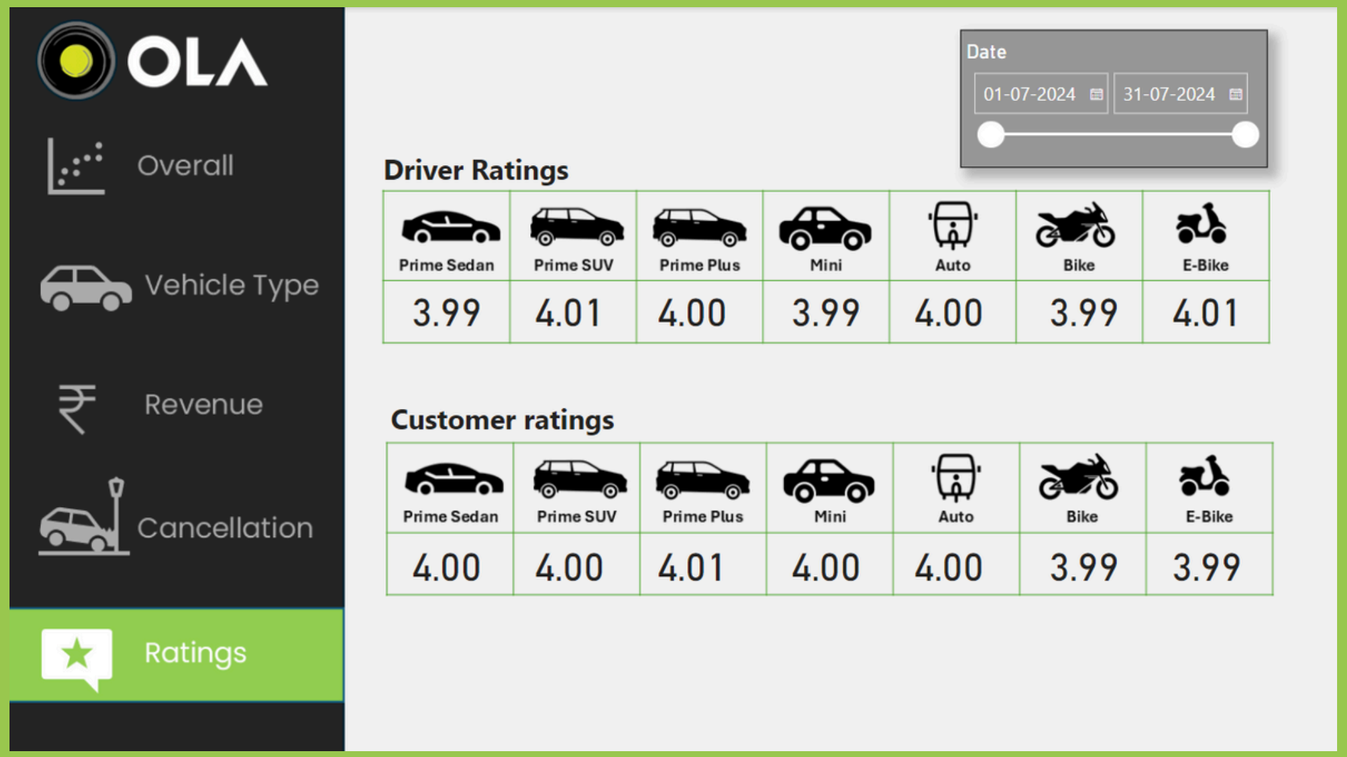
This dashboard shows the top 5 customers with highest booking value and also shows a graph of Revenue generated by each payment method.

Insights from dashboards



This dashboard shows a distribution of Rides cancellation by Drivers and Customers. It also has cards showing total number of bookings, Total successful bookings, Total cancelled bookings and the cancellation rate.

Insights from dashboards



This dashboard shows Driver ratings and Customer ratings for each type of car.

Conclusion

This project demostrates the power of SQL and PowerBI in analysing Ola’s Booking data to uncover valuable insights on finding total successful bookings, calculating the average distance travelled by each car, driver and customer ratings, top customers with highest ratings, successful bookings for each car type etc. By cleaning and transforming the data, we identifiedkey trends that can enhace the bookings stratergies, improve customer ratings and better understand the customer preferences. The findings from this analysis can be used to make informed decisions that boost customer satisfaction and drive business growth.