Uber Trip Analysis Dashboard

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 Distanceacross 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.

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

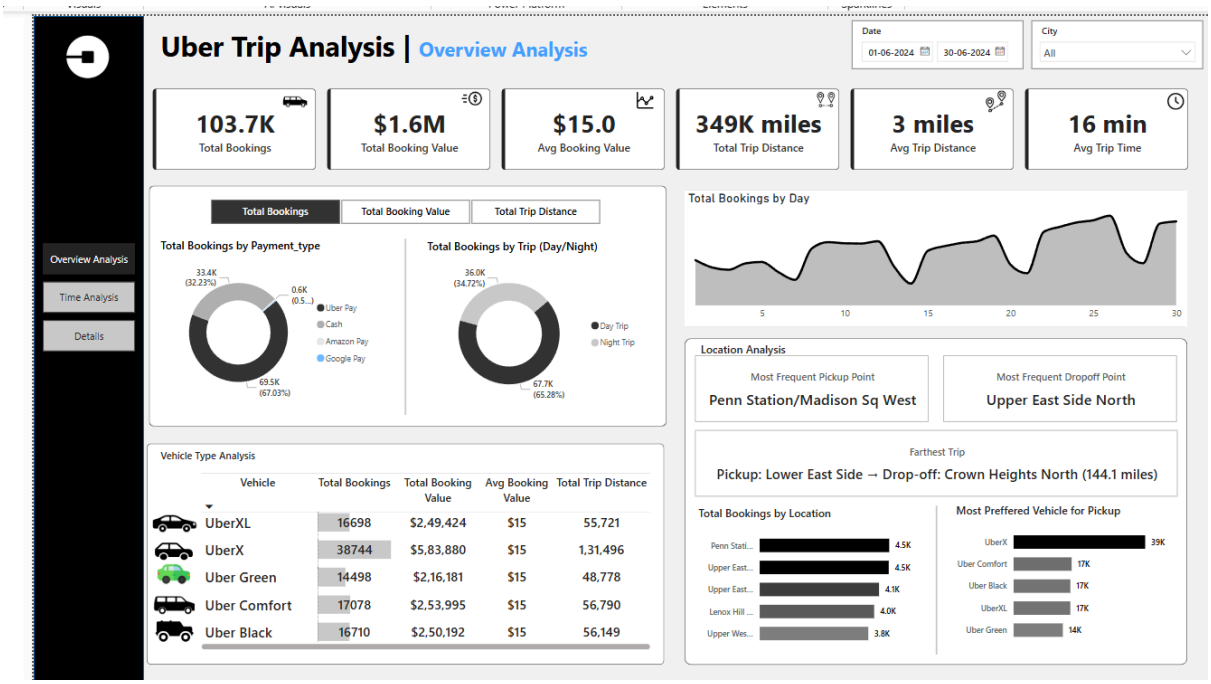
To provide in-depth insights and allow users to explore granular data, a **Grid Tab** will be created allowing users to access detailed records based on selections made in other dashboards.

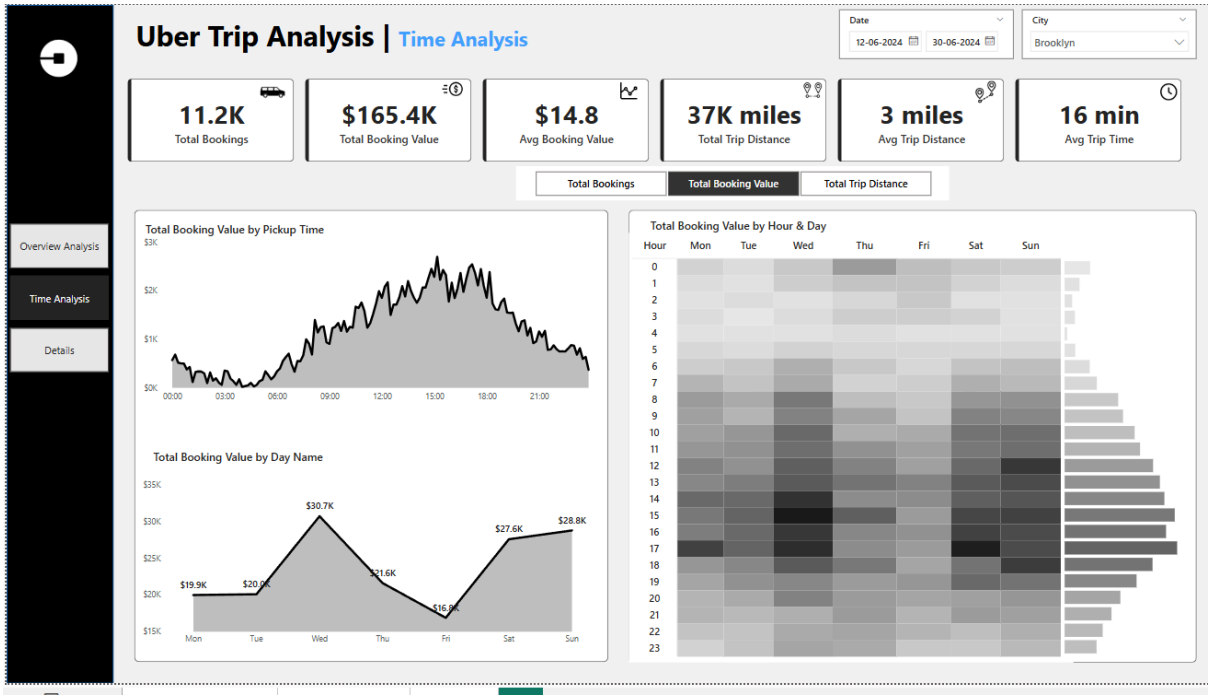
Features of the Grid Tab:

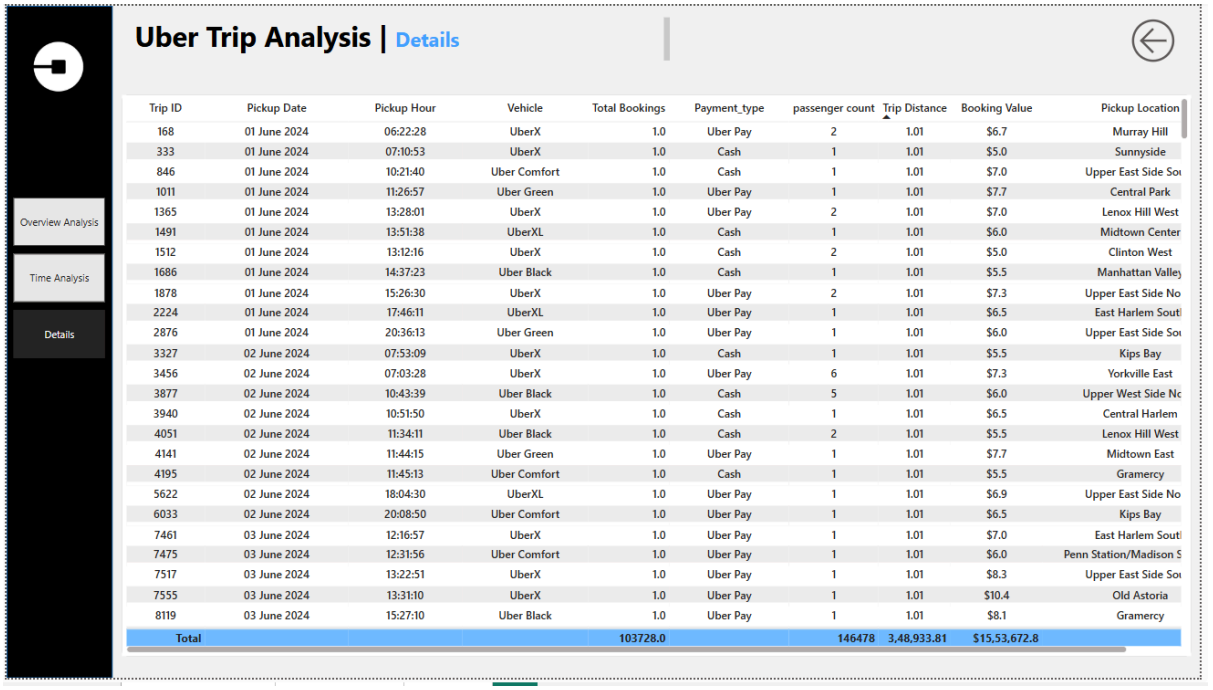
Grid Table with Key Fields:

- Displays essential trip details

Output:







Trip ID	Pickup Date	Pickup Hour	Vehicle	Total Bookings	Payment_type	passenger count	Trip Distance	Booking Value	Pickup Location
168	01 June 2024	06:22:28	UberX	1.0	Uber Pay	2	1.01	$6.7	Murray Hill
333	01 June 2024	07:10:53	UberX	1.0	Cash	1	1.01	$5.0	Sunnyside
846	01 June 2024	10:21:40	Uber Comfort	1.0	Cash	1	1.01	$7.0	Upper East Side So
1011	01 June 2024	11:26:57	Uber Green	1.0	Uber Pay	1	1.01	$7.7	Central Park
1365	01 June 2024	13:28:01	UberX	1.0	Uber Pay	2	1.01	$7.0	Lenox Hill West
1491	01 June 2024	13:51:38	UberXL	1.0	Cash	1	1.01	$6.0	Midtown Center
1512	01 June 2024	13:12:16	UberX	1.0	Cash	2	1.01	$5.0	Clinton West
1686	01 June 2024	14:37:23	Uber Black	1.0	Cash	1	1.01	$5.5	Manhattan Valley
1878	01 June 2024	15:26:30	UberX	1.0	Uber Pay	2	1.01	$7.3	Upper East Side No
2224	01 June 2024	17:46:11	UberXL	1.0	Uber Pay	1	1.01	$6.5	East Harlem Soutl
2876	01 June 2024	20:36:13	Uber Green	1.0	Uber Pay	1	1.01	$6.0	Upper East Side So
3327	02 June 2024	07:53:09	UberX	1.0	Cash	1	1.01	$5.5	Kips Bay
3456	02 June 2024	07:03:28	UberX	1.0	Uber Pay	6	1.01	$7.3	Yorkville East
3877	02 June 2024	10:43:39	Uber Black	1.0	Cash	5	1.01	$6.0	Upper West Side Nc
3940	02 June 2024	10:51:50	UberX	1.0	Cash	1	1.01	$6.5	Central Harlem
4051	02 June 2024	11:34:11	Uber Black	1.0	Cash	2	1.01	$5.5	Lenox Hill West
4141	02 June 2024	11:44:15	Uber Green	1.0	Uber Pay	1	1.01	$7.7	Midtown East
4195	02 June 2024	11:45:13	Uber Comfort	1.0	Cash	1	1.01	$5.5	Gramercy
5622	02 June 2024	18:04:30	UberXL	1.0	Uber Pay	1	1.01	$6.9	Upper East Side No
6033	02 June 2024	20:08:50	Uber Comfort	1.0	Uber Pay	1	1.01	$6.5	Kips Bay
7461	03 June 2024	12:16:57	UberX	1.0	Uber Pay	1	1.01	$7.0	East Harlem Soutl
7475	03 June 2024	12:31:56	Uber Comfort	1.0	Uber Pay	1	1.01	$6.0	Penn Station/Madison S
7517	03 June 2024	13:22:51	UberX	1.0	Uber Pay	1	1.01	$8.3	Upper East Side So
7555	03 June 2024	13:31:10	UberX	1.0	Uber Pay	1	1.01	$10.4	Old Astoria
8119	03 June 2024	15:27:10	Uber Black	1.0	Uber Pay	1	1.01	$8.1	Gramercy
Total				103728.0		146478	3,48,933.81	$15,53,672.8	