Tableau or Power BI Dashboarding project proposal

1. Executive Summary:

This project aims to design and develop an **Uber Data Analytics Dashboard** using **Power BI connected to a SQL database**. The dashboard will consolidate Uber ride, driver, and payment data to deliver real-time insights that optimize revenue, improve driver efficiency, enhance customer satisfaction, and identify high-demand locations.

2. Problem Statement:

The growing demand for ride-hailing services like Uber has generated massive volumes of operational data, including customer details, driver performance, ride history, locations, and payments. Without effective data integration and analysis, stakeholders struggle to gain actionable insights for improving revenue, driver efficiency, and customer experience.

This project will bridge the gap between raw ride data and strategic insights through an interactive dashboard that highlights:

- Peak ride demand patterns
- Driver performance and revenue contribution
- Customer preferences and retention
- Operational optimization opportunities

3. Data Sources:

Primary Data: Uber ride history, driver profiles, customer details, payment transactions, and cancellation logs (stored in SQL database).
Secondary Data: Not applicable for this project phase.

4. Methodology:

Extract data from Uber's SQL database (rides, drivers, payments, customers).

Transform data using SQL queries (cleaning null values, formatting dates, aggregating revenue, handling cancellations).

Load data into Power BI for visualization.

Dashboard Design: Create key KPIs such as total rides, driver earnings, cancellation rate, and revenue trends.

Interactivity: Add drill-down features (city → location → time of day), slicers (date, payment type, driver), and filters.

Testing: Validate accuracy of insights with sample queries in SQL.

Deployment: Publish dashboard for stakeholders with role-based access

5. Expected Outcomes:

- Real-time visualization of ride demand and revenue.
- Identification of high-demand pickup/drop-off zones.
- Improved decision-making through driver performance tracking.
- Enhanced customer experience insights.
- Data-driven operational and resource optimization.

6. Tools and Technologies:

- **SQL** – Data extraction, transformation, and preparation.
- **Power BI** – Dashboard development and visualization.

7. Risks and Challenges:

- Integration challenges while connecting SQL with Power BI.
- Ensuring data accuracy, especially with large datasets.
- Stakeholder adoption and training for effective use of the dashboard.

8. Conclusion:

The **Uber Data Analytics Dashboard** will empower decision-makers with clear, actionable insights. By leveraging SQL and Power BI together, Uber can enhance service quality, customer satisfaction, and profitability through informed, data-driven strategies..