

# **OLA RIDE - ANALYTICS REPORT**

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## **Agenda**

- SQL Database
- Data Cleaning
- Power BI Dashboard
- Streamlit Application

## **Steps Followed**

1. Imported the OLA dataset into a MySQL database.
2. Performed data cleaning and preprocessing using Python and Pandas.
3. Validated missing values and standardized data formats.
4. Executed SQL queries to derive business insights.
5. Built interactive Power BI dashboards with slicers and KPIs.
6. Developed a Streamlit application for interactive analytics.

## **SQL Database & Queries**

- **Successful bookings**

```
SELECT * FROM bookings WHERE booking_status='Success';
```

The screenshot shows the phpMyAdmin interface for the 'ola\_rides' database. The left sidebar lists databases like 'information\_schema', 'mysql', and 'ola\_rides'. The main area displays a table with columns: Date, Time, Booking\_ID, Booking\_Status, Customer\_ID, Vehicle\_Type, Pickup\_Location, Drop\_Location, V\_TAT, C\_TAT, Canceled\_Rides\_by\_Customer, Canceled\_Rides\_by\_Driver, and Incomplete. The table contains numerous rows of booking data.

Date	Time	Booking_ID	Booking_Status	Customer_ID	Vehicle_Type	Pickup_Location	Drop_Location	V_TAT	C_TAT	Canceled_Rides_by_Customer	Canceled_Rides_by_Driver	Incomplete
0000-00-00 00:00:00	22:20:00	CNR940424040	Success	CID225428	Bike	Magal Road	Varthur	203	30	null	null	No
0000-00-00 00:00:00	19:59:00	CNR2982357875	Success	CID270156	Prime SUV	Sahakar Nagar	Varthur	238	130	null	null	No
0000-00-00 00:00:00	09:02:00	CNR1797421789	Success	CID095955	Mini	Rajajinagar	Chamrajpet	252	80	null	null	No
0000-00-00 00:00:00	04:42:00	CNR8787177882	Success	CID080249	Mini	Kadugodi	Vijayanagar	231	90	null	null	No
0000-00-00 00:00:00	09:51:00	CNR312067560	Success	CID0476071	Bike	Tumkur Road	Whitefield	133	40	null	null	No
0000-00-00 00:00:00	23:33:00	CNR4787583516	Success	CID0923404	Prime Plus	Hosur Road	Jayanagar	35	55	null	null	No
0000-00-00 00:00:00	04:03:00	CNR7943634301	Success	CID0647026	Prime Plus	Kammanahalli	Rajajinagar	238	95	null	null	No
0000-00-00 00:00:00	13:18:00	CNR4524472111	Success	CID0540929	Auto	Cox Town	Yelahanka	126	35	null	null	No
0000-00-00 00:00:00	09:54:00	CNR8181602032	Success	CID0157642	Bike	Indiranagar	MG Road	70	95	null	null	No
0000-00-00 00:00:00	10:25:00	CNR8090919544	Success	CID0640151	Bike	Magadi Road	HSR Layout	126	95	null	null	No
0000-00-00 00:00:00	23:42:00	CNR3196196650	Success	CID0243275	Bike	Electronic City	Langford Town	140	40	null	null	No
0000-00-00 00:00:00	14:44:00	CNR6975925287	Success	CID0162055	Prime SUV	Magad Road	RT Nagar	42	30	null	null	No
0000-00-00 00:00:00	11:11:00	CNR159113431	Success	CID092781	eBike	Koramangala	Sarjapur Road	245	70	null	null	No
0000-00-00 00:00:00	20:42:00	CNR6505331573	Success	CID0217093	eBike	Basavangudi	Hulimavu	84	25	null	null	No
0000-00-00 00:00:00	22:33:00	CNR6013805089	Success	CID0817034	Prime Sedan	Padmanabhanagar	Jayanagar	168	65	null	null	No
0000-00-00 00:00:00	18:20:00	CNR6832070187	Success	CID0655872	Bike	Koramangala	BTM Layout	231	145	null	null	No
0000-00-00 00:00:00	21:17:00	CNR5205303253	Success	CID0290480	Prime Plus	Mysore Road	Sahakar Nagar	56	105	null	null	No
0000-00-00 00:00:00	21:18:00	CNR4443921904	Success	CID0654618	Mini	Tumkur Road	Koramangala	231	50	null	null	No
0000-00-00 00:00:00	03:44:00	CNR7194303296	Success	CID0538245	Mini	Mysore Road	Hennur	175	50	null	null	No
0000-00-00 00:00:00	17:11:00	CNR6940055667	Success	CID0805360	Auto	Yelahanka	Mallekshwaram	84	60	null	null	No
0000-00-00 00:00:00	19:44:00	CNR6805571017	Success	CID0810214	Prime SUV	Indiranagar	Indiranagar	36	145	null	null	No

- Average ride distance per vehicle

SELECT vehicle\_type, AVG(ride\_distance) FROM bookings GROUP BY vehicle\_type;

The screenshot shows the phpMyAdmin interface displaying the results of a query. The results table has two columns: Vehicle\_Type and avg\_ride\_distance. The data shows the average ride distance for various vehicle types.

Vehicle_Type	avg_ride_distance
Prime Sedan	15.70
eBike	15.63
Bike	15.63
Mini	15.52
Prime Plus	15.37
Prime SUV	15.26
Auto	6.21

- Cancelled rides by customers

SELECT COUNT(\*) FROM bookings WHERE booking\_status='Cancelled by Customer';

Your SQL query has been executed successfully.

```
SELECT COUNT(*) AS cancelled_by_customer FROM ola_rides WHERE Booking_Status = 'Cancelled by Customer';
```

**cancelled\_by\_customer**

105813

- **Top 5 customers by rides**

```
SELECT customer_id, COUNT(*) AS total_rides FROM bookings GROUP BY customer_id
ORDER BY total_rides DESC LIMIT 5;
```

Customer_ID	total_rides
CI0964071	54
CI0266327	48
CD109965	48
CD387617	47
CD268274	46

- **Driver cancellations**

```
SELECT COUNT(*) FROM bookings WHERE booking_status='Cancelled by Driver';
```

localhost / 127.0.0.1 / ola\_ride / ola\_rides

**phpMyAdmin**

Recent Favorites

Server: 127.0.0.1 > Database: ola\_ride > Table: ola\_rides

Browse Structure SQL Search Insert Export Import Privileges Operations Tracking Triggers

Show query box

Your SQL query has been executed successfully.

```
SELECT COUNT(*) AS driver_cancellations FROM ola_rides WHERE Booking_Status = 'Canceled by Driver';
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Extra options

driver\_cancellations  
186917

Query results operations

Print Copy to clipboard Export Display chart Create view

Bookmark this SQL query

Label:  Let every user access this bookmark

Bookmark this SQL query

Console

- **Max & Min driver rating for Prime Sedan**

```
SELECT MAX(driver_rating), MIN(driver_rating) FROM bookings WHERE vehicle_type='Prime Sedan';
```

localhost / 127.0.0.1 / ola\_ride / ola\_rides

**phpMyAdmin**

Recent Favorites

Server: 127.0.0.1 > Database: ola\_ride > Table: ola\_rides

Browse Structure SQL Search Insert Export Import Privileges Operations Tracking Triggers

Show query box

Showing rows 0 - 0 (1 total, Query took 0.6838 seconds.)

```
SELECT MAX(Driver_Ratings) AS max_driver_rating, MIN(Driver_Ratings) AS min_driver_rating FROM ola_rides WHERE Vehicle_Type = 'Prime Sedan';
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all Number of rows: 25 Filter rows: Search this table

Extra options

max_driver_rating	min_driver_rating
5	0

Query results operations

Print Copy to clipboard Export Display chart Create view

Bookmark this SQL query

Label:  Let every user access this bookmark

Bookmark this SQL query

- **Rides paid using UPI**

```
SELECT * FROM bookings WHERE payment_method='UPI';
```

The screenshot shows the phpMyAdmin interface with the database 'ola\_ride' selected. A query has been run:

```
SELECT * FROM ola_rides WHERE Payment_Method = 'UPI';
```

The results show 24 rows of booking data. The columns include Date, Time, Booking\_ID, Booking\_Status, Customer\_ID, Vehicle\_Type, Pickup\_Location, Drop\_Location, V\_TAT, C\_TAT, Canceled\_Rides\_by\_Customer, Canceled\_Rides\_by\_Driver, and Incomp.

Date	Time	Booking_ID	Booking_Status	Customer_ID	Vehicle_Type	Pickup_Location	Drop_Location	V_TAT	C_TAT	Canceled_Rides_by_Customer	Canceled_Rides_by_Driver	Incomp
0000-00-00 00:00:00	19:59:00	CNR2982357879	Success	CID270156	Prime SUV	Sahakar Nagar	Varthur	238	130	null	null	No
0000-00-00 00:00:00	04:42:00	CNR878177882	Success	CID802429	Mini	Kadugodi	Vijayanagar	231	90	null	null	No
0000-00-00 00:00:00	13:18:00	CNR4524472111	Success	CID540929	Auto	Cox Town	Yelahanka	126	35	null	null	No
0000-00-00 00:00:00	09:54:00	CNR8181602032	Success	CID167642	Bike	Indiranagar	M G Road	70	95	null	null	No
0000-00-00 00:00:00	10:25:00	CNR8009191544	Success	CID640151	Bike	Magadi Road	HSR Layout	126	95	null	null	No
0000-00-00 00:00:00	11:11:00	CNR8975925287	Success	CID162055	Prime SUV	Magadi Road	RT Nagar	42	30	null	null	No
0000-00-00 00:00:00	21:18:00	CNR4443921904	Success	CID654618	Mini	Tumkur Road	Koramangala	231	50	null	null	No
0000-00-00 00:00:00	03:44:00	CNR7194303296	Success	CID533245	Mini	Mysore Road	Hennur	175	50	null	null	No
0000-00-00 00:00:00	17:11:00	CNR6494005067	Success	CID805360	eBike	Yelahanka	Malleshwaram	84	60	null	null	No
0000-00-00 00:00:00	05:25:00	CNR7142278657	Success	CID378034	eBike	Yeshwanthpur	J P Nagar	210	45	null	null	No
0000-00-00 00:00:00	00:58:00	CNR5176704322	Success	CID296026	Prime Plus	KR Puram	Hennur	287	40	null	null	Yes
0000-00-00 00:00:00	21:56:00	CNR7547352327	Success	CID978231	Prime Plus	Hulimavu	Rajarajeshwari Nagar	210	105	null	null	No
0000-00-00 00:00:00	15:02:00	CNR1568684278	Success	CID709612	Prime Plus	Bannerghatta Road	Majestic	42	90	null	null	No
0000-00-00 00:00:00	03:30:00	CNR1050003752	Success	CID993137	Bike	Chamarajpet	Shivajinagar	308	110	null	null	No
0000-00-00 00:00:00	02:45:00	CNR8758857830	Success	CID528642	Prime Plus	HSR Layout	Magadi Road	308	70	null	null	No
0000-00-00 00:00:00	04:47:00	CNR1097414193	Success	CID146748	eBike	Hennur	ID Mantri	94	195	null	null	No

- Avg customer rating per vehicle

SELECT vehicle\_type, AVG(customer\_rating) FROM bookings GROUP BY vehicle\_type;

The screenshot shows the phpMyAdmin interface with the database 'ola\_ride' selected. A query has been run:

```
SELECT Vehicle_Type, ROUND(AVG(Customer_Rating),2) AS avg_customer_rating FROM ola_rides GROUP BY Vehicle_Type ORDER BY avg_customer_rating DESC;
```

The results show the average customer rating for each vehicle type. The columns are Vehicle\_Type and avg\_customer\_rating.

Vehicle_Type	avg_customer_rating
Prime Sedan	2.52
Bike	2.49
Auto	2.48
Mini	2.48
eBike	2.48
Prime Plus	2.46
Prime SUV	2.45

- Total successful booking value

SELECT SUM(booking\_value) FROM bookings WHERE booking\_status='Success';

The screenshot shows the phpMyAdmin interface with the following details:

- Database:** ola\_ride
- Table:** ola\_rides
- Query:**

```
SELECT ROUND(SUM(Booking_Value),2) AS total_successful_revenue FROM ola_rides WHERE Booking_Status = 'Success';
```
- Result:** total\_successful\_revenue: 355529071.00
- Operations:** Print, Copy to clipboard, Export, Display chart, Create view.
- Bookmark:** Bookmark this SQL query

- **Incomplete rides with reason**

SELECT booking\_id, cancellation\_reason FROM bookings WHERE booking\_status != 'Success';

The screenshot shows the phpMyAdmin interface with the following details:

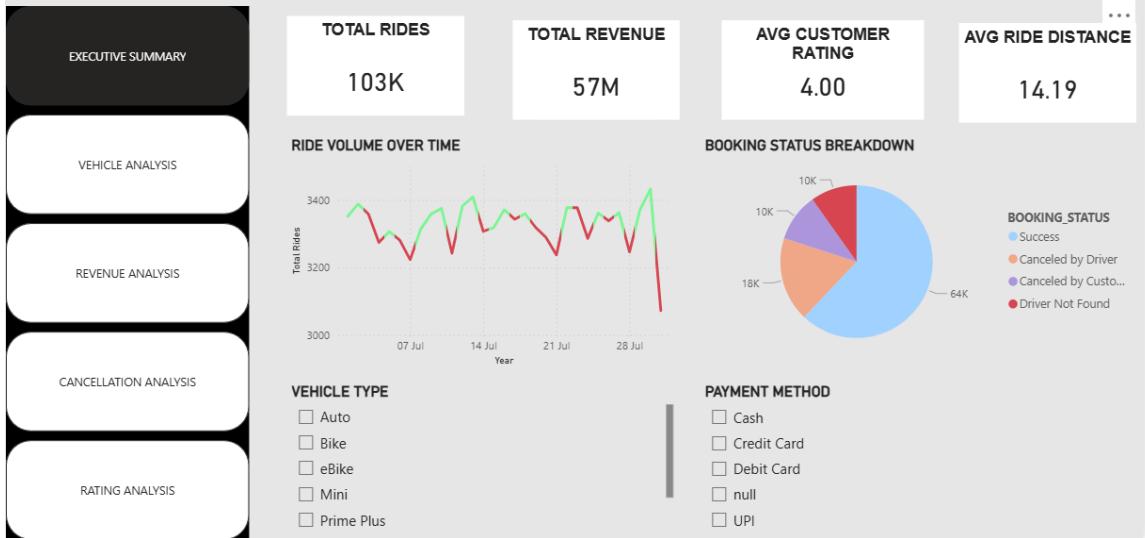
- Database:** ola\_ride
- Table:** ola\_rides
- Result:** A list of rows showing booking\_id and cancellation\_reason. Some rows have a status of 'Incomplete' in the cancellation\_reason column.

Booking_ID	Customer_ID	Vehicle_Type	Incomplete_Rides_Reason
CNR5176704322	CID296026	Prime Plus	Customer Demand
CNR89312632867	CID649563	Prime SUV	Vehicle Breakdown
CNR79242302885	CID517861	Auto	Customer Demand
CNR1640228587	CID190281	Prime Sedan	Other issue
CNR7023990602	CID526261	Bike	Other Issue
CNR959311980	CID957698	Auto	Customer Demand
CNR5863244684	CID798517	eBike	Customer Demand
CNR952978867	CID900068	eBike	Customer Demand
CNR7154040384	CID91013	Auto	Customer Demand
CNR3193710797	CID467902	Prime Sedan	Other issue
CNR7073850950	CID880026	Auto	Customer Demand
CNR8952584604	CID194856	Bike	Customer Demand
CNR5433575259	CID763377	Prime Sedan	Vehicle Breakdown
CNR5757699041	CID499436	Prime SUV	Vehicle Breakdown
CNR7537293562	CID200131	eBike	Customer Demand
CNR2722435581	CID877036	Mini	Vehicle Breakdown
CNR5495479048	CID497169	Auto	Other issue
CNR6585703917	CID979507	Auto	Customer Demand
CNR3178581771	CID406782	Prime SUV	Customer Demand
CNR7582255360	CID238250	Bike	Vehicle Breakdown
CNR8359311317	CID520411	Bike	Customer Demand
CNR5109611023	CID459050	Prime Sedan	Other issue
CNR7127343811	CID440642	Prime SUV	Vehicle Breakdown
CNR6315774432	CID778590	eBike	Other issue
CNR7333194442	CID563302	Mini	Other Issue

## Power BI Dashboard Analysis



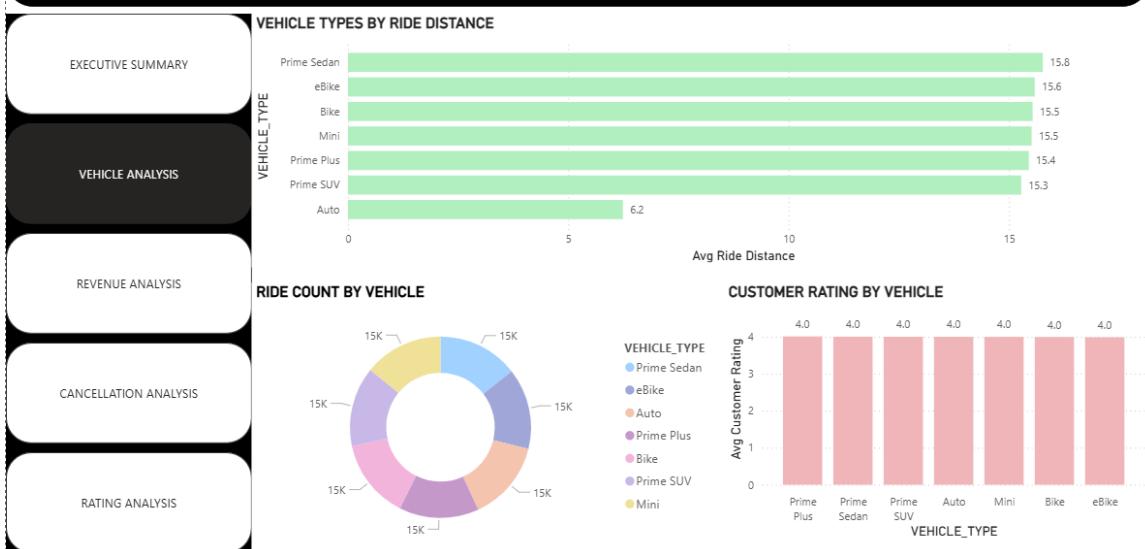
## OLA RIDE INSIGHT - EXECUTIVE SUMMARY



- The platform processed approximately 103K rides, generating nearly 57M in revenue, indicating strong demand.
- Successful bookings significantly outnumber cancellations, though driver cancellations remain an improvement area.
- Average customer rating of 4.0 reflects consistent customer satisfaction.



## OLA RIDE INSIGHT - VEHICLE ANALYSIS

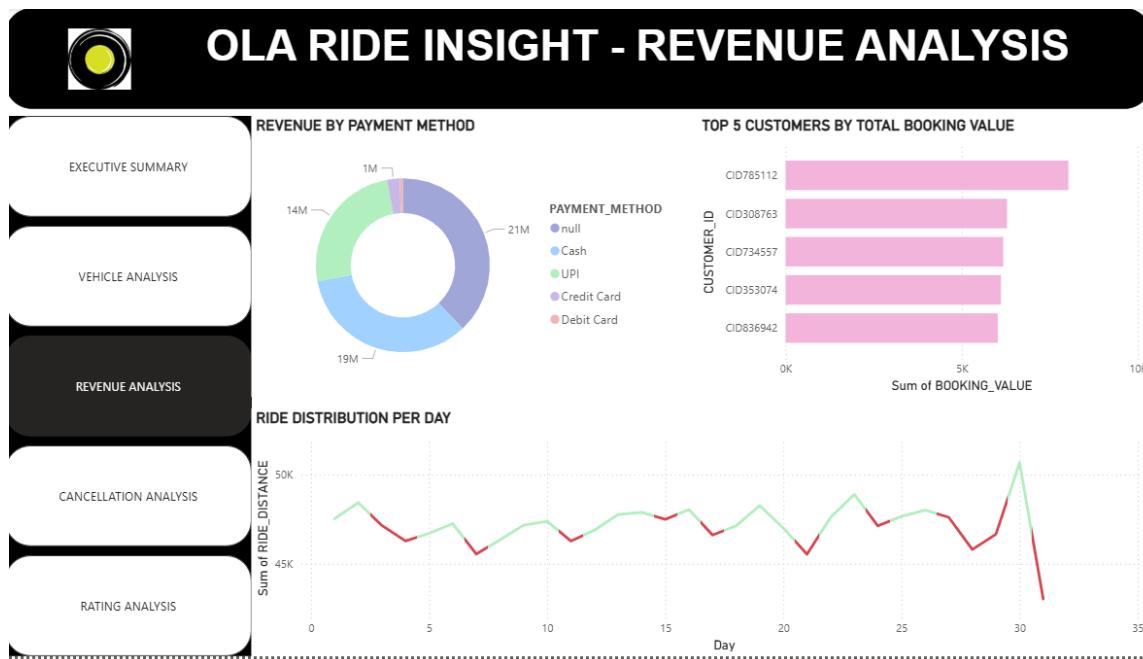


### CUSTOMER RATING BY VEHICLE

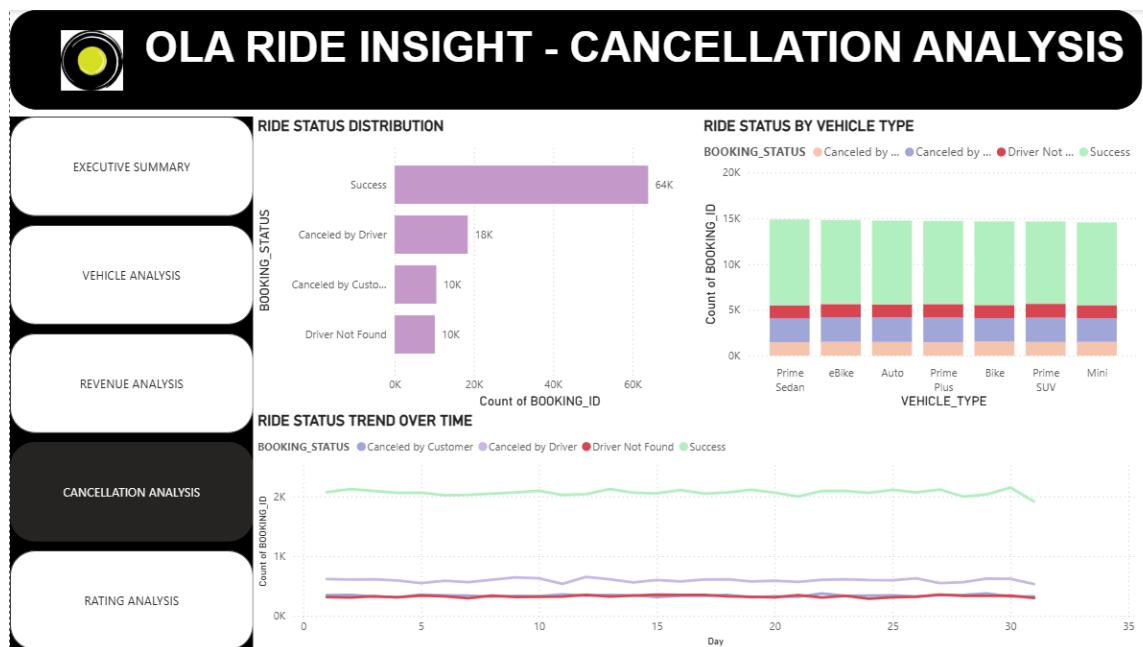


- Prime Sedan and eBike show the highest average ride distances, indicating longer-trip preference.
- Ride distribution is balanced across vehicle categories, showing diversified demand.

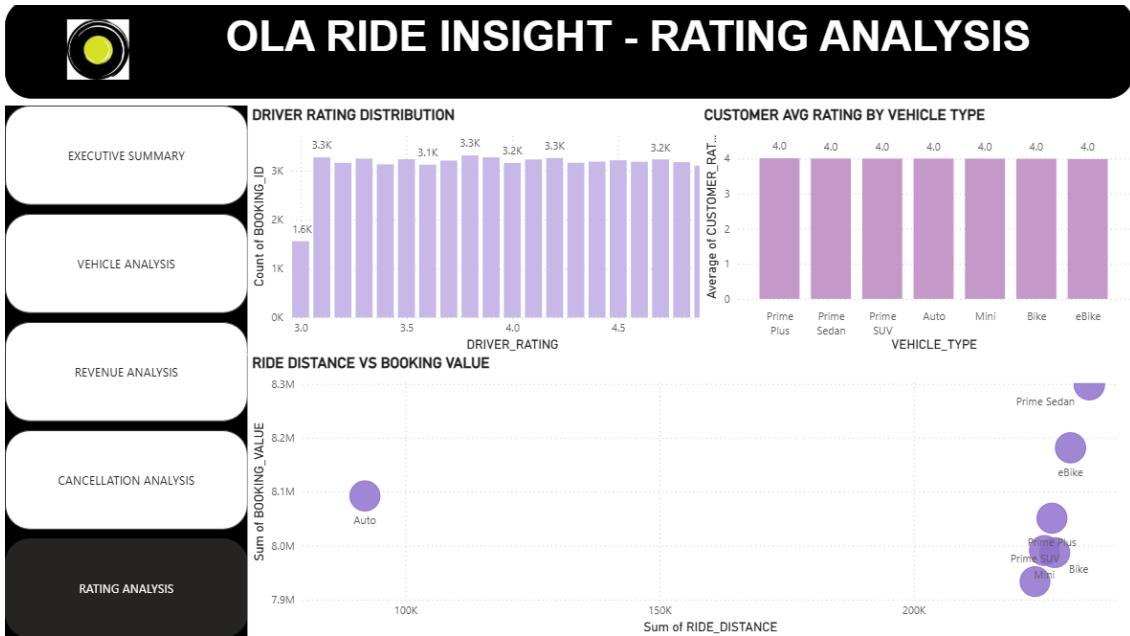
- Customer ratings remain consistently high (~4.0) across all vehicle types.



- Cash and UPI together contribute the majority share of revenue.
- Top customers generate significantly higher booking value, suggesting loyalty opportunities.
- Ride distance trend remains stable with periodic peaks in demand.



- Successful rides (~64K) dominate the booking status distribution.
- Driver-side cancellations are higher than customer cancellations, indicating supply-side gaps.
- Ride status trend over time remains relatively stable.



- Driver ratings are tightly clustered between 3.5 and 4.5, showing consistent performance.
- Customer ratings remain uniformly around 4.0 across vehicle types.
- Higher ride distance segments correspond with higher booking values.

## Streamlit Application Code

```

import streamlit as st
import pandas as pd

st.set_page_config(page_title="OLA Ride Insights", layout="wide")

st.title("OLA Ride Insights Dashboard")

```

```
df = pd.read_csv("OLA_DataSet.csv")

st.subheader("Dataset Preview")
st.dataframe(df.head())

st.subheader("Ride Count by Vehicle Type")
if 'vehicle_type' in df.columns:
    st.bar_chart(df['vehicle_type'].value_counts())

st.subheader("Booking Status Breakdown")
if 'booking_status' in df.columns:
    st.bar_chart(df['booking_status'].value_counts())

# ----- POWER BI DASHBOARDS -----

st.markdown("---")
st.header("Power BI Dashboard")

st.subheader("Executive Summary")
st.image("powerbi_1.png", use_container_width=True)

st.subheader("Vehicle Analysis")
st.image("powerbi_2.png", use_container_width=True)

st.subheader("Revenue Analysis")
st.image("powerbi_3.png", use_container_width=True)
```

```
st.subheader("Cancellation Analysis")
st.image("powerbi_4.png", use_container_width=True)
```

```
st.subheader("Rating Analysis")
st.image("powerbi_5.png", use_container_width=True)
```