**Case Study on OLA: Data-Driven Strategies for Operational Optimization**

**Project Overview:**

This project analyses ride-booking data from Bengaluru city over one month to gain actionable insights into ride performance, cancellations, customer behaviour, and ratings.

The project is based on the hypothetical data created using ChatGPT. It includes data for Bengaluru city for 1 month.

**Objective:**

The goal is to analyse ride-booking data for insights into ride performance, cancellations, customer behaviour and ratings to optimize operational efficiency and customer satisfaction.

**Dataset description:**

The data set includes 19 features relevant for the analysis that includes:

Date, Time, Booking ID 4. Booking Status 5. Customer ID 6. Vehicle Type 7. Pickup Location (Create dummy location points Take any 50 areas from Bangalore) 8. Drop Location (Take from dummy pickup locations) 9. Avg VTAT (Time taken to arrive at the vehicle) 10. Avg CTAT (Time taken to arrive the Customer) 11. Cancelled Rides by Customer 12. Reason for cancelling by Customer 13. Cancelled Rides by Driver 14. Incomplete Rides 15. Incomplete Rides Reason - Customer Demand - Vehicle Breakdown - Other Issue 16. Booking Value 17. Ride Distance 18. Driver Ratings 19. Customer Rating.

**Tools used:**

* Language: SQL (Structured Query Language)
* DBMS: MySQL Workbench (MySQL Workbench is used because it is open-source)

**Business Questions:**

1. Retrieve all successful bookings
2. Find the average ride distance for each vehicle type
3. Get the total number of cancelled rides by customers
4. List the top 5 customers who booked the highest number of rides
5. Get the number of rides cancelled by drivers due to personal and car-related issues
6. Find the maximum and minimum driver ratings for Prime Sedan bookings
7. Retrieve all rides where payment was made using UPI
8. Find the average customer rating per vehicle type
9. List all incomplete rides along with the reason

**Insights**

* Bangalore recorded a total of **1,03,024** rides—a volume that showcased the demand for cab service. However, a deeper analysis discovered that only **62.08%** of the rides were successfully completed, **37.91%** of rides were cancelled, out of which **17.89%** were due to drivers and **10.19%** were attributed to customers.
* When it came to ride distances, clear patterns emerged. For cars, customers travelled an average of **15 kilometres**, making it the preferred choice for longer commutes. On the other hand, auto-rickshaws proved ideal for short-distance trips, with an average ride distance of just **6 kilometres**.
* Payment preferences offered another layer of insight. Cash reigned supreme, accounting for 33.99% of transactions, while UPI payments were steadily growing, capturing **25%** of payments. However, card usage lagged far behind at **2.97%,** suggesting limited adoption.
* The story of incomplete rides revealed further challenges. While only **3.81%** of rides fell into this category, the reasons varied—**1.54%** stemmed from vehicle breakdowns, **1.55%** were due to customer demand, and **0.71%** resulted from other unforeseen issues.

**Suggestions**

* **Reducing Cancellations:**  
  Implement better communication tools between drivers and customers, along with penalty policies for frequent cancellations. Understanding and addressing driver-specific issues could reduce the 17.89% driver-initiated cancellations.
* **Improving Ride Completion:**Regular vehicle maintenance programs and driver training can minimize 1.54% of rides impacted by vehicle breakdowns, improving reliability.
* **Encouraging Digital Payments:**  
  Promote UPI and card-based payments through discounts or loyalty rewards to reduce cash dependency and streamline operations.
* **Enhancing Short-Distance Services:**  
  Optimize auto-rickshaw availability for shorter distances while targeting car services for medium and long commutes to align with customer preferences.

In the end, the Ola’s ride service in Bengaluru holds immense potential, but by reducing cancellations, ensuring vehicle readiness, and encouraging digital payments, Ola can transform into a seamless, customer-centric experience for all.

**Objective:** Analyse ride trends, revenue, cancellations, and ratings to optimize operational efficiency and customer satisfaction.

**Solution:** Developed an interactive Power BI dashboard to visualize ride volume, revenue distribution, cancellation reasons, and rating patterns for data-driven decision-making.

**Key Achievements:**

* Identified peak ride demand, top vehicle types, and high-value customers to improve service efficiency.
* Analysed cancellation reasons, leading to insights for reducing ride drop-offs.
* Evaluated payment trends and rating correlations to enhance customer experience and revenue strategies.