**Dashboard 1: Overview Analysis**

This dashboard leverages Uber trip data in Power BI to uncover booking trends, revenue insights, and trip efficiency, enabling stakeholders to make informed, data-driven decisions.

**Key Performance Indicators (KPIs):**

1. **Total Bookings:** Tracks the number of trips booked during a specified time frame.
2. **Total Booking Value:** Represents the total revenue generated from all bookings.
3. **Average Booking Value:** Measures the average revenue earned per booking.
4. **Total Trip Distance:** Summarizes the total distance covered across all trips.
5. **Average Trip Distance:** Highlights the average distance traveled per trip.
6. **Average Trip Time:** Displays the average duration of trips.

**Expected Outcomes:**

✔ Discover patterns in ride bookings and revenue generation.

✔ Evaluate trip efficiency by analyzing distance and duration metrics.

✔ Compare booking values and trip trends across different timeframes.

✔ Deliver actionable insights to refine pricing strategies and enhance customer satisfaction.

### **Charts**

#### **Dynamic Measure Selector**

Create a Measure Selector using a Disconnected Table to enable dynamic visualization updates based on user selection. Available measures:

* **Total Bookings**
* **Total Booking Value**
* **Total Trip Distance**

#### **Visualizations**

* **By Payment Type**: Categorizes data by different payment methods (e.g., Card, Cash, Wallet).
* **By Trip Type**: Distinguishes between Day and Night trips for comparison.

#### **Additional Enhancements**

* **Dynamic Title**: Automatically updates chart titles based on the selected measure for better context.
* **Slicers**: Add interactive filters for parameters like Date, City, and more to enable deeper analysis.
* **Tooltips**: Display additional insights such as Average Booking Value or Trip Distance on hover.

### **Vehicle Type Analysis**

#### **Grid View (Matrix/Table Visual in Power BI)**

Design a Grid Table to analyze key performance indicators (KPIs) across different Vehicle Types, including:

* **Total Bookings**
* **Total Booking Value**
* **Average Booking Value**
* **Total Trip Distance**

#### **Implementation in Power BI:**

* Use a Table or Matrix Visual to display Vehicle Types alongside the selected KPIs.
* Apply **Conditional Formatting** to emphasize high and low values for easy interpretation.
* Enable **Sorting & Filtering** to allow users to customize their view for better interactivity.

### **Total Bookings by Day**

#### **Analysis Objectives:**

* Detect trends and fluctuations in daily trip volumes.
* Identify **peak** and **off-peak** booking days for strategic insights.
* Understand the impact of external factors, such as holidays, events, and weather, on ride demand.
* Support planning for **resource allocation** and **pricing adjustments**.

### **Location Analysis**

Understanding trip locations plays a key role in optimizing ride distribution, forecasting demand, and enhancing operational efficiency.

**Key Areas of Analysis:**

1. **Most Frequent Pickup Point:**
   * Pinpoint the most common starting locations for trips.
   * Enables strategic optimization of driver availability and dynamic pricing strategies.
2. **Most Frequent Drop-off Point:**
   * Identify the most common trip destinations.
   * Requires activating an inactive relationship in Power BI between Pickup and Drop-off Locations within the data model.

 **Farthest Trip:**

* Analyze the longest trips based on distance traveled.
* Valuable for understanding outlier trips, long-distance demand, and fare optimization.

 **Total Bookings by Location (Top 5):**

* Highlight the top 5 locations with the highest booking volumes.
* Supports demand forecasting and improves driver deployment in high-traffic areas.

 **Most Preferred Vehicle for Location Pickup:**

* Determine the most frequently booked vehicle type at each pickup location.
* Guides strategic vehicle allocation based on customer preferences and localized demand.

### **Additional Enhancements for Uber Trip Analysis Dashboard**

#### **1. Data Details Bookmark**

* Introduce a "Data Details" bookmark to display a pop-up or side panel featuring:
  + Definitions of key metrics such as Total Bookings and Total Trip Distance.
  + Descriptions of the tables used in the analysis.
  + Information on the data source and its refresh frequency.

#### **2. Clear Filters Button**

* Implement a "Clear Filters" button using a blank button with a Reset Slicers action.
* Allows users to reset all selections effortlessly in a single click, enhancing overall user experience.

#### **3. Download Raw Data Button**

* Add functionality to export raw data in CSV or Excel format.
* Utilize Power Automate or built-in Power BI Export features for implementation.Empowers users to conduct raw data analysis outside of Power BI when necessary.

**Dashboard 2: Time Analysis**

This dashboard is designed to uncover trip patterns based on time, enabling Uber to analyze ride demand and trends across various time intervals. It serves as a critical tool for optimizing operations, pricing strategies, and driver availability.

**Global Dynamic Measure** A unified measure selector will be implemented, dynamically updating all visuals based on user selection. Options include:

* Total Bookings
* Total Booking Value
* Total Trip Distance

**Visualizations**

1. **By Pickup Time (10-Minute Intervals)** - *Area Chart*
   * Segments trip bookings into 10-minute intervals throughout the day.

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Helps identify periods of peak and off-peak demand.

 **By Day Name** - *Line Chart*

* Illustrates booking trends from Monday to Sunday.
* Ideal for analyzing weekday versus weekend ride patterns.

 **By Hour and Day** – *Heat map (Matrix Grid)*

* **Rows:** Hours of the Day (0–23)
* **Columns:** Days of the Week (Monday to Sunday)
* **Values:** Displays the selected dynamic measure (e.g., Total Bookings).
* Highlights peak booking periods across specific hours and days.

**Dashboard 3: Details Tab**

To enhance data exploration and provide in-depth insights, a Grid Tab will be introduced. This feature will allow users to drill through and access detailed records based on selections made within other dashboards.

**Key Features of the Grid Tab:**

* **Grid Table with Key Fields:** Displays crucial trip information for easy reference.
* **Drill-Through Functionality:**
  + Enables users to right-click on data points from visuals like charts or heat maps and drill through to the Grid Tab.
  + Shows detailed records related to the selected data point.
* **Full Data View Bookmark:**
  + Includes a "View Full Data" option to toggle between the filtered drill-through view and the complete dataset.
  + Provides an easy way to reset filters and access the full record set.