OLA BOOKING DATA ANALYSIS

Prepared by: Risit Sahoo

Project Type: Business Intelligence (BI) & Data Analytics Project

Date – 05.01.2026

1. Project Overview

The OLA Booking Data Analysis Project is an end-to-end business intelligence solution developed to analyze ride booking operations and uncover meaningful insights related to revenue generation, customer behavior, service efficiency, and cancellation trends.

The project integrates SQL-based data analysis with interactive Power BI dashboards to transform raw booking data into actionable insights. The final output enables business stakeholders to monitor KPIs, identify operational issues, and support data-driven decision-making.

2. Business Problem Statement

Ride-hailing platforms operate in a fast-moving and highly competitive environment. OLA faces several operational challenges such as frequent ride cancellations, inconsistent driver performance, fluctuating vehicle demand, and incomplete rides.

Without proper analytical reporting, identifying the root causes behind these issues becomes difficult. This project aims to address these gaps by providing structured analysis and centralized visual reporting.

3. Business Objectives

The key objectives of this project include:

- Analyze overall booking performance
- Identify successful and cancelled ride trends
- Evaluate vehicle-type demand and utilization
- Understand customer and driver rating patterns
- Calculate revenue from completed rides
- Analyze payment method preferences
- Identify reasons behind incomplete rides
- Develop an interactive Power BI dashboard for decision support

4. Dataset Overview

The dataset consists of structured OLA booking transaction records stored in Excel format. Each row represents a single ride containing booking details, customer and driver information, financial data, and ride completion status.

Key Data Fields

- Booking ID and booking status
- Customer ID and customer rating
- Driver rating
- Vehicle type and ride distance
- Booking value and payment method
- Cancellation indicators
- Incomplete ride reasons

This structure supports detailed operational and financial analysis.

5. Tools & Technologies Used

- Microsoft Excel – Data source
- MySQL – Data analysis using SQL
- Microsoft Power BI – Dashboard and visualization
- DAX – KPI calculations

6. Data Preparation & Cleaning

Before analysis, the dataset was processed to ensure data quality and consistency.

Steps Performed

- Removed duplicate records
- Handled missing and null values
- Standardized categorical columns
- Corrected data types for numerical fields
- Validated rating scales (1–5)
- Cleaned cancellation and incomplete ride reason fields

These steps ensured the dataset was accurate and reliable for analysis.

7. SQL-Based Data Analysis

SQL was used to perform backend analysis and create reusable analytical views.

Key SQL Analysis Areas

- Successful booking identification
- Average ride distance by vehicle type
- Customer-initiated cancellation analysis

- Driver cancellation due to personal or car issues
- Top 5 customers by number of bookings
- Maximum and minimum driver ratings
- Payment method–based ride analysis
- Revenue calculation from successful rides
- Incomplete ride analysis with reasons

SQL functions such as COUNT, SUM, AVG, GROUP BY, and WHERE were extensively used to derive meaningful metrics.

8. Detailed Power BI Visualizations and Analytics

Power BI was used to convert SQL outputs into interactive dashboards.

Visualizations Included

- KPI cards for bookings, revenue, and rides
- Bar and column charts for vehicle performance
- Pie and donut charts for booking distribution
- Line charts for trend analysis
- Matrix tables for detailed comparison
- Slicers for dynamic filtering

These visuals enable both high-level monitoring and detailed analytical exploration.

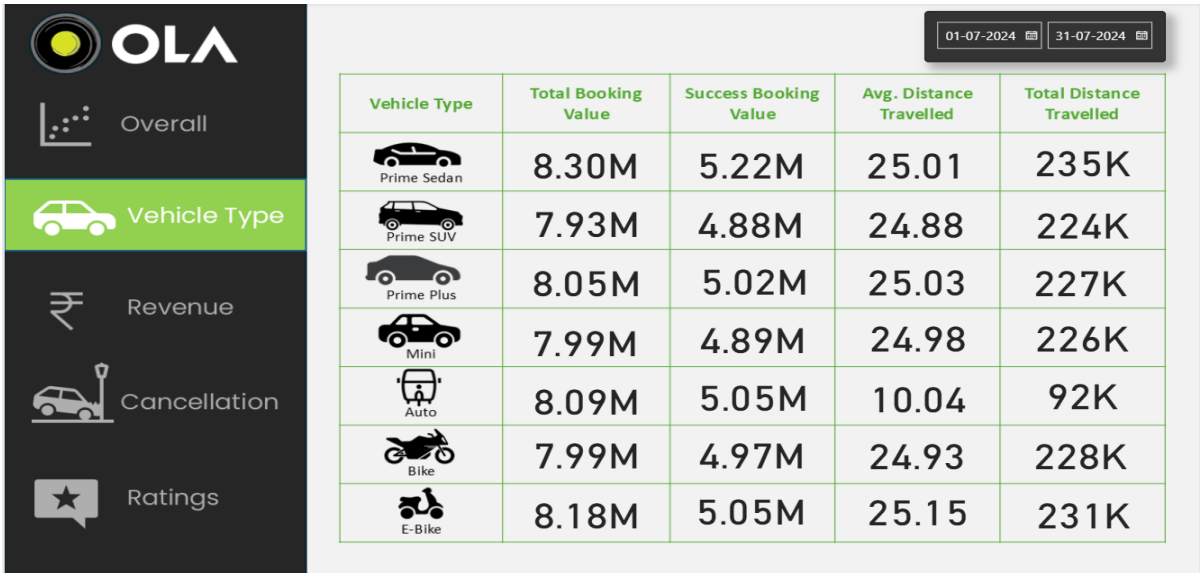
9. Dashboard Overview

The Power BI dashboard provides a consolidated view of booking operations and performance metrics.

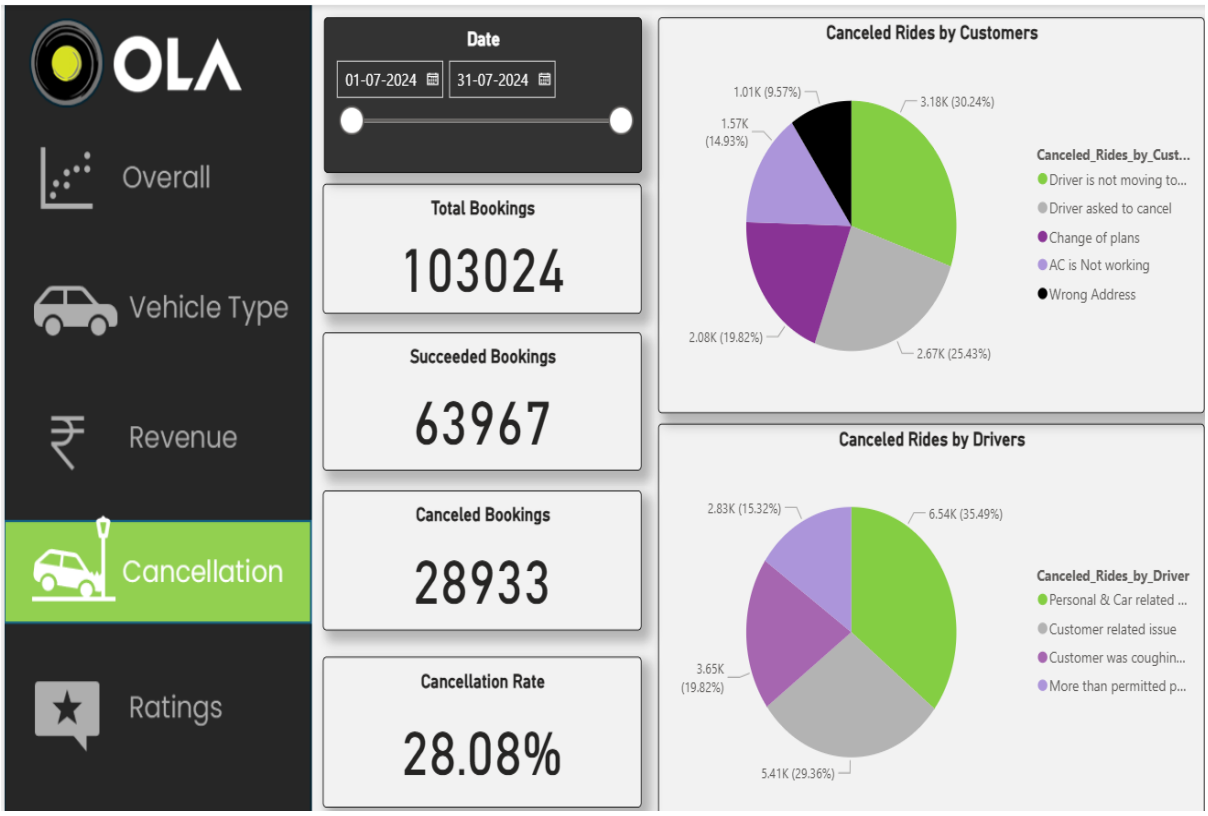
Dashboard Highlights

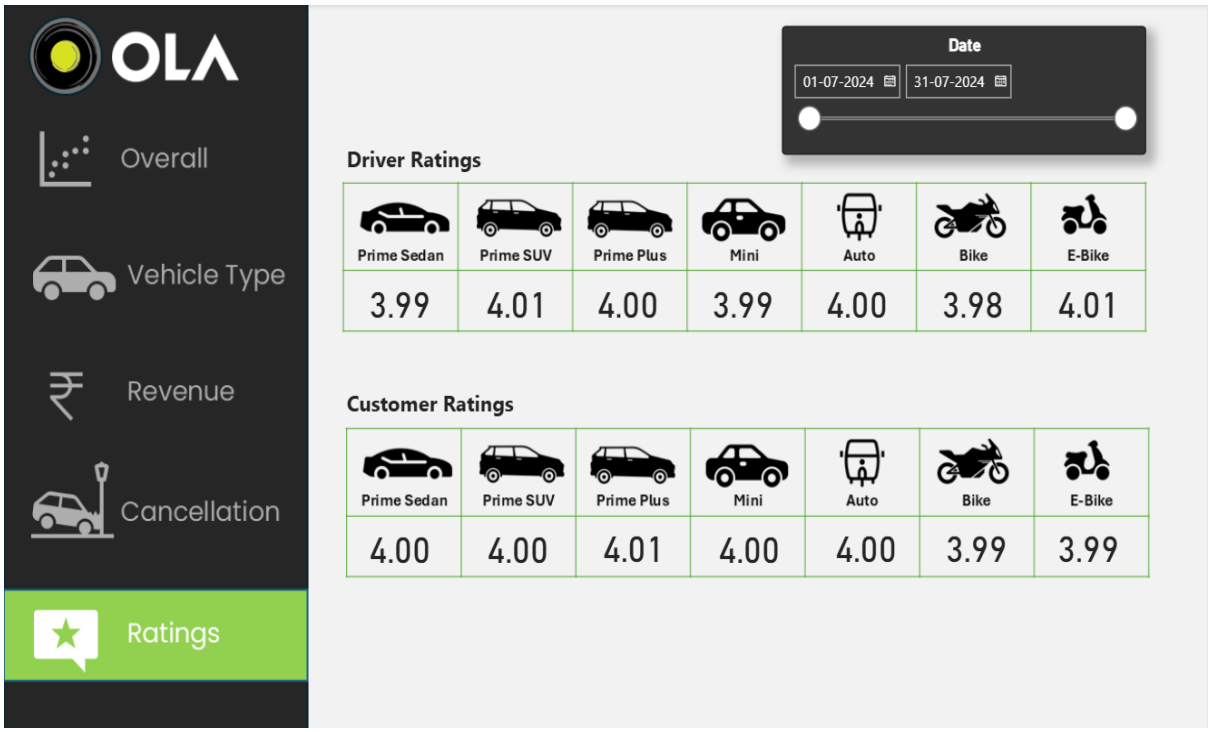
- Total bookings overview
- Successful vs cancelled rides
- Revenue summary
- Vehicle-type demand distribution
- Customer and driver rating analysis
- Payment method breakdown
- Incomplete ride reason analysis


OLA
Overall
Vehicle Type
Revenue
Cancellation
Ratings
Date
01-07-2024
31-07-2024
Total Bookings
103024
Total Bookings Value
35M
Booking Status Breakdown
10.12K (9.83%)
10.5K (10.19%)
18.43K (17.89%)
63.97K (62.09%)
Booking_Status
Success
Canceled by Driver
Canceled by Customer
Driver Not Found
Ride Volume Over Time
Booking Count
3,400
3,200
3,000
07 Jul
14 Jul
21 Jul
28 Jul
Date


OLA
Overall
Vehicle Type
Revenue
Cancellation
Ratings
01-07-2024
31-07-2024
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


OLA
Overall
Vehicle Type
Revenue
Cancellation
Ratings
Revenue by Payment Method
Booking_Value
20M
15M
10M
5M
0M
Cash
UPI
Credit Card
Debit Card
Payment_Method
Date
01-07-2024
31-07-2024
Top 5 Customers
Customer_ID | Sum of Booking_Value
CID308763 | 6281
CID353074 | 6110
CID734557 | 6177
CID785112 | 8025
CID836942 | 6019
Total | 32612
Revenue by Payment Method
Ride_Distance
60K
40K
20K
0K
07 Jul
14 Jul
21 Jul
28 Jul
Date





10. Analysis Report and Key Insights

Booking Performance

- Successful rides contribute the majority of total bookings.
- Ride completion rate directly impacts revenue generation.

Cancellation Analysis

- Customer cancellations are higher than driver cancellations.
- Waiting time and plan changes are major contributing factors.

Vehicle Performance Insights

- Certain vehicle types show strong demand consistency.
- Premium vehicle categories maintain better rating stability.
- Some categories show lower utilization, indicating optimization opportunities.

Customer Behavior Insights

- A small percentage of customers' accounts for a large share of total bookings.
- High-frequency customers significantly influence platform revenue.

Driver Rating Analysis

- Prime and premium vehicle drivers show higher average ratings.
- Stable driver ratings indicate effective driver management.

Revenue & Payment Analysis

- Revenue is generated exclusively from successful rides.
- UPI emerges as the most preferred payment method.
- Digital payments dominate over cash transactions.

Incomplete Ride Insights

- Incomplete rides are mainly caused by driver availability issues and operational constraints.
- These negatively affect customer satisfaction and platform trust.

11. Business Recommendations

- Improve ETA accuracy to reduce customer cancellations
- Optimize driver allocation during peak hours
- Introduce incentives for high-performing drivers
- Reassess underutilized vehicle categories
- Promote digital payment offers to increase conversion
- Strengthen monitoring for incomplete rides
- Use dashboard insights for daily operational review

12. Conclusion

The OLA Booking Data Analysis Project demonstrates a complete data analytics lifecycle, beginning with raw data cleaning and SQL-based analysis and concluding with advanced Power BI visualization and business insight generation.

The project highlights strong analytical skills, business understanding, and BI tool proficiency. The resulting dashboard empowers stakeholders to identify inefficiencies, improve customer experience, and enhance revenue performance, making it highly suitable for professional data analyst portfolios and interview evaluations.