

# BUSINESS REQUIREMENT

## UBER TRIP ANALYSIS

### DAHBOARD 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.

## **DAHBOARD 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.

## **DAHBOARD 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.