**BUSINESS OBJECTIVE**

**UBER TRIP ANALYSIS**

**1: OVERVIEW ANALYSIS**

Analyse Uber trip data using Power BI to gain insights into booking trends, revenue, and trip efficiency, helping stakeholders make data-driven decisions.

**KPI’s**

1. **Total Bookings** – How many trips were booked over a given period?
2. **Total Booking Value** – What is the total revenue generated from all bookings?
3. **Average Booking Value** – What is the average revenue per booking?
4. **Total Trip Distance** – What is the total distance covered by all trips?
5. **Average Trip Distance** – How far are customers traveling on average per trip?
6. **Average Trip Time** – What is the average duration of trips?

**Expected Outcomes:**

✔ Identify trends in ride bookings and revenue generation.  
✔ Analyse trip efficiency in terms of distance and duration.  
✔ Compare booking values and trip patterns across different time periods.  
✔ Provide insights to optimize pricing models and improve customer satisfaction.

**CHART’s**

Create a Measure Selector using a Disconnected Table with the following values:

* Total Bookings
* Total Booking Value
* Total Trip Distance

Then, use a measure to dynamically update the visualizations based on user selection.

**By Payment Type (Card, Cash, Wallet, etc.)**

**By Trip Type (Day/Night)**

**Additional Enhancements:**

* **Dynamic Title** – Update the chart title based on the selected measure.
* **Slicers** – Add filters for Date, City, and other interactive filters for deeper analysis.
* **Tooltips** – Show additional details like Average Booking Value or Trip Distance.

**Vehicle Type Analysis - Grid View in Power BI**

Create a grid table (matrix or table visual) to analyse key performance indicators like Total Bookings, Total Booking Value, Avg Booking Value, Total Trip Distance across different Vehicle Types in Uber trips.

**Power BI Implementation:**

* **Use a Table or Matrix Visual** to display Vehicle Type with the KPIs.
* **Apply Conditional Formatting** to highlight high and low values.
* **Enable Sorting & Filtering** for user interaction.

**Total Bookings by Day**

* Detecting trends and fluctuations in daily trip volumes.
* Identifying peak and off-peak booking days.
* Understanding the impact of external factors (holidays, events, weather) on ride demand.
* Supporting strategic planning for resource allocation and pricing adjustments.

**Location Analysis**

Understanding trip locations is crucial for optimizing ride distribution, demand forecasting, and operational efficiency. This analysis focuses on:

* **Most Frequent Pickup Point**
* Identify the most common starting locations for trips.
* Helps in optimizing driver availability and dynamic pricing strategies.
* **Most Frequent Drop-off Point**
* Find the most common drop-off locations.
* Requires activating an **inactive relationship** in Power BI between **Pickup Location and Drop-off Location** in the data model.
* **Farthest Trip**
* Determine the longest trip based on distance travelled.
* Useful for analysing outlier trips, long-distance demand, and fare optimization.

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

* Identify the **top 5 locations** with the highest trip bookings.
* Helps in demand forecasting and optimizing driver availability in high-traffic areas.

**Most Preferred Vehicle for Location Pickup**

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

**Other Implementation Enhancements for Uber Trip Analysis Dashboard**

* **Bookmark for Data Details**
* Add a **"Data Details"** bookmark to display a pop-up or side panel explaining:
  + Meaning of key metrics (Total Bookings, Total Trip Distance, etc.).
  + Description of tables used in the analysis.
  + Data source and refresh frequency.
* **Clear Slicer Button**
* Add a **"Clear Filters"** button using a **blank button with a Reset Slicers action** to reset all selections in one click.
* Improves user experience for quick dashboard resets.
* **Download Raw Data Button**
* Add a **button to export raw data** in CSV or Excel format.
* Use **Power Automate or built-in Power BI Export functionality**.
* Enables users to analyse raw data outside Power BI if needed.

**DASHBOARD 2: TIME ANALYSIS**

To understand trip patterns based on time, Uber needs to analyse ride demand and trends across different time intervals. This dashboard will help in optimizing operations, pricing, and driver availability.

**Global Dynamic Measure (Filters All Charts)**

A **measure selector** will be created for:  
✔ **Total Bookings**  
✔ **Total Booking Value**  
✔ **Total Trip Distance**  
This dynamic measure will update all visuals based on user selection.

**Visualizations:**

**By Pickup Time (10-Minute Intervals) - Area Chart**

* Groups trip bookings into **10-minute intervals** throughout the day.
* Helps in identifying peak and off-peak demand periods.

**By Day Name - Line Chart**

* Shows booking trends across **Monday to Sunday**.
* Useful for analysing weekday vs. weekend demand.

**By Hour and Time - Heatmap (Matrix Grid)**

* **Rows:** Hours of the Day (0–23)
* **Columns:** Days of the Week (Mon-Sun)
* **Values:** Selected Dynamic Measure (e.g., Total Bookings)
* Highlights peak booking hours across different days.

**DASH BOARD 3: DETAILS TAB**

To provide in-depth insights and allow users to explore granular data, a **Grid Tab** will be created. This tab will enable drill-through functionality, allowing users to access detailed records based on selections made in other dashboards.

**Features of the Grid Tab:**

* **Grid Table with Key Fields:**
* Displays essential trip details
* **Drill-Through Functionality:**
* Users can right-click on a data point from other visuals (e.g., charts, heatmaps) and **drill through to this Grid Tab**.
* Displays detailed records related to the selected data point.
* **Bookmark for Full Data View:**
* A **"View Full Data"** bookmark to toggle between filtered drill-through data and the complete dataset.
* Allows users to reset filters and see all records easily.