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) Guide
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(11/08/2024)
PowerBi and SQL connection	Connect MySQL to PowerBI
Steps to Create a Free Power BI Work Account	Steps to Create a Free Power BI Work Account
Power Bi Slides	Ola-Slides.pptx
DATA CLEANING & PREPROCESSING EDA (Tamil)	Project Excellence Series: Guided Learning & Problem Solving [EDA](Tamil)
DATA CLEANING & PREPROCESSING EDA (English)	Project Excellence Series: Guided Learning & Problem Solving [EDA](English)

Project Live Evaluation	**Project Live Evaluation**
EDA Guide	**Exploratory Data Analysis (EDA) Guide**
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(11/08/2024)**
Project Orientation (English)	**Ola Ride Insights Session Recordings[DS-C-WD-E-B48](08/05/2025):**