## **Project Details: Uber Trip Metrics & Insights Visualization**

### **BUISNESS REQUIREMENT OVERVIEW**

The goal of this project is to explore Uber trip data using **Power BI** to uncover insights related to booking patterns, trip efficiency, revenue generation, and user behavior. This report provides a set of dashboards that help stakeholders understand how the service is performing and where improvements can be made.

## **DASHBOARD 1**

This dashboard presents a high-level summary of Uber's business performance. The focus is on trip volume, distance covered, revenue generated, and average trip metrics.

### **📌 Key Metrics (KPIs)**

* **Total Bookings** – Shows how many trips were booked during the selected time period.
* **Total Booking Value** – Displays the complete revenue generated from all trips.
* **Average Booking Value** – Gives the average income per trip.
* **Total Trip Distance** – Indicates the overall kilometers covered in all rides.
* **Average Trip Distance** – Average distance traveled per trip.
* **Average Trip Time** – Tells how long a typical ride takes on average.

### **✅ Objectives & Expected Insights:**

* Recognize patterns in bookings and revenue across time.
* Understand how efficiently trips are being completed.
* Compare trends across dates to spot seasonal or daily changes.
* Support pricing strategies and service improvements through insights.

### **📊 Visuals & Measures**

* **Dynamic Measure Selector:** A slicer is created from a disconnected table to allow switching between:  
  + Total Bookings
  + Total Booking Value
  + Total Trip Distance
* This selection dynamically updates all visuals on the dashboard.
* **Breakdown by:**
  + **Payment Method** (e.g., Cash, Card, Wallet)
  + **Trip Timing** (Day vs. Night)

### **🔧 Extra Features:**

* **Dynamic Chart Titles** – Titles auto-update based on the selected KPI.
* **Slicers** – Added for Date, City, etc., to help with more focused analysis.
* **Tooltips** – Provide more context like average trip value and trip length.

### **🚗 Vehicle Type Analysis (Grid View)**

* A matrix or table visual is used to show KPIs by **Vehicle Type** (UberX, UberXL, etc.).
* Metrics include:  
  + Total Bookings
  + Total Booking Value
  + Average Booking Value
  + Total Trip Distance

**Enhancements:**

* Conditional formatting to highlight best and worst performers.
* Sorting and filtering for easier data exploration.

### **📅 Daily Trends in Booking:**

* Visual showing **Bookings per Day**
* Helps find busy vs. slow days
* Understand the effect of holidays or events on bookings
* Useful for resource planning and fare adjustments

## **📍 LOCATION ANALYSIS**

Understanding where trips start and end is important for logistics and future growth.

* **Top Pickup Locations** – Where most rides begin. Useful for managing supply and surge pricing.
* **Top Drop-off Locations** – Where most trips end. (Requires activating a hidden relationship in Power BI model.)
* **Longest Trip (by Distance)** – Find extreme or outlier trips to analyze high-value or long-distance demand.
* **Top 5 Locations by Bookings** – Focus on the busiest areas.
* **Most Booked Vehicle by Location** – Identify vehicle preferences for each area. Helps in planning vehicle distribution.

### **🌟 Other Dashboard Features & Enhancements**

* **Bookmark Panel for Definitions:** A special view to explain:  
  + Key KPIs like trip count, trip distance, etc.
  + Descriptions of data tables and their usage.
  + Refresh logic and data source information.
* **Clear Filters Button:** A reset button to clear all slicers at once for user convenience.
* **Download Raw Data:** Button to export data to Excel or CSV (using Power Automate or native export options).  
   Allows stakeholders to work with data outside Power BI.

## **DASHBOARD 2**

This dashboard focuses on analyzing trip trends by time intervals to help in **demand forecasting and resource planning**.

### **🔄 Global Measure Selector:**

Used again here to filter across all charts:

* Total Bookings
* Total Booking Value
* Total Trip Distance

### **📈 Time-Based Visuals:**

1. **Pickup Time (10-Minute Intervals):**
   * Area chart showing bookings every 10 minutes throughout the day.
   * Helps detect high-traffic windows.
2. **Day Name Trend:**
   * Line chart for each day (Mon–Sun).
   * Compares weekday vs. weekend trends.
3. **Hourly Heatmap (Hour vs. Day):**
   * Rows: Hours (0–23)
   * Columns: Days (Mon–Sun)
   * Values: Selected measure (e.g., Total Bookings)
   * Useful for visualizing peak hours across the week.

## **DASHBOARD 3**

This section offers a detailed view of individual trips, with the option to drill through from other visuals.

### **🔍 Grid Tab Features:**

* **Detailed Table:** Shows individual trip data (Trip ID, Distance, Time, Amount, etc.).
* **Drill-Through Support:** Allows right-clicking on a chart or data point to view specific records in the grid.
* **Bookmark to View All Data:** A button to switch between filtered data (based on user selection) and full dataset view.