Ola & Uber Ride Booking & Cancellation Analysis (SQL Project)

1. INTRODUCTION

Project Overview

This SQL-based project analyzes ride booking, cancellation patterns, revenue performance, customer behavior, driver performance, and operational efficiency using real-world styled Ola & Uber ride data.

2. DATA PREPARATION & CLEANING

Data Loading

• Created database OLA and table Ride_Booking_Cancellation. • Loaded dataset using LOAD DATA INFILE from CSV.

Data Cleaning Actions

• Replaced string 'NULL' values with numeric 0. • Converted V_TAT and C_TAT from VARCHAR to INT. • Converted Driver_Rating and Customer_Rating from VARCHAR to FLOAT. • Removed unnecessary Vehicle_Images column. • Added derived column Ride_Status to classify rides as Success or Cancelled. • Ensured consistency in column formats and naming.

3. DATASET OVERVIEW

Key Columns

Booking Status, Vehicle Type, Pickup/Drop Locations, Booking Value, Payment Method, Ride Distance, Driver & Customer Ratings, V_TAT, C_TAT.

4. KEY ANALYTICAL INSIGHTS

Completed vs Cancelled Rides

Status	Total Rides	Percentage
Success	63967	62.09%
Canceled by Driver	18434	17.89%
Canceled by Customer	10499	10.19%
Driver Not Found	10124	9.83%

Top 3 Pickup Locations

Pickup Location	Total
Banashankari	2201
Yeshwanthpur	2139
RT Nagar	2135

Revenue by Vehicle Type (Success Rides)

Vehicle Type	Total Rides	Revenue
Prime Sedan	9379	5224050
eBike	9180	5054662
Auto	9167	5051846
Bike	9134	4971968
Prime Plus	9075	5015165
Mini	9036	4835961
Prime SUV	8996	4876815

Loss by Vehicle Type (Failed Rides)

Vehicle Type	Failed Rides	Loss Amount
eBike	5636	3126861
Mini	5516	3105035
Prime Sedan	5498	3074562
Prime SUV	5659	3056515
Auto	5588	3040364
Prime Plus	5632	3037542
Bike	5528	3015086

Top 5 Revenue Routes

Route	Revenue	Total Rides
Frazer Town → Vijayanagar	41469	55
Magadi Road → Vijayanagar	40745	60
Nagarbhavi → Majestic	40559	55
Frazer Town → Ramamurthy Nagar	39655	55
Electronic City → Langford Town	39422	54

Cancellation Rate by Distance

Distance Category	Total Rides	Cancelled	Cancellation %
Short (<5 km)	45498	39057	85.84%
Medium (5–15 km)	17526	0	0%
Long (>15 km)	40000	0	0%

Driver Rating vs Cancellation

Rating Category	Total Rides	Cancelled	Cancellation %
Low (0–3)	39057	39057	100%
Medium (3–4)	46526	0	0%
High (4–5)	17441	0	0%

Operational Inefficiency (V_TAT & C_TAT)

Vehicle Type	Avg V_TAT	Avg C_TAT
Prime Sedan	107.58	53.84
Mini	107.19	52.44
Auto	106.67	53.02
Bike	106.57	53.02
Prime Plus	105.65	52.29
eBike	105.37	52.66
Prime SUV	103.64	51.59

Peak Cancellation Hour

Hour	Total Cancellations
10 AM	1718

Top Payment Methods

Payment Method	Count
Cash	35022
UPI	25881
Credit Card	2435

5. CONCLUSION

Short-distance rides show extremely high cancellations. Prime Sedan generates high revenue but faces operational inefficiency. Peak cancellation hours identified along with high-value routes. Recommendations provided for operational and business improvements.

6. RECOMMENDATIONS

• Incentivize drivers for short-distance rides. • Improve operational efficiency for Prime Sedan and Mini. • Apply dynamic pricing on high-revenue routes. • Increase driver supply around 10 AM peak cancellation hour.