🚖 OLA Data Analyst Project Report

Project Title: OLA Ride Booking Data Analysis

Domain: Transportation & Mobility

Tools Used: SQL (MySQL), Power BI

1. Executive Summary

This project analyzes booking data from OLA to examine ride volume, payment trends, cancellation patterns, and customer-driver ratings. By utilizing SQL for data retrieval and Power BI for visualization, the project aims to optimize operations, improve customer satisfaction, and increase booking success rates.

2. Dataset Overview

The dataset includes specific columns allowing for a 360-degree view of the ride experience.

- **Time & Date:** Tracking peak hours and daily volume.
- **Booking Details:** ID, Status (Success/Cancelled), Vehicle Type.
- **Customer & Driver:** IDs, Ratings, Cancellation reasons.
- **Financials:** Booking Value, Payment Method (UPI, Cash, etc.).
- **Logistics:** Pickup/Drop locations, TAT (Turn Around Time), Ride Distance.

3. Phase 1: SQL Data Analysis

We utilized SQL to extract key performance indicators (KPIs) and created **Views** to store these complex queries for future use.

📊 Volume & Success Analysis

1. Successful Bookings

- **Objective:** Identify the core revenue-generating rides.
- **Query Logic:** Filtered Booking_Status for 'Success'.
- **Business Value:** Establishes the baseline for total successful volume.

2. Ride Distance Analysis

- **Objective:** Determine the average distance traveled by different vehicles (e.g., Auto vs. Prime Sedan).
- **Query Logic:** Grouped by Vehicle_Type and calculated AVG(Ride_Distance).
- **Business Value:** Helps in fuel/battery planning and pricing strategies per vehicle type.

3. Total Booking Value

- **Objective:** Calculate total revenue from completed rides.
- **Query Logic:** Summed Booking_Value where status is 'Success'.
- **Business Value:** The primary metric for financial performance.

🚫 Cancellation & Issue Analysis

4. Customer Cancellations

- **Objective:** Quantify lost opportunities due to customer decisions.
- **Query Logic:** Counted rows where status is 'Cancelled by Customer'.
- **Business Value:** High numbers here indicate pricing issues or long wait times.

5. Driver Cancellations (Personal/Car Issues)

- **Objective:** Identify reliability issues on the supply side.
- **Query Logic:** Filtered cancelled_Rides_by_Driver for 'Personal & Car related issue'.
- **Business Value:** Highlights the need for vehicle maintenance checks or driver support.

6. Incomplete Rides

- **Objective:** Investigate rides that started but didn't finish.
- **Query Logic:** Retrieved Booking_ID and Incomplete_Rides_Reason.
- **Business Value:** crucial for safety and refund management.

⭐ Ratings & Customer Behavior

7. Top Customers

- **Objective:** Identify high-value frequent flyers.
- **Query Logic:** Top 5 customers ordered by ride count.
- **Business Value:** Useful for loyalty programs and retention marketing.

8. Driver Ratings (Prime Sedan)

- **Objective:** Assess quality control in the premium segment.
- **Query Logic:** Calculated MAX and MIN driver ratings for 'Prime Sedan'.
- **Business Value:** Ensures premium customers receive premium service.

9. Customer Ratings by Vehicle

- **Objective:** Compare customer satisfaction across fleet types.
- **Query Logic:** Average Customer_Rating grouped by Vehicle_Type.
- **Business Value:** Identifies if specific vehicle types (e.g., Mini vs. Auto) have lower satisfaction.

💳 Financial Insights

10. UPI Adoption

- **Objective:** Track digital payment penetration.
- **Query Logic:** Retrieved all records where Payment_Method is 'UPI'.
- **Business Value:** Vital for partnership decisions with payment gateways.

4. Phase 2: Power BI Visualization

Data is visualized across five distinct dashboard views to tell a compelling story.

View 1: Overall Performance

- **Ride Volume Over Time:** A time-series chart tracking daily/weekly demand fluctuations.
- **Booking Status Breakdown:** A Pie/Doughnut chart showing the split between Success, Customer Cancellations, and Driver Cancellations.

View 2: Vehicle Insights

- **Top 5 Vehicle Types by Distance:** A bar chart comparing which vehicles travel the furthest (likely Prime SUV/Sedan).

View 3: Revenue & Financials

- **Revenue by Payment Method:** A stacked bar chart visualizing cash vs. digital payments (UPI/Credit Card).
- **Top 5 Customers by Value:** A leaderboard highlighting the biggest spenders.
- **Ride Distance Distribution:** A histogram showing if most rides are short (intra-city) or long-distance.

View 4: Cancellation Intelligence

- **Cancellation Reasons (Customer vs. Driver):** Side-by-side bar charts highlighting *why* rides are cancelled (e.g., "Driver asked to change destination" vs. "Customer changed mind").

View 5: Quality & Ratings

- **Driver Rating Distribution:** A box plot to see the spread of ratings (Are most drivers 5-star, or is there a wide variance?).
- **Customer vs. Driver Ratings:** A scatter plot to check for correlations (Do unhappy drivers rate customers poorly?).

5. Conclusion & Recommendations

This analysis provides a structured approach to understanding OLA's operational health.

1. **Reduce Cancellations:** By identifying the top reasons for driver cancellations (Car Issues), OLA can enforce stricter maintenance checks.
2. **Incentivize UPI:** If UPI rides are smoother, marketing campaigns can target Cash users to switch.
3. **Loyalty Rewards:** The "Top 5 Customers" data should be used to roll out "Ola Select" memberships to retain high-value users.
4. **Premium Service Check:** Monitoring Prime Sedan ratings ensures the flagship service remains high-quality.