

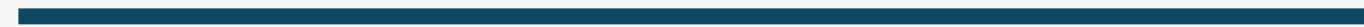


# *OLA Ride Booking Data Analysis Project*

An end-to-end data analytics project focused on OLA's ride booking data — from raw data cleaning in Excel to deep SQL-based analysis and interactive visualizations using Power BI. This project uncovers business-critical insights into customer behavior, operational trends, and key performance metrics.



# *Project Goal*



To perform a comprehensive analysis of OLA's ride data and build actionable dashboards that help understand:

- Customer booking and cancellation behavior
- Peak demand times and ride volumes
- Revenue performance and ride success rates
- Operational bottlenecks and geographic trends

The goal was not only to extract insights but also to visualize them clearly for business stakeholders using dynamic Power BI dashboards.



# *Business Problems*



Retrieve all successful bookings.

Find average ride distance for each vehicle type.

Find total number of canceled rides by customers.

Find top 5 customers who booked the highest number of rides.

Find the maximum and minimum driver ratings for Prime Sedan Bookings.

Find the average customer rating per vehicle type.

Calculate the total booking values of rides completed successfully.





List all incomplete rides along with the reasons.

For each vehicle type, rank the rides based on their Booking value.





## *Tools & Technologies Used*

-  Excel – for initial data cleaning and exploration
-  SQL (MySQL) – for writing queries to solve business questions
-  Power BI – for dashboard creation and visual storytelling
-  Data Modeling & DAX – to create KPIs, measures, and filters

## *Dashboards Created*

1. Booking Overview Dashboard – Total bookings, success rate, and revenue
2. Cancellation Insights – Breakdown of driver vs. customer cancellations
3. Geographic Trends – State-wise booking performance
4. Daily & Hourly Ride Trends – Temporal analysis of ride activity
5. KPI Summary – Interactive visuals for key metrics and business performance



# Retrieve all successful bookings.

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

	Date	Time	Booking_ID	Booking_Status	Customer_ID	Vehicle_Type	Pickup_Location	Drop_Location	V_TAT	C_TAT	Canceled_Rides_
▶	2024-07-25 22:20:00	22:20:00	CNR2940424040	Success	CID225428	Bike	Magadi Road	Varthur	203	30	<div>HULL</div>
	2024-07-30 19:59:00	19:59:00	CNR2982357879	Success	CID270156	Prime SUV	Sahakar Nagar	Varthur	238	130	<div>HULL</div>
	2024-07-02 9:02:00	9:02:00	CNR1797421769	Success	CID939555	Mini	Rajajinagar	Chamarajpet	252	80	<div>HULL</div>
	2024-07-13 4:42:00	4:42:00	CNR8787177882	Success	CID802429	Mini	Kadugodi	Vijayanagar	231	90	<div>HULL</div>
	2024-07-23 9:51:00	9:51:00	CNR3612067560	Success	CID476071	Bike	Tumkur Road	Whitefield	133	40	<div>HULL</div>
	2024-07-29 23:33:00	23:33:00	CNR4787583516	Success	CID923404	Prime Plus	Hosur Road	Jayanagar	35	55	<div>HULL</div>
	2024-07-26 4:03:00	4:03:00	CNR7943634301	Success	CID647026	Prime Plus	Kammanahalli	Rajajinagar	238	95	<div>HULL</div>
	2024-07-27 13:18:00	13:18:00	CNR4524472111	Success	CID540929	Auto	Cox Town	Yelahanka	126	35	<div>HULL</div>
	2024-07-16 9:54:00	9:54:00	CNR8181602032	Success	CID167642	Bike	Indiranagar	MG Road	70	95	<div>HULL</div>
	2024-07-02 10:25:00	10:25:00	CNR8090918544	Success	CID640151	Bike	Magadi Road	HSR Layout	126	95	<div>HULL</div>
	2024-07-05 23:42:00	23:42:00	CNR3196156650	Success	CID243275	Bike	Electronic City	Langford Town	140	40	<div>HULL</div>
	2024-07-09 11:11:00	11:11:00	CNR9975925287	Success	CID162055	Prime SUV	Magadi Road	RT Nagar	42	30	<div>HULL</div>
	2024-07-12 14:44:00	14:44:00	CNR1591113431	Success	CID902781	eBike	Koramangala	Sarjapur Road	245	70	<div>HULL</div>
	2024-07-11 20:42:00	20:42:00	CNR3650331573	Success	CID217093	eBike	Basavanagudi	Hulimavu	84	25	<div>HULL</div>
	2024-07-08 22:33:00	22:33:00	CNR6013805089	Success	CID817034	Prime Sedan	Padmanabhan...	Jayanagar	168	65	<div>HULL</div>
	2024-07-03 18:20:00	18:20:00	CNR9832070187	Success	CID655872	Bike	Koramangala	BTM Layout	231	145	<div>HULL</div>
	2024-07-02 21:17:00	21:17:00	CNR5670520752	Success	CID300480	Prime Plus	Munegoda	Sahakar Nagar	56	105	<div>HULL</div>



bookings7 ×

Output

*Find average ride distance for each vehicle type.*



```
SELECT
    Vehicle_Type, round(AVG(Ride_Distance), 0) AS Avg_distance
FROM
    bookings
GROUP BY Vehicle_Type;
```



Result Grid     Filter Rows: <input type="text"/>		
	Vehicle_Type	Avg_distance
▶	Prime Sedan	16
	Bike	16
	Prime SUV	15
	eBike	16
	Mini	15
	Prime Plus	15
	Auto	6



*Find total number of canceled rides by customers.*



```
SELECT
    COUNT(*) AS Total_canceled_rides
FROM
    bookings
WHERE
    Booking_Status = 'Canceled By Customer';
```

Result Grid			 Filter Rows:	
	Total_canceled_rides			
▶	4539			





*Find top 5 customers who booked the highest number of rides.*



```
SELECT
    Customer_ID, COUNT(Booking_ID) AS Total_rides
FROM
    bookings
GROUP BY Customer_ID
ORDER BY Total_rides DESC
LIMIT 5;
```

Result Grid			Filter Rows:
	Customer_ID	Total_rides	
▶	CID887797	3	
	CID706246	3	
	CID688426	3	
	CID219102	3	
	CID266327	3	





*Find the maximum and minimum driver ratings for Prime Sedan Bookings.*



```
SELECT
    MIN(Driver_Ratings) AS min_rating,
    MAX(Driver_Ratings) AS max_rating
FROM
    bookings
WHERE
    Vehicle_Type = 'Prime Sedan';
```

Result Grid			Filter Rows:
	min_rating	max_rating	
▶	3	5	



*Find the average customer rating per vehicle type.*



```
• SELECT
    Vehicle_Type, AVG(Customer_Rating) AS Average_rating
FROM
    bookings
GROUP BY Vehicle_Type;
```

The screenshot shows a database query result grid with the following data:

	Vehicle_Type	Average_rating
▶	Prime Sedan	3.9928658388117815
	Bike	3.9771275298707494
	Prime SUV	3.9876598946576314
	eBike	3.9901213592232962
	Mini	4.00377454730937
	Prime Plus	3.9951401388531766
	Auto	4.008243277205317



Result 2 ×



*Calculate the total booking values of rides completed successfully.*



```
SELECT
    SUM(Booking_Value) AS total
FROM
    bookings
WHERE
    Booking_Status = 'Success';
```

Result Grid			 Filter Rows
	total		
▶	15397818		



*List all incomplete rides along with the reasons.*



```
SELECT
    Booking_ID, Incomplete_Rides_Reason
FROM
    bookings
WHERE
    Incomplete_Rides = 'Yes';
```

Result Grid			Filter Rows:	Export:	Wrap Cell Content:
	Booking_ID	Incomplete_Rides_Reason			
▶	CNR5176704322	Customer Demand			
	CNR9312632867	Vehicle Breakdown			
	CNR7924302885	Customer Demand			
	CNR1640228587	Other Issue			
	CNR7623690602	Other Issue			
	CNR9590311980	Customer Demand			
	CNR5863244684	Customer Demand			
	CNR9526078867	Customer Demand			
	CNR7154043084	Customer Demand			
	CNR3193710797	Other Issue			
	CNR7073850950	Customer Demand			
	CNR9952584604	Customer Demand			
	CNR5433575259	Vehicle Breakdown			
	CNR3575066041	Vehicle Breakdown			
	CNR7537935962	Customer Demand			
	CNR2722435581	Vehicle Breakdown			
	CNR5495479048	Other Issue			





bookings1 ×



*For each vehicle type, rank the rides based on their Booking value.*

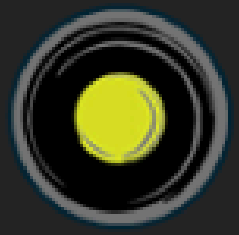


```
SELECT
  Booking_ID,
  Vehicle_Type,
  Booking_Value,
  RANK() OVER (PARTITION BY Vehicle_Type ORDER BY Booking_Value) as rank_by_booking_value
FROM
  Bookings
ORDER BY
  Vehicle_Type,
  rank_by_booking_value;
```

Result Grid   Filter Rows: <input type="text"/>   Export:    Wrap Cell Content: 				
	Booking_ID	Vehicle_Type	Booking_Value	rank_by_booking_value
▶	CNR4229838897	Auto	100	1
	CNR9821437400	Auto	100	1
	CNR5723011436	Auto	100	1
	CNR6725387392	Auto	100	1
	CNR4045592454	Auto	100	1
	CNR1072231824	Auto	100	1
	CNR9711740579	Auto	100	1
	CNR9550268696	Auto	100	1
	CNR5913321332	Auto	100	1
	CNR6484290711	Auto	101	10
	CNR4259534522	Auto	101	10
	CNR2907364421	Auto	101	10
	CNR5343725284	Auto	101	10
	CNR4159990632	Auto	101	10
	CNR9143196412	Auto	101	10

Result 3 ×





# OLA



Overall



Vehicle Type



Revenue



Cancellation



Ratings

Date

01-07-2024



20-07-2024



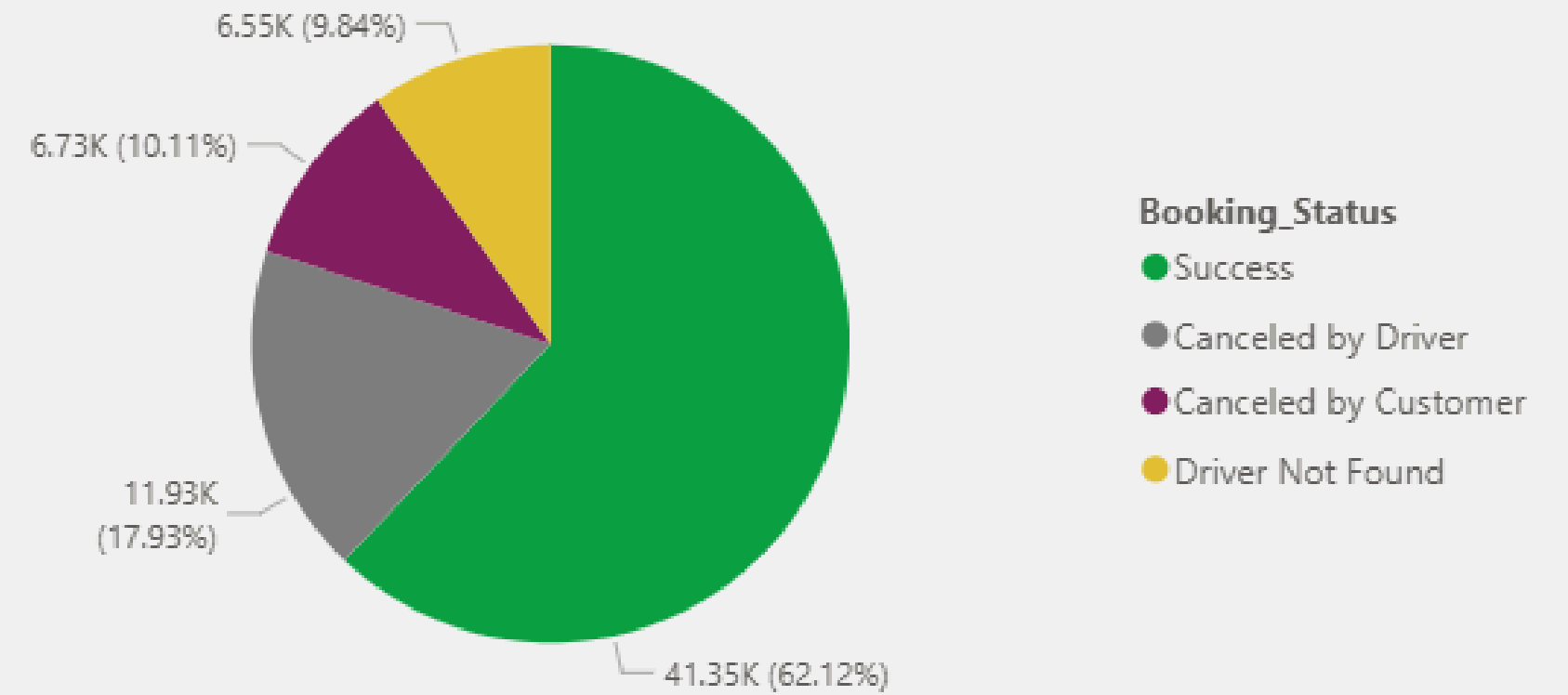
Total Bookings

66566

Total Bookings

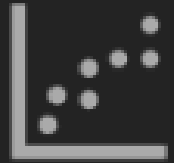
23M

Booking Status Breakdown



Ride Volume Over Time





Overall



Vehicle Type



Revenue



Cancellation



Ratings

01-07-2024

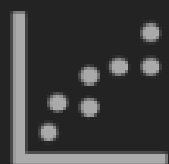


20-07-2024



Vehicle Type	Total Booking Value	Success Booking Value	Avg. Distance Travelled	Total Distance Travelled
 Prime Sedan	5.3M	3.3M	24.9	150K
 Prime SUV	5.1M	3.1M	24.8	143K
 Prime Plus	5.2M	3.3M	24.9	148K
 Mini	5.1M	3.1M	24.8	145K
 Auto	5.2M	3.2M	10.1	59K
 Bike	5.3M	3.2M	24.8	148K
 E-Bike	5.3M	3.3M	25.2	150K





Overall



Vehicle Type



Revenue

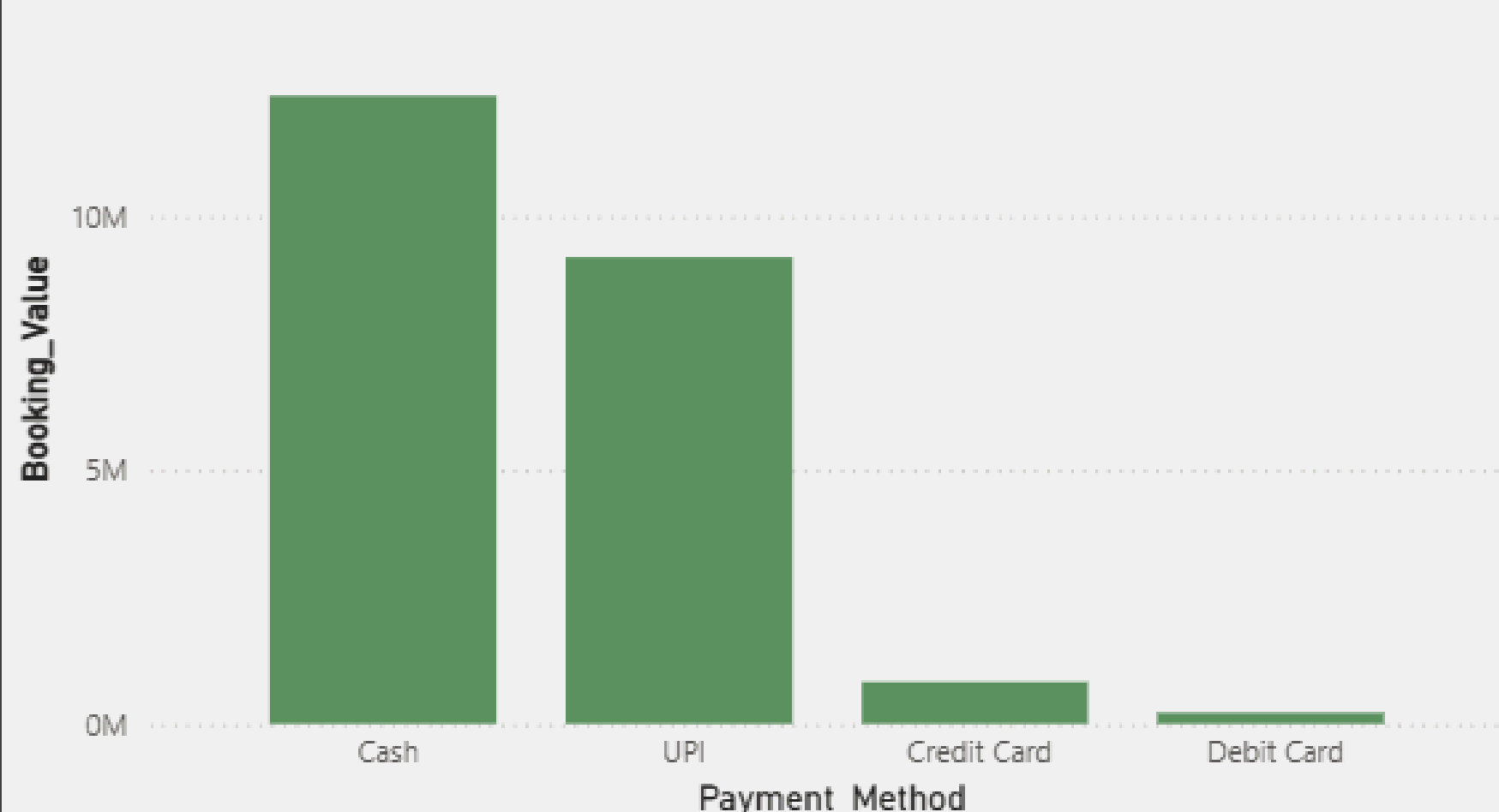


Cancellation



Ratings

Revenue by Payment Method



Date

01-07-2024



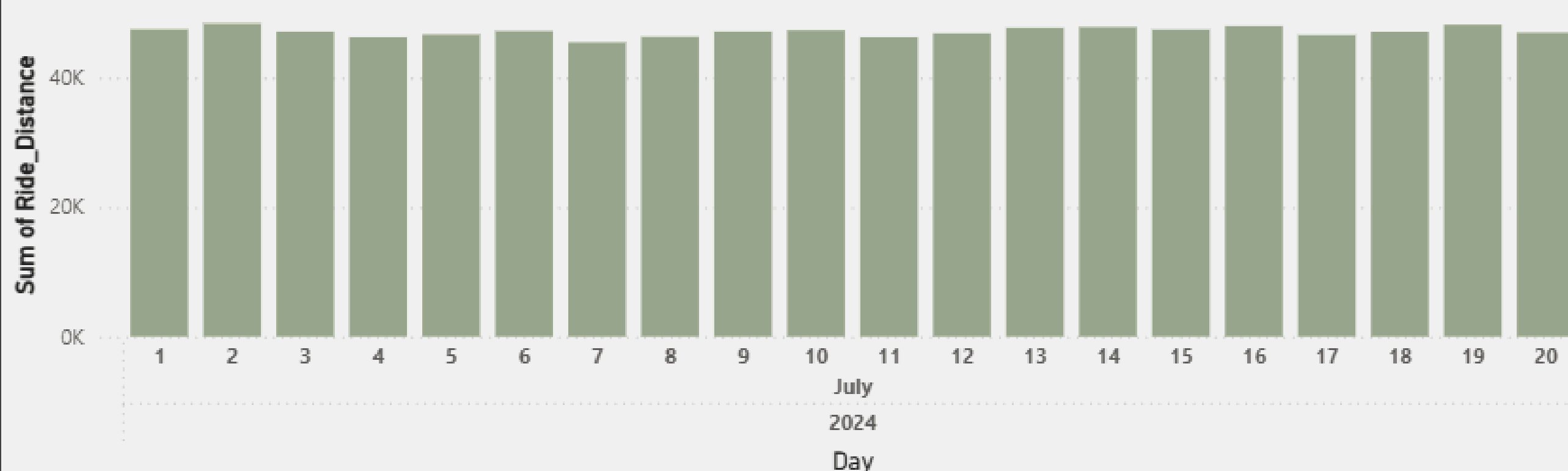
20-07-2024



Top 5 Customers

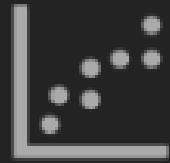
Customer_ID	Sum of Booking_Value
CID281468	4177
CID455502	4960
CID635848	4976
CID838428	3998
CID933539	5314
Total	23425

Ride Distance per day





# OLA



Overall



Vehicle Type



Revenue



Cancellation



Ratings

Date

01-07-2024



20-07-2024



Total Bookings

66566

Success Bookings

41349

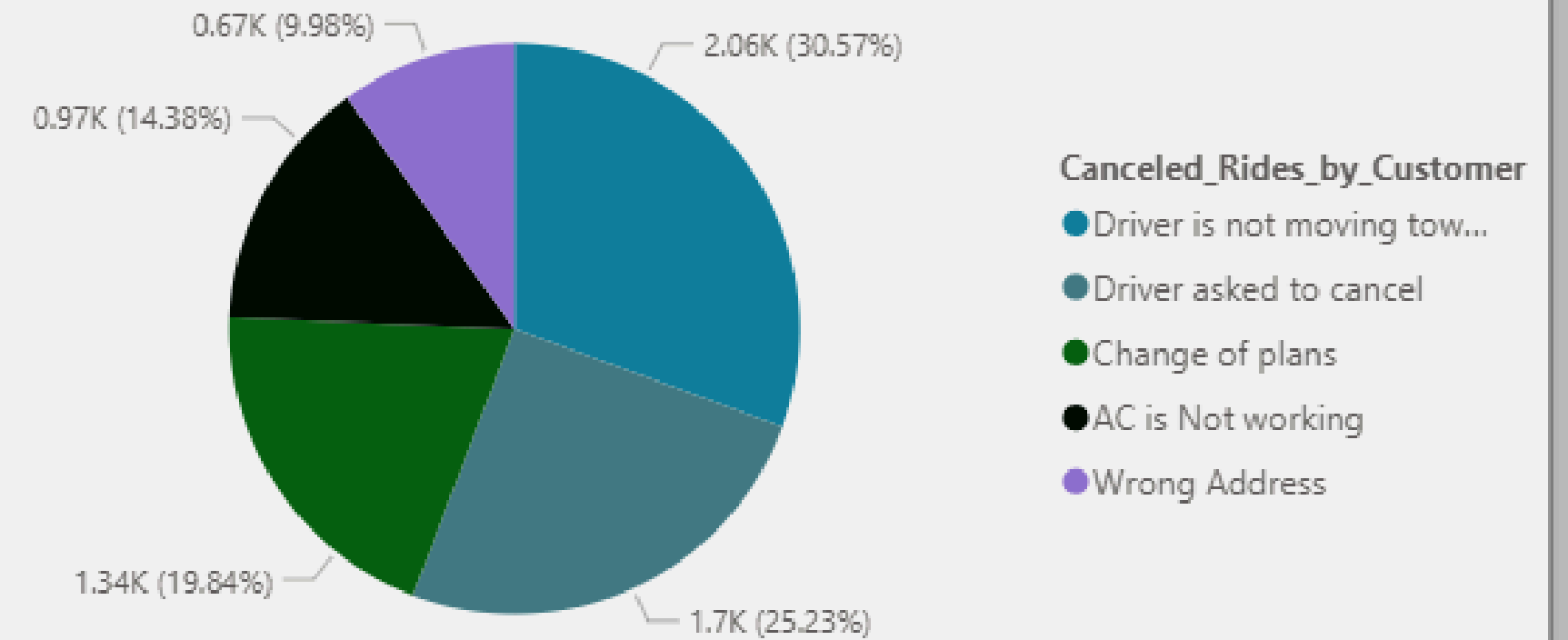
Canceled Bookings

25217

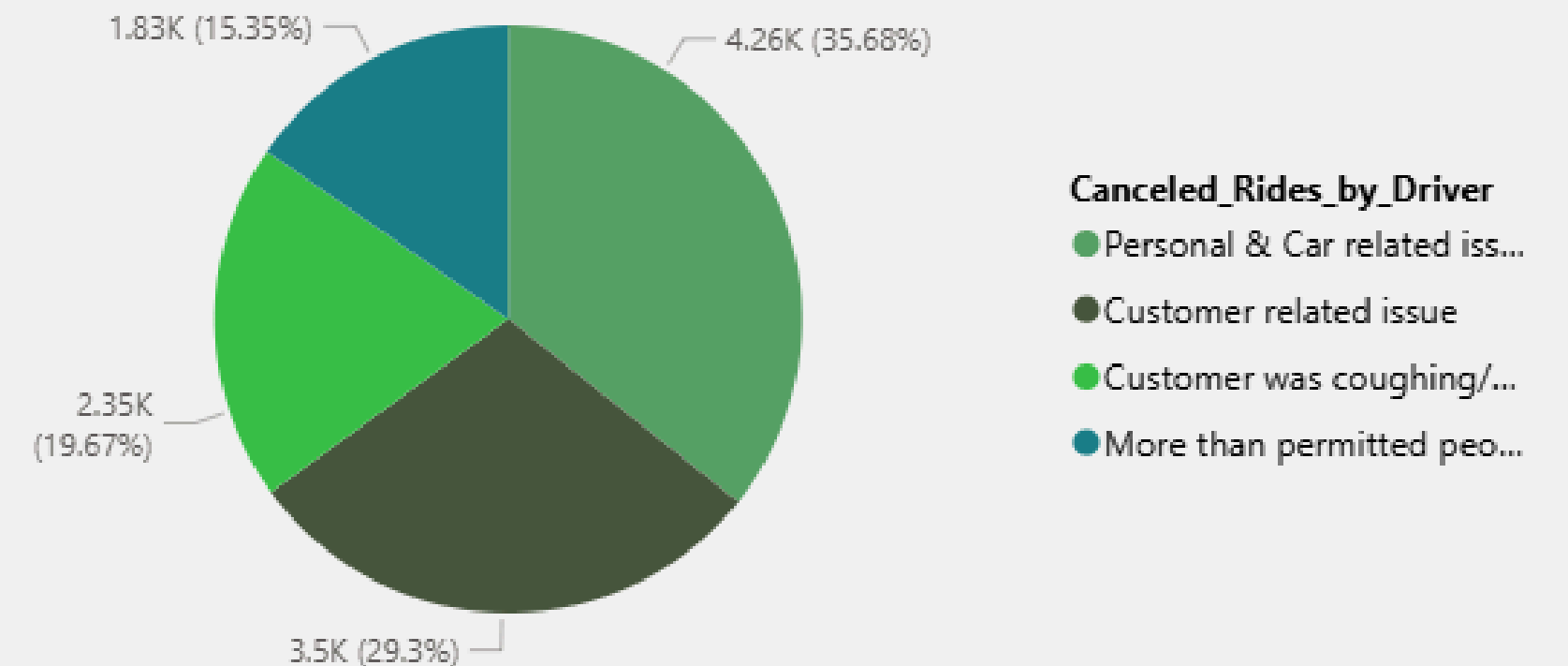
Cancellation Rate

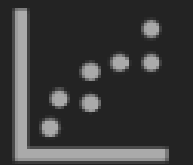
28.04

Canceled rides by Customers



Canceled rides by Drivers





Overall



Vehicle Type



Revenue



Cancellation



Ratings

Date

01-07-2024



20-07-2024



### Driver Ratings

Prime Sedan	Prime SUV	Prime Plus	Mini	Auto	Bike	E-Bike
3.98	4.00	3.99	4.00	4.01	3.99	4.00

### Customer Ratings

Prime Sedan	Prime SUV	Prime Plus	Mini	Auto	Bike	E-Bike
4.01	4.00	4.01	4.00	4.00	3.99	3.98



## *Key Insights*

- 🚗 Over **23 million total bookings**, with detailed ride status tracking
- 📉 **Cancellation analysis** shows ~38% of rides are not completed — highlighting a major operational area
- 📈 **Ride volumes peak during weekends** and holidays, indicating strong demand fluctuations
- 🧱 **Region-wise demand** reveals top-performing states with better ride success rates
- 🕒 Booking frequency increases between **7 AM – 11 AM and 6 PM – 9 PM**, aligned with commute hours

## *Project Outcomes*

- Transformed raw ride data into actionable dashboards for strategic insights
- Identified high-cancellation zones and times for operational improvements
- Provided visual tools for OLA stakeholders to monitor performance in real time
- Demonstrated proficiency in **data storytelling, SQL problem solving, and Power BI dashboarding**





*Thank you*

~Sanika Tambekar

