



Project Title	Ola Ride Insights
Skills take away From This Project	SQL querying, data preprocessing, Power BI visualization, Streamlit app development, and business intelligence insights.
Domain	Ride-Sharing & Mobility Analytics

Problem Statement:

The rise of ride-sharing platforms has transformed urban mobility, offering convenience and affordability to millions of users. OLA, a leading ride-hailing service, generates vast amounts of data related to ride bookings, driver availability, fare calculations, and customer preferences. However, deriving actionable insights from this data remains a challenge. To enhance operational efficiency, improve customer satisfaction, and optimize business strategies, this project focuses on analyzing OLA's ride-sharing data. By leveraging data analytics, visualization techniques, and interactive applications, the goal is to extract meaningful insights that

can drive data-informed decisions. The project will involve cleaning and processing raw ride data, performing exploratory data analysis (EDA), developing a dynamic Power BI dashboard, and creating a Streamlit-based web application to present key findings in an interactive and user-friendly manner.

Business Use Cases:

- Identifying peak demand hours and optimizing driver allocation.
- Analyzing customer behavior for personalized marketing strategies.
- Understanding pricing patterns and surge pricing effectiveness.
- Detecting anomalies or fraudulent activities in ride data.

Approach:

Data Understanding & Exploration

- Load and examine the dataset structure.
- Identify key variables like ride status, payment method, and ratings.
- Perform initial exploratory data analysis (EDA).

Data Cleaning & Preprocessing

- Handle missing or inconsistent values.
- Convert data types and standardize formats.
- Create derived features if necessary for better insights.

SQL Query Development

- Write queries to extract insights (e.g., ride trends, cancellations, ratings).
- Optimize queries for performance and accuracy.
- Validate results against the dataset.

Power BI Dashboard Creation

- Design interactive visualizations for ride trends, revenue, and cancellations.
- Use filters and slicers for dynamic data exploration.
- Integrate KPIs and metrics for business insights.

Streamlit Application Development

- Create a user-friendly UI to display SQL query results.
- Implement interactive filters and search options.
- Embed Power BI visuals into the Streamlit app for a complete analytics experience.

Project Documentation & Deployment

- Document insights, queries, and dashboard explanations.
- Ensure the Streamlit app is deployed and accessible.
- Present findings with business-oriented storytelling.

SQL 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. Calculate the total booking value of rides completed successfully:

10. List all incomplete rides along with the reason

Power BI Questions

1. Ride Volume Over Time
2. Booking Status Breakdown
3. Top 5 Vehicle Types by Ride Distance
4. Average Customer Ratings by Vehicle Type
5. Canceled Rides Reasons
6. Revenue by Payment Method
7. Top 5 Customers by Total Booking Value
8. Ride Distance Distribution Per Day
9. Driver Ratings Distribution
10. Customer vs. Driver Ratings

Segregation of the views

1. Overall
 - Ride Volume Over Time
 - Booking Status Breakdown
2. Vehicle Type
 - Top 5 Vehicle Types by Ride Distance
3. Revenue

- Revenue by Payment Method
- Top 5 Customers by Total Booking Value
- Ride Distance Distribution Per Day

4. Cancellation

- Cancelled Rides Reasons (Customer)
- cancelled Rides Reasons(Drivers)

5. Ratings

- Driver Ratings
- Customer Ratings

Results:

- Interactive dashboard and application showcasing key insights.
- Streamlined access to booking trends, ratings, and revenue analysis.
- Actionable insights for improving ride experience and service efficiency.

Project Evaluation metrics:

- Accuracy of SQL queries and insights.
- Effectiveness of Power BI visualizations.
- Usability and responsiveness of the Streamlit application.

Technical Tags:

Python, Pandas, NumPy, Matplotlib, Seaborn, SQL, Data Visualization, Power BI, Streamlit, Data Cleaning, Feature Engineering, EDA.

Data Set:

Data set: 📁 OLA PROJECT

Project Deliverables:

- Maintain clean and optimized SQL queries.
- Ensure Power BI dashboards are interactive and user-friendly.
- Follow coding best practices in Streamlit development.











Project Guidelines:



- **Clean the dataset** – Handle missing values and format data properly.
- **Write SQL queries** – Extract insights using joins, aggregations, and filters.
- **Create Power BI dashboard** – Build interactive and clear visualizations.
- **Develop Streamlit app** – Display SQL results and embed Power BI visuals.
- **Follow coding standards** – Write clean, well-documented code with Git version control.
- **Submit project files** – Provide SQL queries, Power BI dashboard, and Streamlit app.
- **Present findings** – Explain insights with a business-focused approach.

Timeline:

The project must be completed and submitted **within 7 days from the assigned date**

Reference

Project Live Evaluation	 Project Live Evaluation
EDA Guide	 Exploratory Data Analysis (EDA) G...
EDA Detail Document	 EDA_INDEPTH
Capstone Explanation Guideline	 Capstone Explanation Guideline
GitHub Reference	 How to Use GitHub.pptx
Streamlit recording (English)	 Special session for STREAMLIT(1...
PowerBi and SQL connection	 Connect MySQL to PowerBI
Steps to Create a Free Power BI Work Account	 Steps to Create a Free Power BI ...
Power Bi Slides	 Ola-Slides.pptx
DATA CLEANING & PREPROCESSING EDA (Tamil)	 Project Excellence Series: Guided ...

DATA CLEANING & PREPROCESSING EDA (English)	 Project Excellence Series: Guided ...
Project Orientation (English)	 Ola Ride Insights Session Recordi...

PROJECT DOUBT CLARIFICATION SESSION (PROJECT AND CLASS DOUBTS)

About Session: The Project Doubt Clarification Session is a helpful resource for resolving questions and concerns about projects and class topics. It provides support in understanding project requirements, addressing code issues, and clarifying class concepts. The session aims to enhance comprehension and provide guidance to overcome challenges effectively.

Note: Book the slot at least before 12:00 Pm on the same day

Timing: Monday-Saturday (4:00PM to 5:00PM)

Booking link : <https://forms.gle/XC553oSbMJ2Gcfug9>

LIVE EVALUATION SESSION (CAPSTONE AND FINAL PROJECT)

About Session: The Live Evaluation Session for Capstone and Final Projects allows participants to showcase their projects and receive real-time feedback for improvement. It assesses project quality and provides an opportunity for discussion and evaluation.

Note: This form will Open only on Saturday (after 2 PM) and Sunday on Every Week

Timing: Monday-Saturday (05:30PM to 07:00PM)

Booking link : <https://forms.gle/1m2Gsro41fLtZurRA>

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