UBER RIDE ANALYSIS DASHBOARD

Report

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# 1. Introduction

This project analyzes ride-sharing data consisting of 150,000 bookings. The goal is to identify booking trends, cancellations, customer satisfaction factors, vehicle performance, and payment preferences. A Power BI dashboard and Python-based analysis were used to derive insights.

# 2. Dataset Description

The dataset contains 150,000 records with 21 columns. It includes details such as booking date, time, booking status, customer ID, vehicle type, pickup and drop locations, VTAT (Vehicle Turnaround Time), CTAT (Customer Turnaround Time), ride cancellations, booking value, ride distance, driver ratings, customer ratings, and payment method.

# 3. Data Cleaning & Preprocessing

- Handled missing values in ratings, booking values, and times.  
- Converted date and time columns into proper formats.  
- Removed duplicates and standardized categories.  
- Ensured numerical fields (distance, value) were valid.

# 4. Exploratory Data Analysis

## 4.1 Booking Status Distribution

Majority of rides were completed successfully. Some were cancelled or incomplete.

## 4.2 Ride Demand by Hour of Day

Peak demand occurs between 6 PM and 8 PM, indicating evening travel is dominant.

## 4.3 Vehicle Type Preferences

Most popular vehicle type was Auto, followed by Bike and Go Sedan.

## 4.4 Payment Method Preferences

UPI is the most widely used payment method, followed by Cash and Uber Wallet.

## 4.5 Correlation Analysis

There is a strong positive correlation between ride distance and booking value. Ratings are only weakly correlated, indicating that customer satisfaction depends more on service quality than fare.

## 4.6 Cancellations Analysis

- Customer cancellations were mostly due to wrong address, change of plans, or driver not moving towards pickup.  
- Driver cancellations were due to customer-related issues, sick customers, or excess passengers.

## 4.7 Avg VTAT & CTAT by Vehicle Type

Go Sedan provided the best CTAT performance, averaging around 29 minutes, making it the most reliable vehicle type.

# 5. Key Insights

- Evening hours (6–8 PM) show maximum ride demand.  
- Key pickup hubs: Khandsa, Barakhamba Road, Saket, Badarpur, Pragati Maidan.  
- Customer cancellations mainly due to Wrong Address and Change of Plans.  
- Driver cancellations largely due to customer-related issues.  
- UPI dominates as the most preferred payment method.  
- Go Sedan offers the most reliable turnaround performance.

# 6. Final Conclusions

This analysis reveals critical insights into ride-sharing operations:  
1. Ride demand is highly time-dependent, with evenings being the busiest.  
2. Cancellations highlight the importance of improving pickup accuracy and communication.  
3. Service quality is the main driver of customer satisfaction, not distance or fare.  
4. Digital payment adoption (especially UPI) is strong, reflecting user trust.  
5. Fleet optimization during peak evening hours can maximize revenue.  
  
Overall, the study demonstrates the value of combining data analytics with visualization tools like Power BI to uncover business insights that can improve operations and customer experience.

# 7. References

- Dataset.csv (Raw dataset)  
- Project.pbix (Power BI dashboard)  
- Python exploratory data analysis