

Ola Ride Bookings Analysis

Problem Statement :

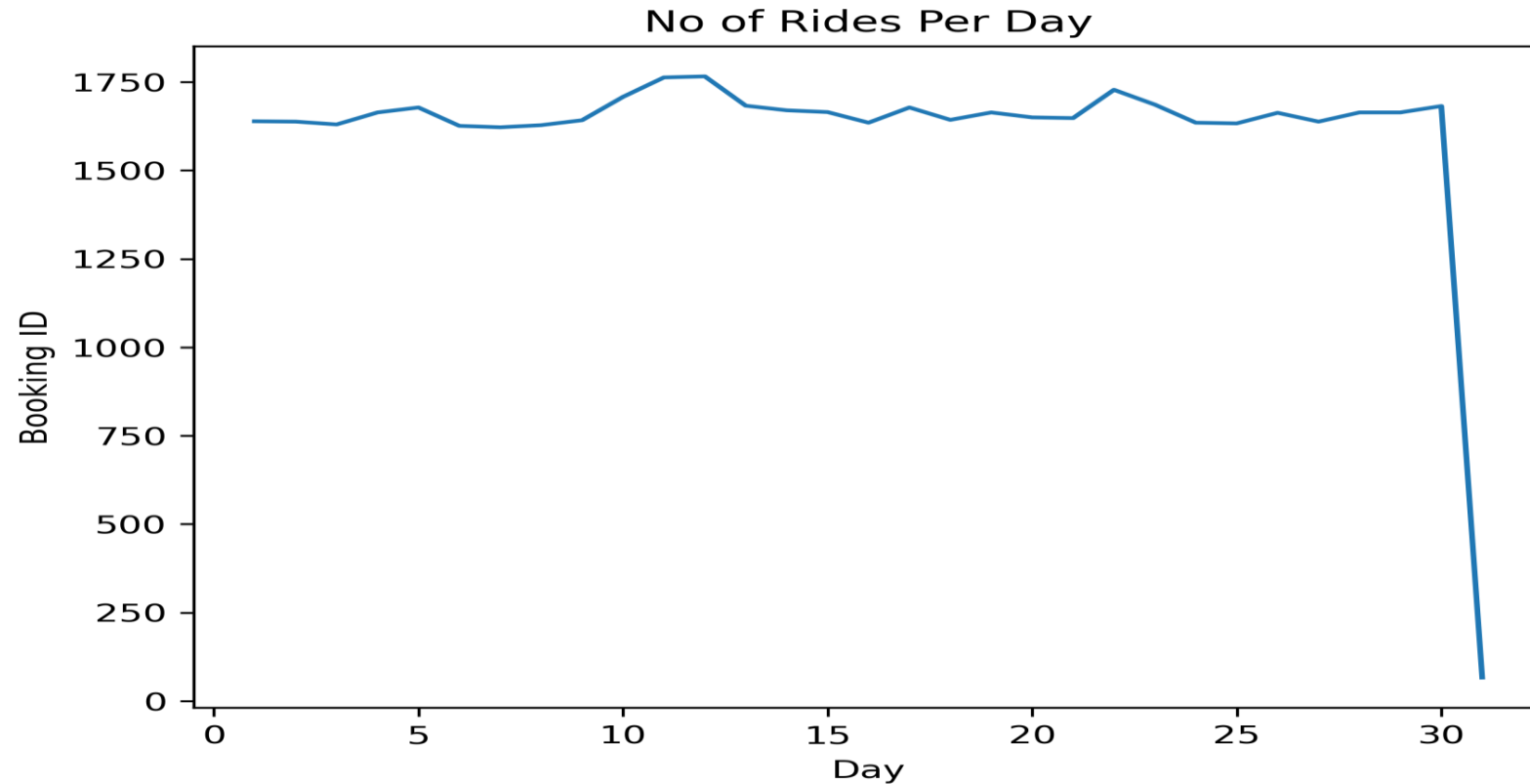
This project aims to analyze real booking data to identify patterns behind driver and customer cancellations, evaluate service quality through ratings, and understand operational inefficiencies. The insights will help stakeholders improve platform reliability, customer experience, and operational decision-making.

Project Objective :

- Analyze ride booking performance using real-world data
- Identify key issues like cancellations, incomplete rides, and low ratings
- Use SQL for querying and Python for visualization
- Recommend strategies to improve ride completion and user satisfaction

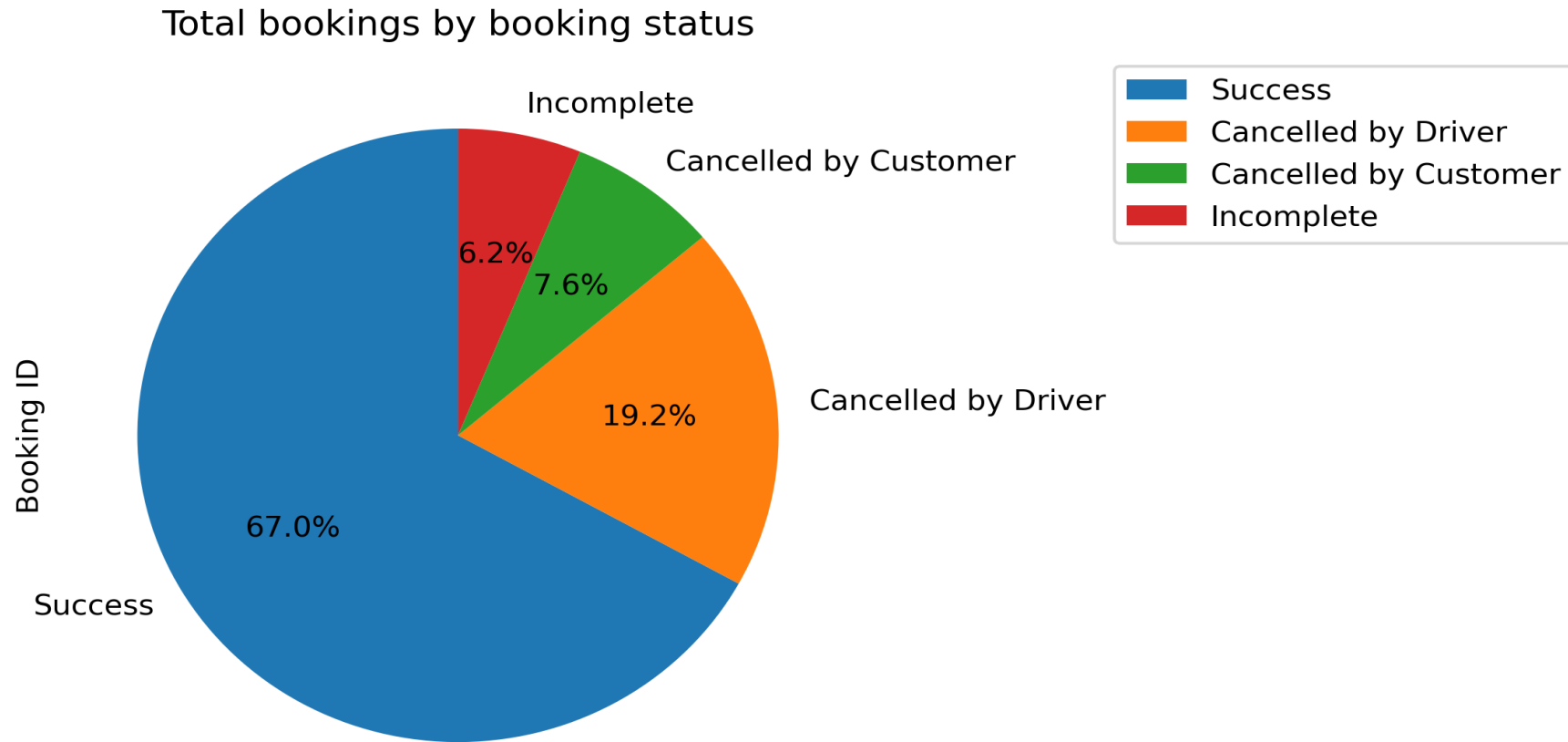
Ride Volume Over Time :

A time-series chart showing the number of rides per day



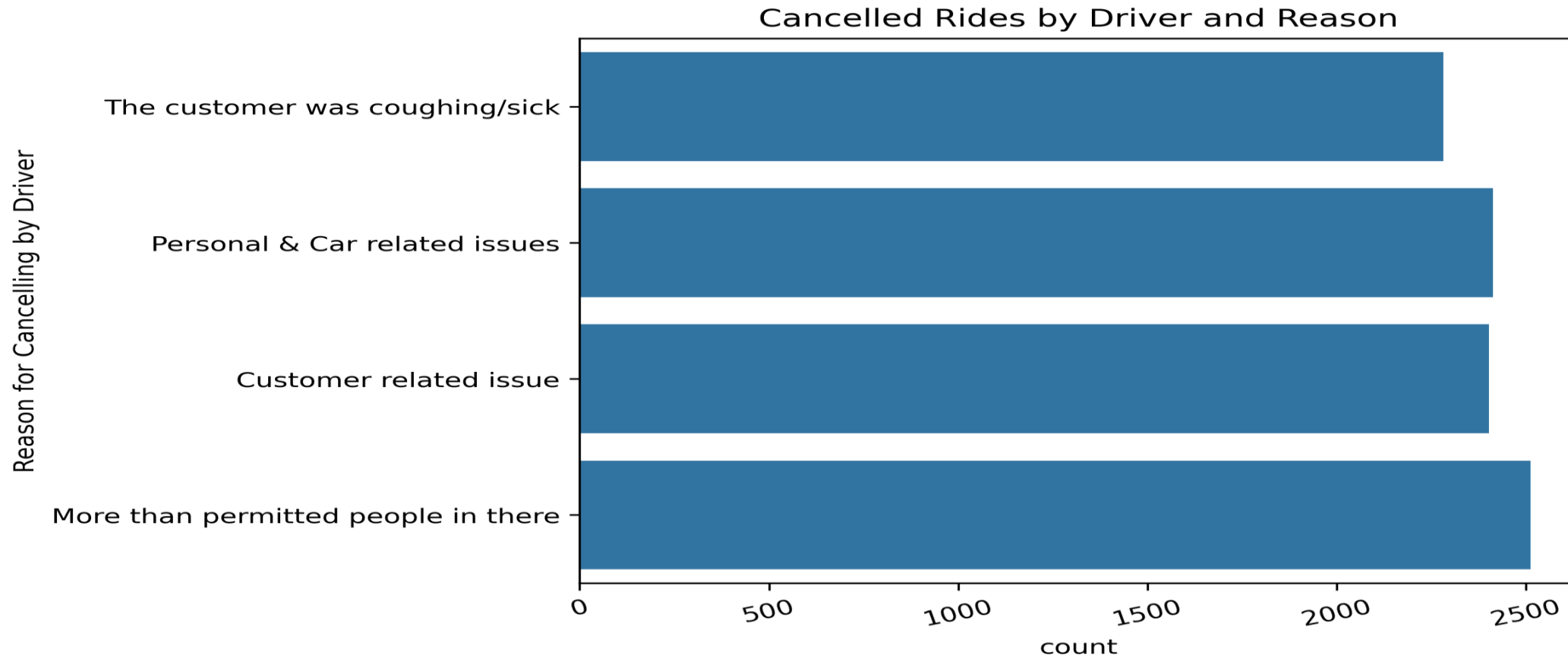
- By Observing the Line chart ,we know that ride bookings averagely between 1500 to 1750 from start day of month to 30th day after decreasing
- The maximum bookings occurred at 11th ,12th ,13th date

Booking Status Breakdown :



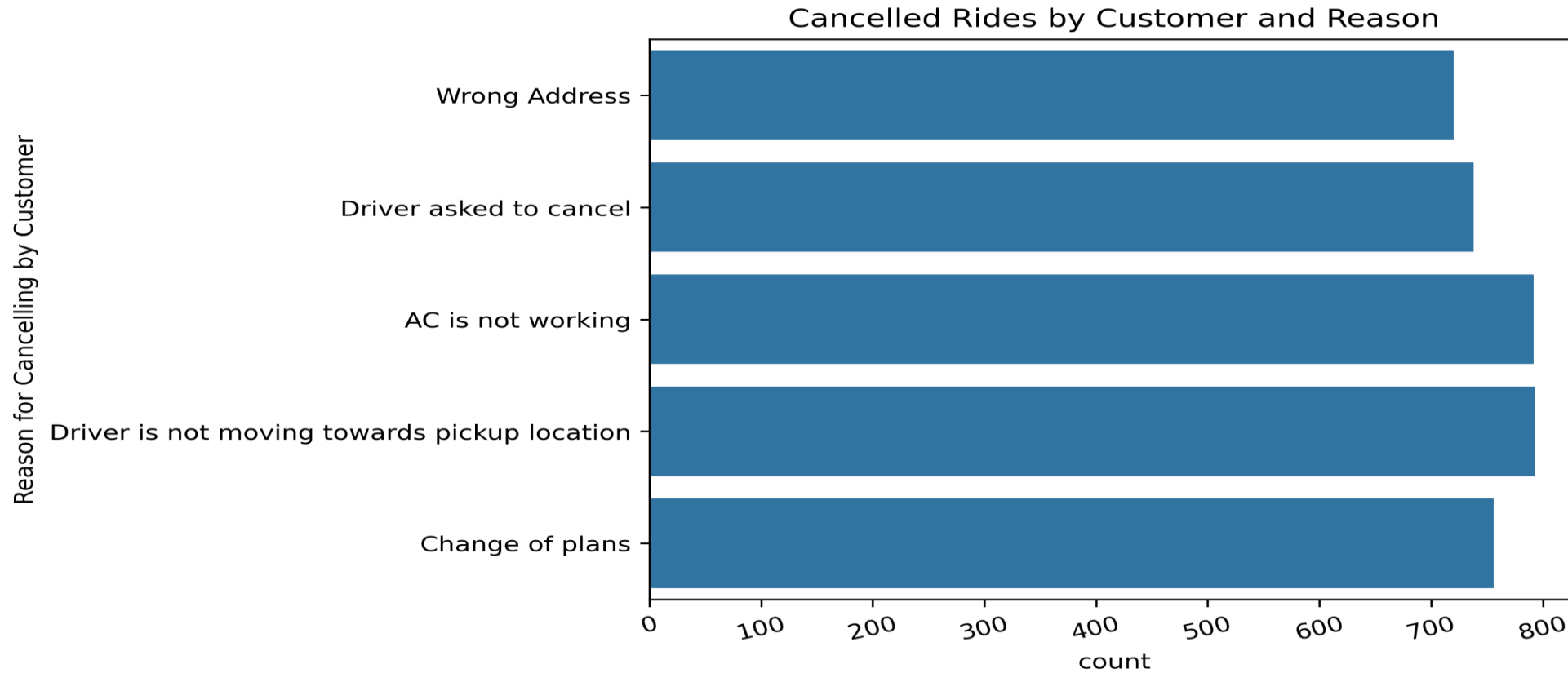
- The above Pie chart shows total Ride Bookings and Ride status in percentage format
- Success rate of rides are 67% and the Remaining 33% were Cancelled due to some reasons
- Mainly 19.2% rides were cancelled by the Driver and Customer cancelled 7.6% of Rides
- Only 6.2% of Rides were incomplete due to other issues

Reason for Cancelling Rides by Driver :



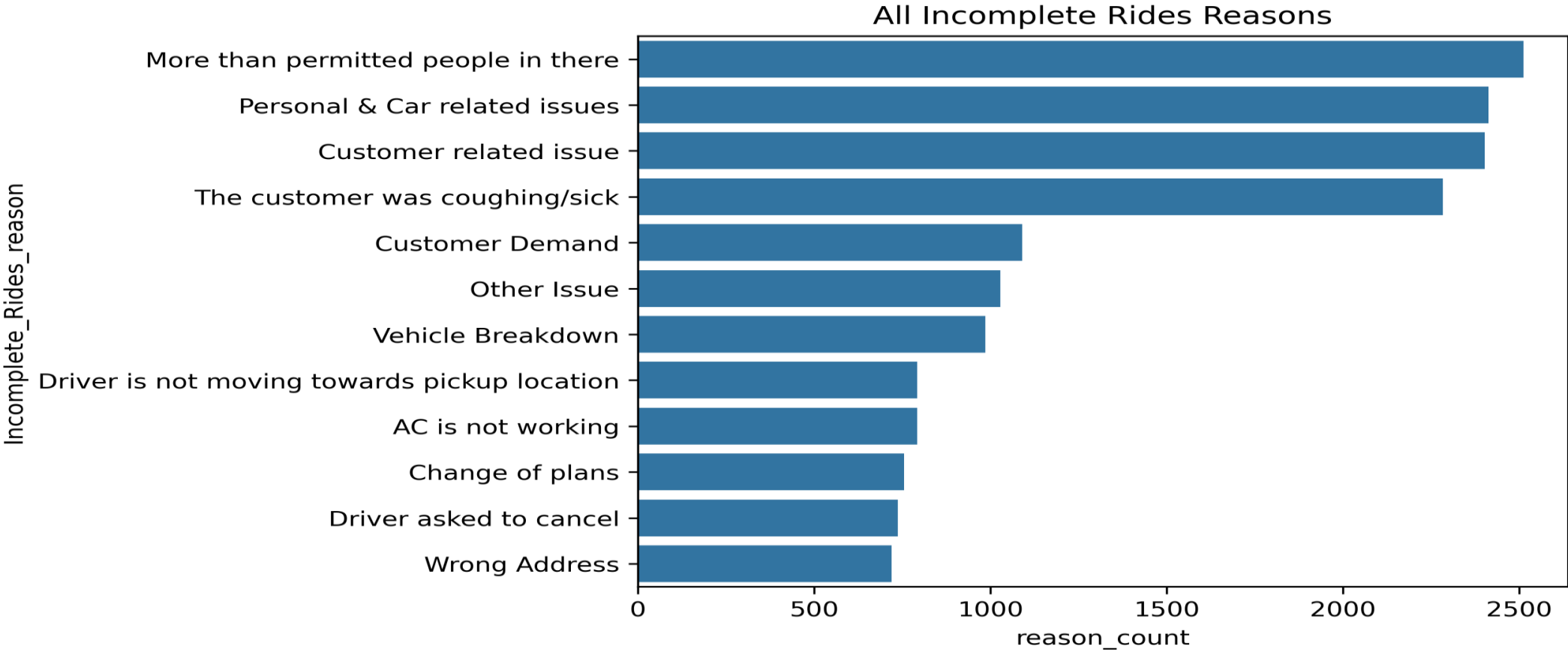
- The Bar chart shows 4 repeated reasons for cancelling rides by Driver
- In that Top most reason is **“More than permitted people in there”** due to this almost 2500 rides were cancelled
- Almost 2400 rides cancelled due to the **“Personal & Car related issue”** and **“Customer related issue”**
- Finally **“The Customer was coughing/sick”** due to this reason nearly 2200 rides were cancelled by driver

Reason for Cancelling Rides by Customer :



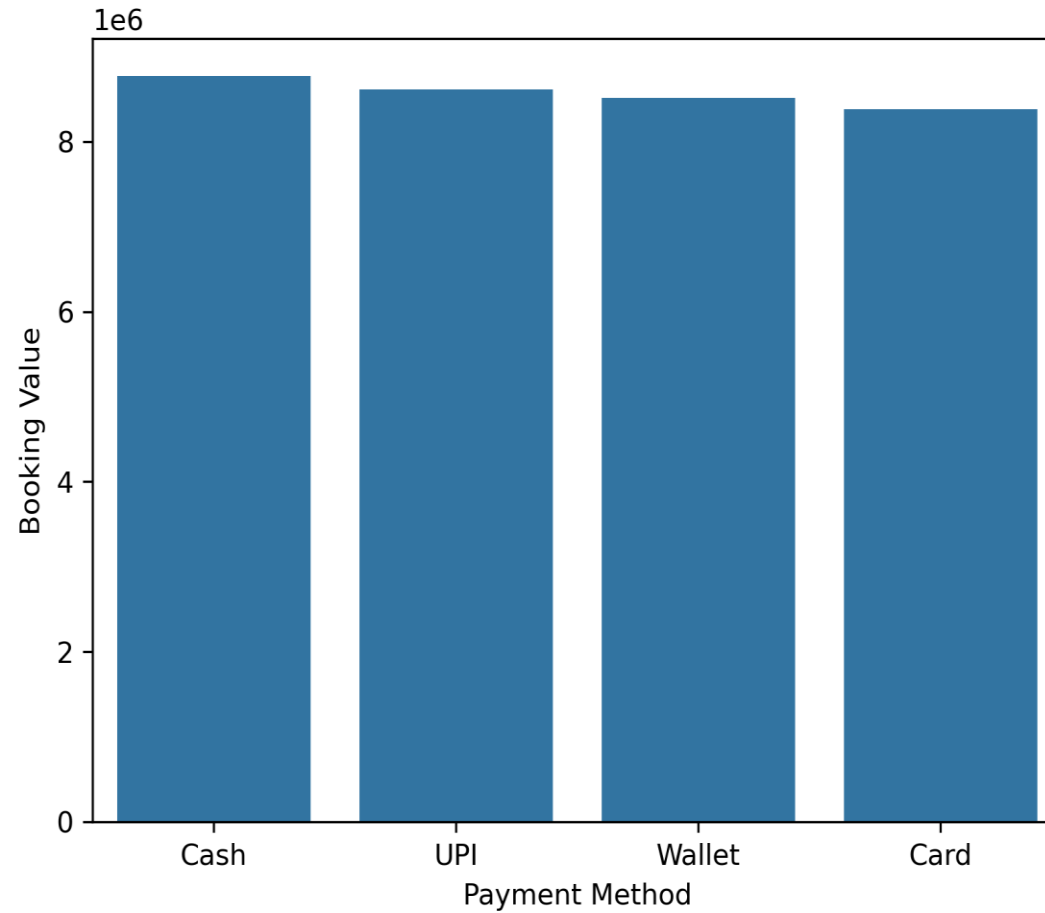
- The Bar chart shows 5 repeated reasons for cancelling rides by Customer
- In that Top most reasons are **“Ac is not working”** & **“Driver is not moving towards pickup location”** due to this almost 780 rides were cancelled
- Almost 720 rides cancelled due to the **“Wrong Address”** entered by the Customer
- Almost 730 rides cancelled because **“Driver asked to cancel”** wantedly
- Finally 750 rides cancelled due to of **“Change of plans”** by customer

All Incomplete Rides Count & Their Reasons :



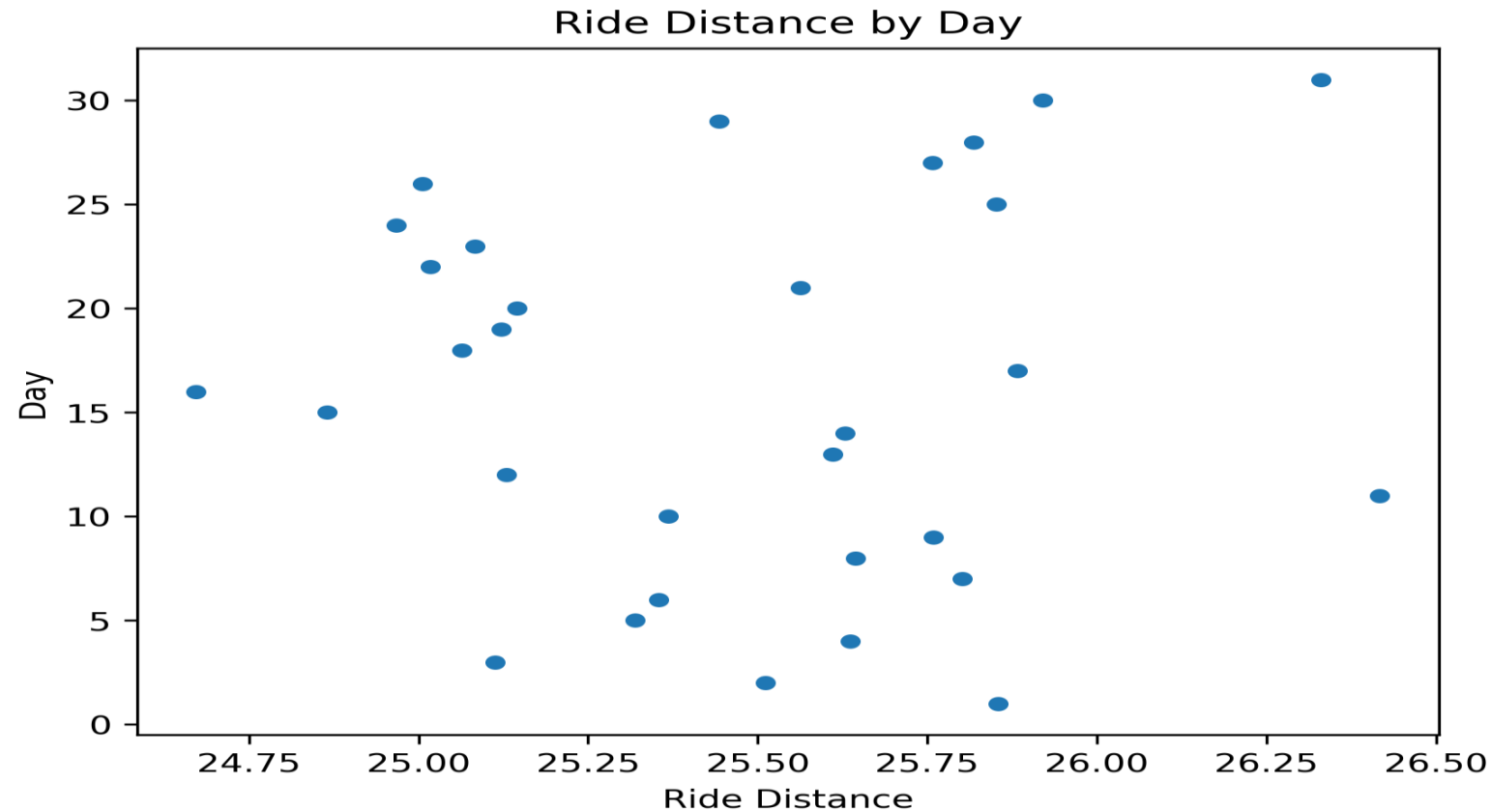
- By the above bar chart shows that ,Due to particular reason this number of rides were not completed
- It was combined of all reasons like cancelled by driver and customer reasons, incomplete ride reason
- By this chart we can easily findout , 2500 rides incomplete due to this “**More than permitted people in there**” reason

Revenue by Payment Method :



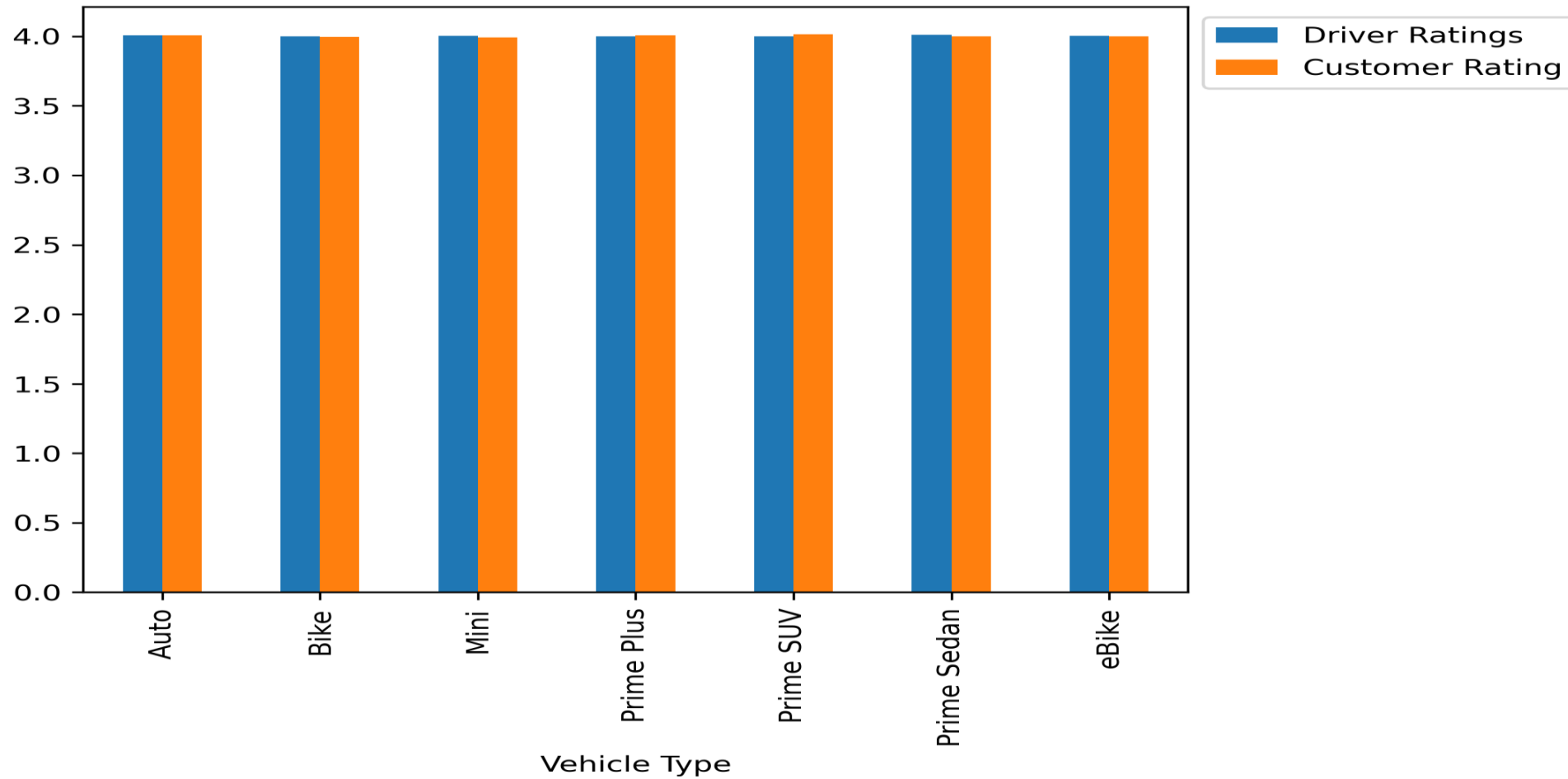
- By the above bar chart shows that Customers payment by payment method
- Here most of the persons made their payment by **Cash** and then **UPI**
- Lowest preference payment method id **Card**

Ride distance vs per Day :



- Above Scatterplot shows on X-axis days from 0 to 31 and Y-axis travelled ride distance from 24.75 km to 26.5 km
- Each dot represents average distance travelled on each day
- Here left side dots shown as less distance covered , right side dots shown as more distance covered
- 16th day least ride distance around 23.5 km and 11th is top distance covered around 26.3 km

Driver vs Customer Ratings by vehicle Type :



- By the above bar chart shows that, Average Customer and Driver ratings by Vehicle
- Here almost all vehicles got around 4 star rating ,Top is Auto with 4.06 rating

	count	mean	min	25%	50%	75%	max	std
Date	49999	2024-01-15 12:52:56.991539968	2024-01-01 00:00:00	2024-01-08 00:00:00	2024-01-15 00:00:00	2024-01-23 00:00:00	2024-01-31 00:00:00	NaN
Time	49999	2025-08-03 11:28:27.442148608	2025-08-03 00:00:00	2025-08-03 05:00:00	2025-08-03 12:00:00	2025-08-03 17:00:00	2025-08-03 23:00:00	NaN
Customer ID	49999.0	550979.937539	100001.0	328740.5	552598.0	773970.0	999991.0	258855.930945
Avg VTAT	33484.0	10.481654	1.0	5.73	10.46	15.24	20.0	5.490853
Avg CTAT	33484.0	15.56432	1.0	8.31	15.61	22.79	30.0	8.365313
Cancelled by Customer	49999.0	0.075982	0.0	0.0	0.0	0.0	1.0	0.264971
Cancelled Rides by Driver	49999.0	0.192204	0.0	0.0	0.0	0.0	1.0	0.394036
Incomplete Rides	49999.0	0.062121	0.0	0.0	0.0	0.0	1.0	0.241378
Booking Value	33484.0	1023.374286	50.1	532.9425	1023.35	1514.6775	2000.0	563.595072
Ride Distance	33484.0	25.447143	1.0	13.1	25.46	37.67	50.0	14.175953
Driver Ratings	33484.0	4.00304	3.0	3.5	4.0	4.5	5.0	0.57968
Customer Rating	33484.0	4.001726	3.0	3.5	4.0	4.5	5.0	0.579177
Day	49999.0	15.536771	1.0	8.0	15.0	23.0	31.0	8.643753
hour	49999.0	11.474289	0.0	5.0	12.0	17.0	23.0	6.923488

Key Takeaways :

- Success rate is good, but driver cancellations need attention
- Incomplete rides often due to breakdowns — improve vehicle readiness
- Better to get customer's feedback for to know where we need to improve
- Target common cancellation reasons with policy or app changes
- Improving the bookings by maintain the vehicle turn around time