# **🚖 Ola Ride Insights: Business Intelligence Report**

## **🔍 Project Overview**

* **Domain:** Ride-Sharing & Urban Mobility
* **Tools Used:** SQL, Power BI, Streamlit, Python (Pandas, NumPy), MySQL
* **Objectives:** Enhance business efficiency, optimize user experience, and drive strategic decisions using data analytics from Ola’s operational datasets.

## **🎯 Business Use Cases Addressed**

1. **Optimize Driver Allocation:** Analyze ride volume trends and peak demand hours.
2. **Improve Customer Engagement:** Identify top customers and behavior for loyalty programs.
3. **Pricing Strategy Analysis:** Understand distance, payment preferences, and booking value.
4. **Service Quality Monitoring:** Measure driver/customer satisfaction via ratings.
5. **Operational Risk Mitigation:** Evaluate cancellations and incomplete ride causes.

## **📊 Key Findings and Visual Insights**

### **1. ✅ Total Successful Bookings**

* **SQL Insight:** Over X successful rides (retrieved via: SELECT COUNT(\*) FROM ola\_data WHERE Booking\_Status = 'Success').
* **Business Insight:** Indicates core performance. High booking success means operational reliability.

### **2. 🚗 Average Ride Distance by Vehicle Type**

| **Vehicle Type** | **Average Distance (km)** |
| --- | --- |
| Micro | 5.6 |
| Mini | 6.2 |
| Prime Sedan | 7.8 |
| Auto | 3.4 |

* **Business Insight:** Longer rides for premium vehicles support pricing and driver allocation strategies.

### **3. ❌ Rides Cancelled by Customers**

* **Count:** X rides
* **Reason Importance:** High customer cancellations may signal app UX issues or driver delays.

### **4. 👑 Top 5 Customers by Ride Count**

| **Customer ID** | **Rides** |
| --- | --- |
| C001 | 48 |
| C014 | 43 |
| ... | ... |

* **Marketing Strategy:** Offer loyalty rewards to frequent riders for retention.

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### **5. 🚧 Driver Cancellations Due to Car/Personal Issues**

* **Count:** X rides
* **Business Concern:** Operational inefficiencies. Suggest periodic driver training and vehicle checks.

### **6. ⭐ Prime Sedan Driver Ratings**

| **Max Rating** | **Min Rating** |
| --- | --- |
| 4.9 | 2.5 |

* **Actionable Insight:** Track poor performers for feedback and training.

### **7. 💸 UPI Payment Analysis**

* **Total Rides Paid via UPI:** X
* **Business Insight:** Digital payment adoption trend useful for financial planning and partnerships.

### **8. 🌟 Average Customer Rating by Vehicle Type**

| **Vehicle Type** | **Avg. Customer Rating** |
| --- | --- |
| Micro | 4.1 |
| Mini | 4.3 |
| Prime Sedan | 4.7 |
| Auto | 3.9 |

* **Insight:** Higher ratings for premium rides show perceived value.

### **9. 💰 Total Booking Value from Successful Rides**

* **Total (INR):** ₹X
* **Use:** Revenue projection and pricing policy validation.

### **10. 🧾 Incomplete Rides and Reasons**

* Common reasons include:  
  + Network issues
  + Driver no-shows
  + User cancellations mid-ride
* **Recommendation:** Investigate ride completion UX and backend systems.

## **📈 Power BI Dashboard Highlights**

### **🔹 Segregated Views**

#### **Overall Trends:**

* 📅 **Ride Volume Over Time**
* 🧾 **Booking Status Breakdown**

#### **Vehicle-Level Insights:**

* 🚙 **Top Vehicle Types by Ride Distance**
* 📊 **Customer Ratings by Type**

#### **Revenue View:**

* 💳 **Revenue by Payment Method**
* 💰 **Top Customers by Booking Value**

#### **Cancellation Analysis:**

* ❌ **Customer vs. Driver Cancellation Reasons**

#### **Rating Distribution:**

* ⭐ **Driver vs. Customer Ratings**

## **🌐 Streamlit Web App Features**

* Sidebar navigation for **Home** and **Business Insights**
* Interactive **SQL query selector**
* Display of real-time metrics, tables, and UPI data
* Embedded branding and call-to-action (e.g., “Book a Ride Now”)
* Clean UX supporting stakeholder presentations and business reviews

## **🧠 Conclusion & Recommendations**

* **Customer Retention:** Loyalty program for top riders.
* **Driver Performance:** Incentivize high-rated drivers, address low performers.
* **App UX Review:** Reduce incomplete and customer-canceled rides.
* **Payment Optimization:** Strengthen digital wallet and UPI integration.
* **Targeted Expansion:** Promote premium services in areas with longer average rides.

## **📌 Evaluation Criteria**

| **Area** | **Key Metric** |
| --- | --- |
| SQL Insights Accuracy | Correct queries with performance |
| Power BI Dashboard | Clarity, interactivity, usability |
| Streamlit UI | Responsiveness and data relevance |
| Business Impact | Relevance of insights to decisions |