Ola Ride Booking Data Analysis

Excel | SQL | Power BI

Project Overview

This project analyzes Ola ride booking data to understand booking success rates, cancellations, revenue trends, and customer & driver ratings. The objective is to derive actionable business insights that can help improve operational efficiency and customer experience.

Business Objectives

- Analyze completed vs canceled rides
- Identify revenue contribution by payment method
- Understand cancellation reasons from both customer and driver perspectives
- Evaluate customer and driver ratings across vehicle types
- Identify high-value customers

Dataset Description

- The dataset contains ride-level booking information including:
- Booking status (Successful / Canceled)
- Vehicle type
- Ride distance and booking value
- Payment method
- Customer and driver ratings
- Cancellation reasons
- Booking dates

Data Cleaning & Workflow

1. Removed duplicate records using Excel
2. Imported cleaned data into SQL for analysis
3. Solved business queries using SQL
4. Built an interactive Power BI dashboard for visualization

SQL Analysis (Queries & Outputs)

1. Successful Ride Bookings

Time	Booking_ID	Booking_Status	Customer_ID	Vehicle_Type	Pickup_Location	Drop_Location	V_TAT	C_TAT	Car
19:59:00	CNR2982357879	Success	CID270156	Prime SUV	Sahakar Nagar	Varthur	238	130	
19:44:00	CNR6805579107	Success	CID810214	Prime SUV	Indiranagar	Indiranagar	35	145	
01:20:00	CNR9704400677	Success	CID974657	Mini	Langford Town	Vijayanagar	287	95	
10:14:00	CNR7500310853	Success	CID377809	Prime Sedan	Jayanagar	Richmond To...	189	85	
05:14:00	CNR3124565731	Success	CID578023	Auto	Basavanagudi	Chickpet	189	55	
17:37:00	CNR4330381266	Success	CID215319	Auto	Banashankari	Rajarajeshw...	168	135	
18:06:00	CNR2478670622	Success	CID381271	Prime Plus	Hennur	Hosur Road	154	130	
09:17:00	CNR6731320458	Success	CID470881	Prime Sedan	Hosur Road	Koramangala	77	25	
19:29:00	CNR6491202733	Success	CID188757	Mini	Magadi Road	Cox Town	56	45	
12:04:00	CNR6136026561	Success	CID233895	eBike	HSR Layout	Bellandur	49	100	
05:53:00	CNR1308261538	Success	CID605780	eBike	Richmond Town	Rajarajeshw...	126	60	
06:56:00	CNR2029679396	Success	CID825106	Prime Plus	Peenya	Frazer Town	105	30	

Retrieves all completed rides to analyze successful transactions.

2. Average Ride Distance by Vehicle Type

Vehicle_Type	Avg_distance
Prime Sedan	15.76
Bike	15.53
Prime SUV	15.27
eBike	15.58
Mini	15.51
Prime Plus	15.45
Auto	6.24

Helps understand ride usage patterns across vehicle categories.

3. Top 5 Customers by Number of Rides

Customer_ID	total_rides
CID954071	5
CID539191	4
CID189965	4
CID268274	4
CID952434	4

Identifies high-frequency customers contributing most bookings.

4. Ride Cancellations by Customers

count(*)
10499

Analyzes customer-initiated cancellations.

5. Total Booking Value of Successful Rides

total_successful_Ride_value
35080467

Calculates revenue generated from completed bookings.

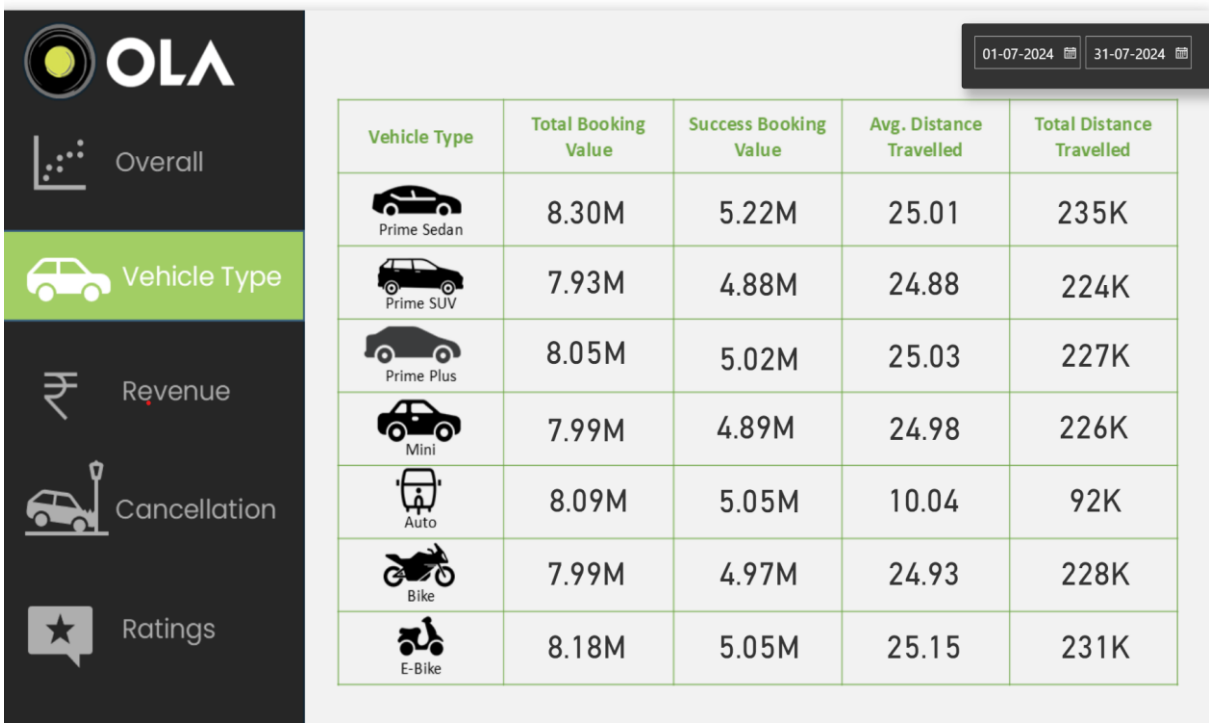
Power BI Dashboard

Overall Performance

Key Observations:

- Over 100K total ride bookings were recorded in the selected period
- Approximately 64% of bookings were successfully completed
- Around 28% of rides were cancelled, indicating operational challenges
- Successful bookings significantly contribute to overall booking value

Vehicle Type Performance Analysis



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

Key Observations:

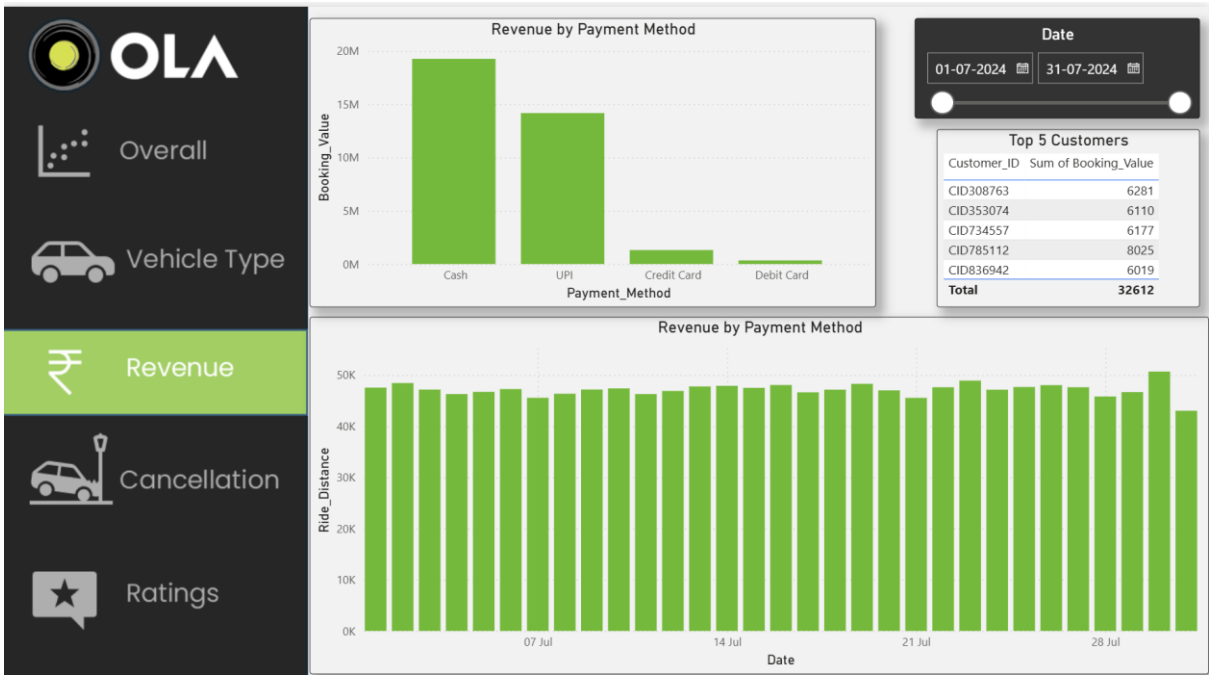
- Premium categories generate higher booking value

- Auto rides cover shorter average distances

- Bike and E-Bike show moderate distance with stable revenue

- Balanced success rate across vehicle types

Revenue Analysis



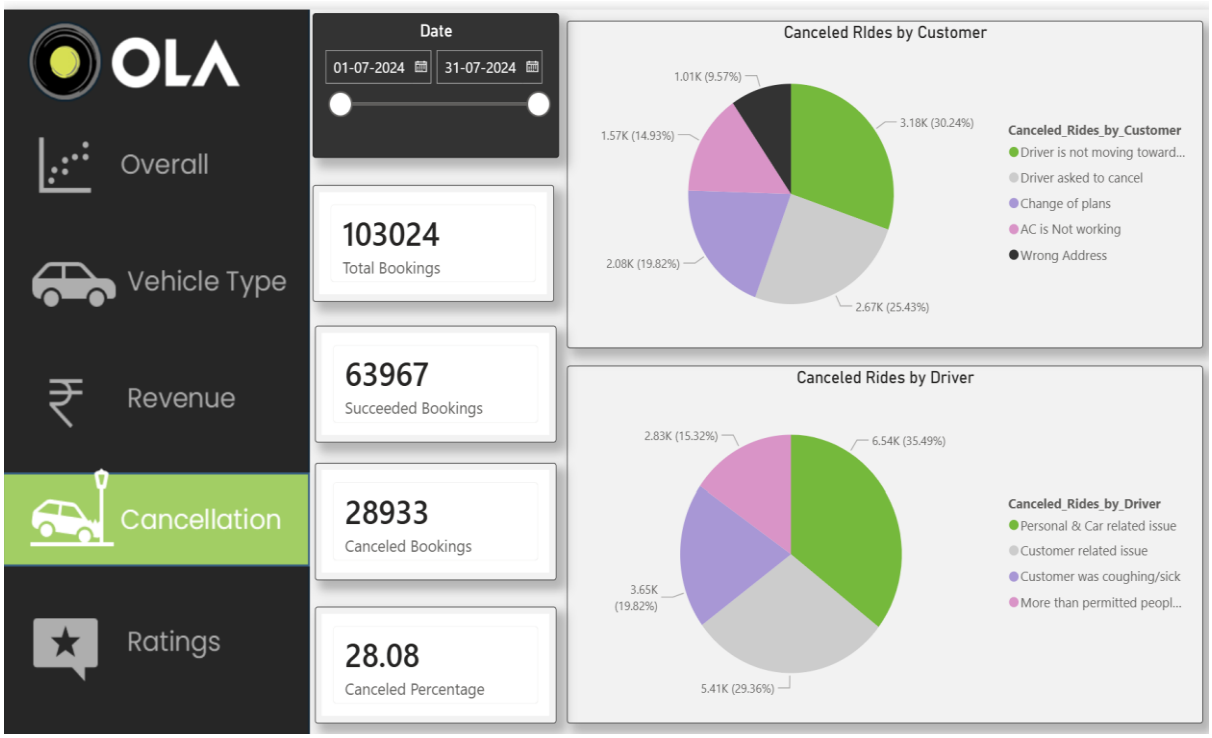
Key Observations:

- Cash and UPI are the most preferred payment methods

- Digital payments contribute a large share of total revenue

- Card-based payments are comparatively less used

Cancellation Analysis



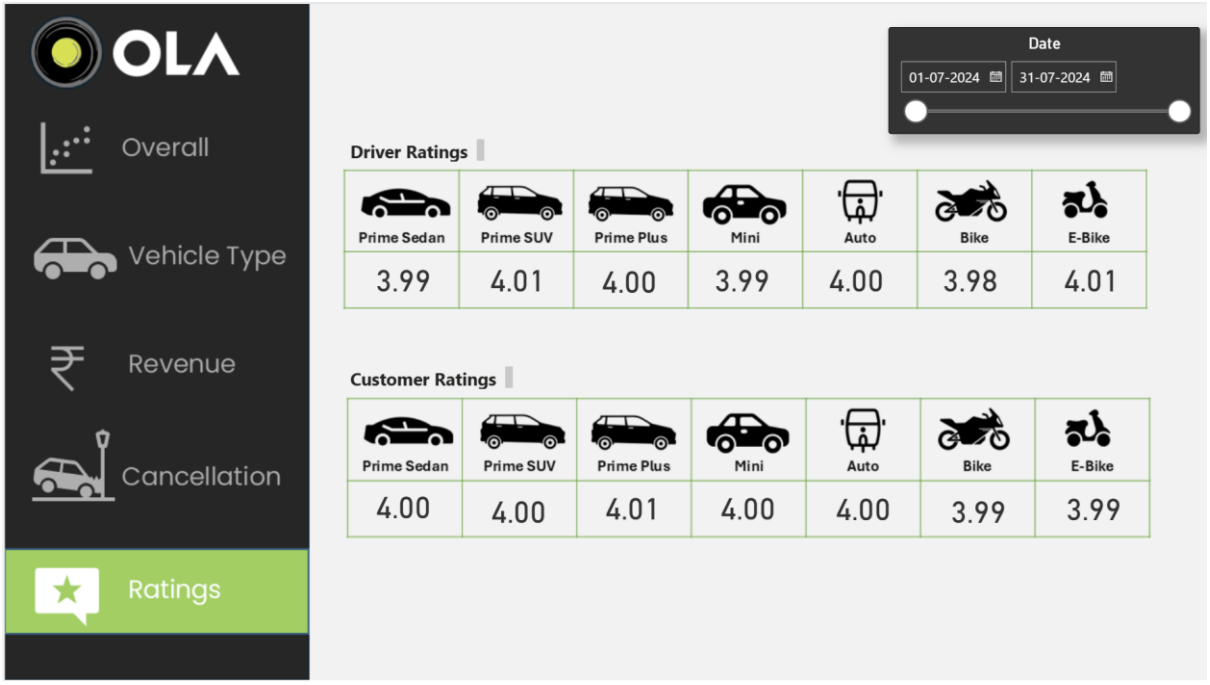
Key Observations:

- Customer cancellations are higher than driver cancellations

- Driver issues are mostly due to personal or vehicle problems

- Reducing driver cancellations can improve success rates

Ratings Analysis



Key Insights

- **Cash and UPI** contribute the highest share of booking revenue
- Nearly **28% of rides are cancelled**, indicating operational gaps
- **Personal and vehicle-related** issues are the top driver cancellation reasons
- **Prime and SUV categories** maintain consistently higher ratings
- A small group of customers contributes significantly to total bookings

Business Recommendations

Based on the analysis, the following data-driven recommendations can be made:

Reduce ride cancellations:

Focus on minimizing driver-related cancellations by improving vehicle checks and driver availability during peak hours.

Optimize vehicle allocation:

Increase availability of premium vehicles in high-demand areas as they generate higher booking value.

Encourage digital payments:

Promote UPI and other digital payment options to improve transaction speed and reduce cash handling issues.

Improve customer retention:

Identify and reward high-frequency customers through loyalty programs or targeted offers.

Enhance service quality:

Monitor lower-rated vehicle categories to improve overall customer satisfaction.

Conclusion

This project demonstrates an end-to-end data analytics workflow using Excel, SQL, and Power BI. The insights derived can help optimize fleet allocation, reduce cancellations, and improve customer satisfaction.