

# 🚗 Uber Trip Analysis Report

## 📊 Project Overview

This Uber Trip Analysis is a deep-dive dashboard project using Power BI to analyze **103,000+ Uber rides** across various metrics: time, location, vehicle type, and payment method. The data was cleaned, structured, and visualized using interactive dashboards categorized into three main sections:

1. Overview
2. Time Analysis
3. Detailed Trip Data

This project helps uncover **key trends, passenger behavior**, and **operational insights** for optimization.

## 🔍 Summary

### ❖ Key Findings

- **103K+ total trips** recorded.
- **Total revenue**: ~\$1.54 million.
- **UberX** is the most used vehicle (38K+ bookings).
- **Peak usage time**: 2 PM – 6 PM, especially on weekends.
- **Top Pickup**: Penn Station / Madison Square West.
- **Top Drop-off**: Upper East Side North.
- **Farthest trip**: 144 miles (Lower East Side → Crown Heights North).

## 📈 Supporting Data

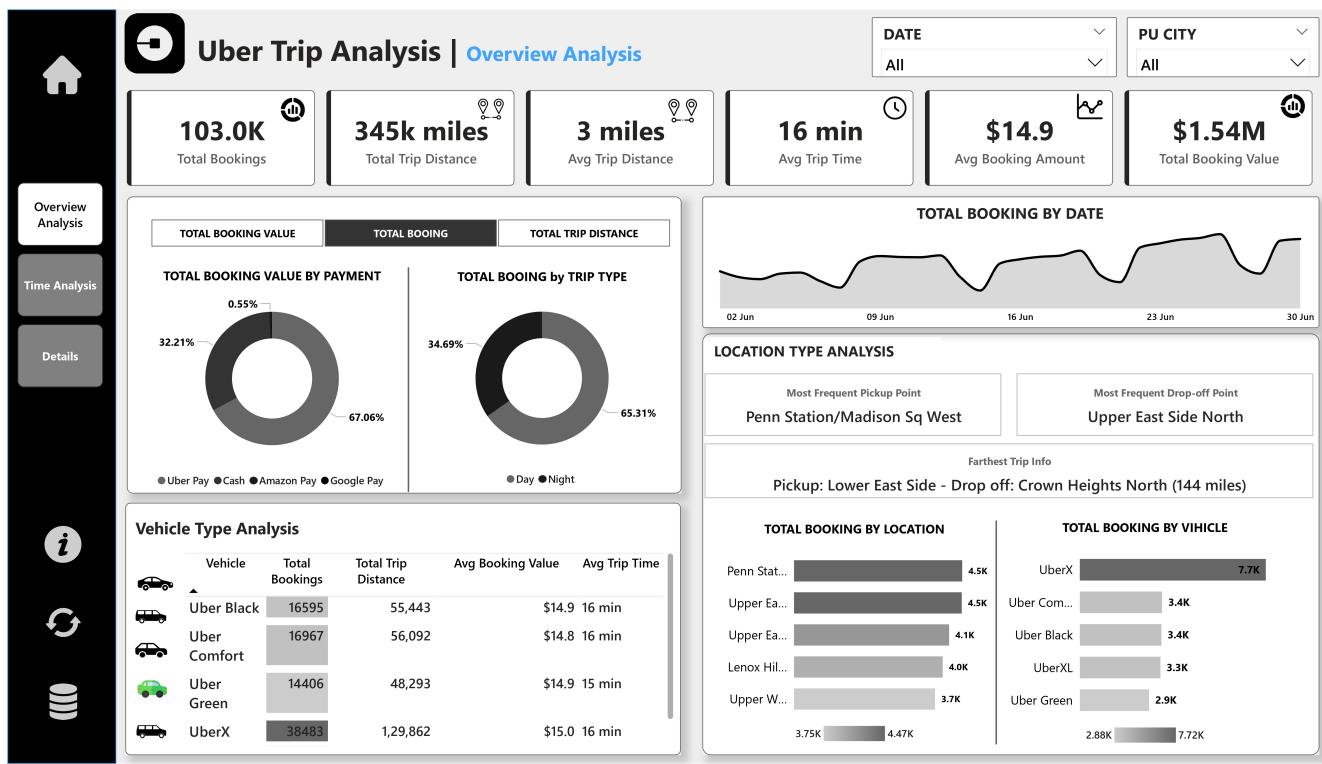
- **Average Trip Distance**: 3 miles
- **Average Trip Duration**: 16 minutes
- **Average Booking Amount**: \$14.9
- **Payment Types**:
  - Uber Pay – 67%
  - Cash – 32%
  - Amazon & Google Pay – 1% combined
- **Trip Type**:
  - Day Trips – 65%
  - Night Trips – 35%

## ☑ Recommendations, Report & Insights

- **Peak Optimization**: Add incentives for users during peak afternoon hours.
- **Fleet Management**: Increase UberX vehicles during weekends and in dense pickup zones.

- **Digital Payment Promotion:** Push digital wallets by offering micro-discounts.
- **Route Focus:** Add more vehicles on popular routes like *Penn Station → Upper East Side*.

## Dashboard Breakdown



### 1. Overview Analysis

This page provides a high-level business summary.

#### KPIs:

- **Total Bookings:** 103,044
- **Total Trip Distance:** 345,000 miles
- **Total Revenue:** \$1.54 million
- **Avg Booking Value:** \$14.9
- **Avg Trip Time:** 16 minutes

#### Bookings by Payment Type:

- Uber Pay – 67.06%
- Cash – 32.21%
- Amazon Pay – 0.55%
- Google Pay – negligible

 **Insight:** Digital payments dominate. Consider removing less-used options.

#### Bookings by Trip Type:

- **Day** – 65.31%
- **Night** – 34.69%

⌚ **Insight:** Daytime has higher usage; evening discounts can increase night bookings.

### 🕒 Bookings by Vehicle Type:

Vehicle	Bookings	Trip Distance	Avg Value	Avg Time
UberX	38,483	129,862 mi	\$15.0	16 min
Uber Comfort	16,967	56,092 mi	\$14.8	16 min
Uber Green	14,406	48,293 mi	\$14.9	15 min
Uber Black	16,595	55,443 mi	\$14.9	16 min

⌚ **Insight:** UberX is the most preferred, while Uber Green has the shortest trip time.

### 🕒 Popular Pickup & Drop-off Points:

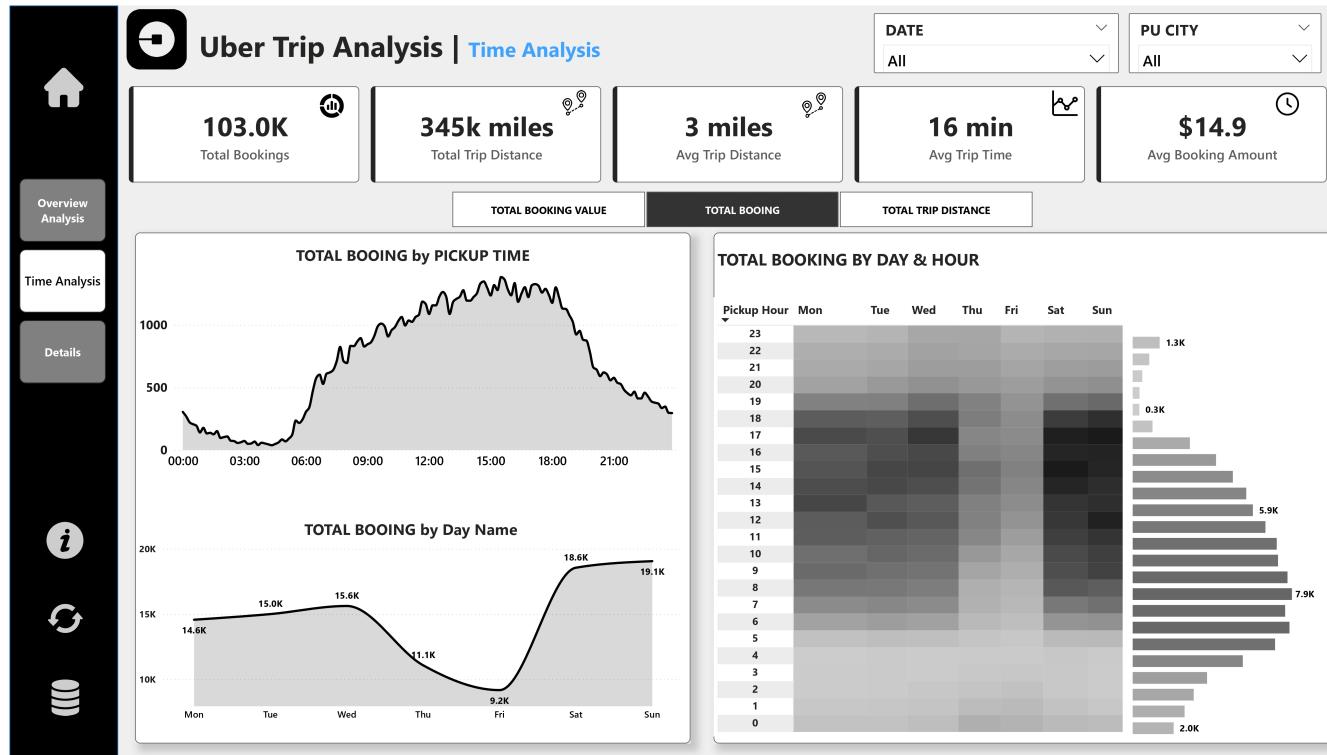
- **Pickup:** Penn Station / Madison Square West
- **Drop-off:** Upper East Side North

### 🕒 Farthest Trip:

- Pickup: Lower East Side
- Drop-off: Crown Heights North
- Distance: 144 miles

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## 2. ⏳ Time Analysis



This page breaks down trip data by time and day.

### ⌚ Bookings by Hour:

Visualizes how bookings change over 24 hours. **Peak Hours:** 14:00 to 18:00 (2 PM – 6 PM)

**💡 Insight:** Afternoon hours are most active. High demand between 3 PM – 6 PM.

### ⌚ Bookings by Day of Week:

- **Tuesday & Sunday** show highest ride activity.
- Mid-week (Wednesday) sees a dip in traffic.

Day	Bookings
Sunday	18.6K
Tuesday	19.1K
Wednesday	9.2K

**💡 Insight:** Weekend strategies should target Sunday and Tuesday evening users.

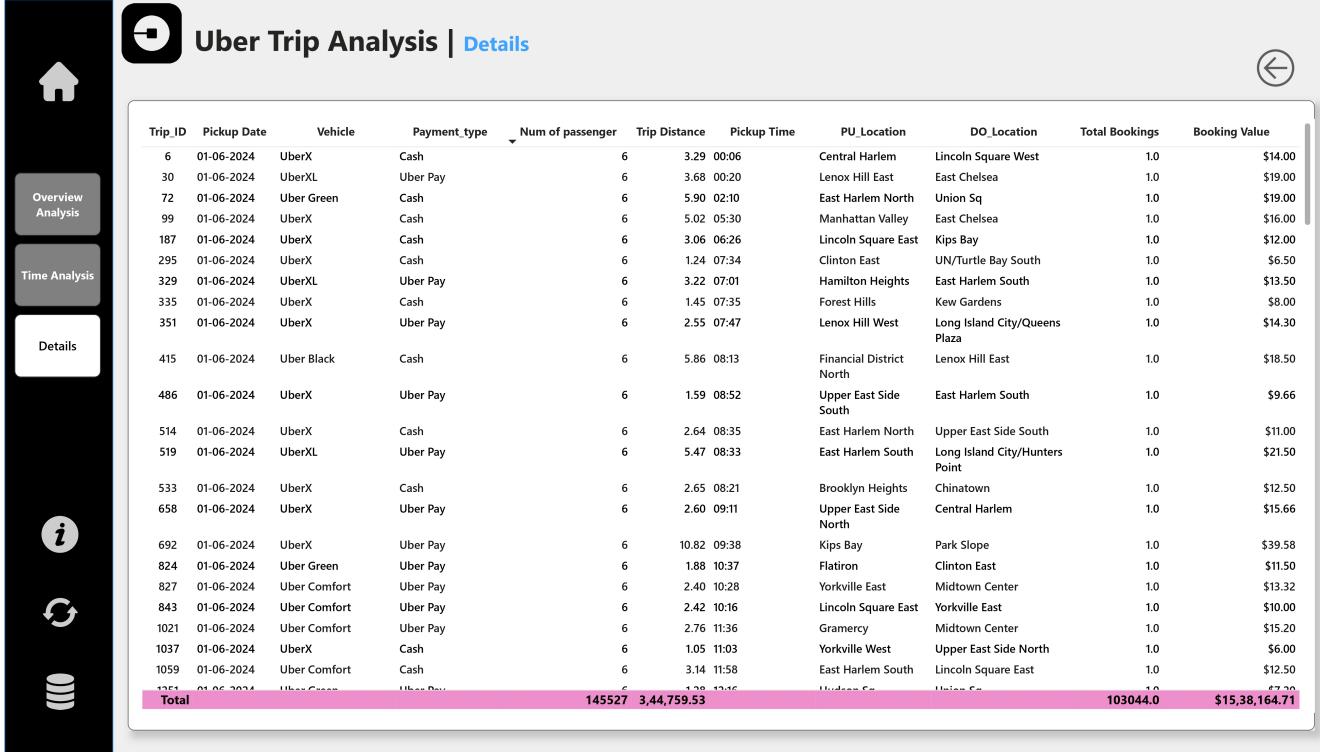
### ⌚ Bookings by Day & Hour Matrix:

Shows heatmap style of trip density across each hour and day. Example:

- **Friday 3 PM** – High
- **Saturday 6 PM** – Very High
- **Monday 4 AM** – Very Low

 **Insight:** Helps allocate drivers by hour/day combo.

### 3. Detailed Trip Data



The screenshot shows a user interface for 'Uber Trip Analysis'. On the left, there's a sidebar with icons for Home, Overview Analysis, Time Analysis, Details (which is selected), and other metrics. The main area is titled 'Uber Trip Analysis | Details' and contains a table of trip data. The table has columns: Trip ID, Pickup Date, Vehicle, Payment type, Num of passenger, Trip Distance, Pickup Time, PU\_Location, DO\_Location, Total Bookings, and Booking Value. The data shows various trips from different dates and locations, with a total summary at the bottom.

Trip ID	Pickup Date	Vehicle	Payment type	Num of passenger	Trip Distance	Pickup Time	PU_Location	DO_Location	Total Bookings	Booking Value
6	01-06-2024	UberX	Cash	6	3.29	00:06	Central Harlem	Lincoln Square West	1.0	\$14.00
30	01-06-2024	UberXL	Uber Pay	6	3.68	00:20	Lenox Hill East	East Chelsea	1.0	\$19.00
72	01-06-2024	Uber Green	Cash	6	5.90	02:10	East Harlem North	Union Sq	1.0	\$19.00
99	01-06-2024	UberX	Cash	6	5.02	05:30	Manhattan Valley	East Chelsea	1.0	\$16.00
187	01-06-2024	UberX	Cash	6	3.06	06:26	Lincoln Square East	Kips Bay	1.0	\$12.00
295	01-06-2024	UberX	Cash	6	1.24	07:34	Clinton East	UN/Turtle Bay South	1.0	\$6.50
329	01-06-2024	UberXL	Uber Pay	6	3.22	07:01	Hamilton Heights	East Harlem South	1.0	\$13.50
335	01-06-2024	UberX	Cash	6	1.45	07:35	Forest Hills	Kew Gardens	1.0	\$8.00
351	01-06-2024	UberX	Uber Pay	6	2.55	07:47	Lenox Hill West	Long Island City/Queens Plaza	1.0	\$14.30
415	01-06-2024	Uber Black	Cash	6	5.86	08:13	Financial District North	Lenox Hill East	1.0	\$18.50
486	01-06-2024	UberX	Uber Pay	6	1.59	08:52	Upper East Side South	East Harlem South	1.0	\$9.66
514	01-06-2024	UberX	Cash	6	2.64	08:35	East Harlem North	Upper East Side South	1.0	\$11.00
519	01-06-2024	UberXL	Uber Pay	6	5.47	08:33	East Harlem South	Long Island City/Hunters Point	1.0	\$21.50
533	01-06-2024	UberX	Cash	6	2.65	08:21	Brooklyn Heights	Chinatown	1.0	\$12.50
658	01-06-2024	UberX	Uber Pay	6	2.60	09:11	Upper East Side North	Central Harlem	1.0	\$15.66
692	01-06-2024	UberX	Uber Pay	6	10.82	09:38	Kips Bay	Park Slope	1.0	\$39.58
824	01-06-2024	Uber Green	Uber Pay	6	1.88	10:37	Flatiron	Clinton East	1.0	\$11.50
827	01-06-2024	Uber Comfort	Uber Pay	6	2.40	10:28	Yorkville East	Midtown Center	1.0	\$13.32
843	01-06-2024	Uber Comfort	Uber Pay	6	2.42	10:16	Lincoln Square East	Yorkville East	1.0	\$10.00
1021	01-06-2024	Uber Comfort	Uber Pay	6	2.76	11:36	Gramercy	Midtown Center	1.0	\$15.20
1037	01-06-2024	UberX	Cash	6	1.05	11:03	Yorkville West	Upper East Side North	1.0	\$6.00
1059	01-06-2024	Uber Comfort	Cash	6	3.14	11:58	East Harlem South	Lincoln Square East	1.0	\$12.50
1251	01-06-2024	Uber Green	Uber Pay	6	1.29	12:16	Hudson Yards	Union Sq	1.0	\$7.20
<b>Total</b>				<b>145527</b>	<b>3,44,759.53</b>				<b>103044.0</b>	<b>\$15,38,164.71</b>

This table provides raw data per trip with filters.

#### ❖ Key Columns:

- Trip ID
- Pickup Date & Time
- Vehicle Type
- Payment Type
- Pickup & Drop Location
- Trip Distance
- Booking Amount

#### ❖ Use Cases:

- Analyze specific outlier trips.
- Audit data anomalies.
- Filter by vehicle or date for micro-analysis.

#### Example Entries:

Trip ID	Date	Vehicle	Pickup Location	Drop Location	Distance	Amount
6	01-06-2024	UberX	Central Harlem	Lincoln Sq. West	3.29 mi	\$14.00
30	01-06-2024	UberXL	Lenox Hill East	East Chelsea	3.68 mi	\$19.00

## 🏁 Conclusion

This Uber Trip Analysis gives a comprehensive look into booking trends, customer behaviors, payment preferences, and optimal scheduling. With strong visualization and insights, this dashboard can support both **operational** and **marketing decisions** for ride-hailing platforms.

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## 📁 Files Included

- [Uber\\_Trip.pdf](#) – PDF export of Power BI dashboard
  - [Uber\\_Trip.pbix](#) – Fully interactive Power BI file
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## 💡 How to Use

1. Open [Uber\\_Trip.pbix](#) in Power BI Desktop.
  2. Use slicers to filter by vehicle type, pickup city, or date.
  3. Navigate between:
    - **Overview** tab for KPIs
    - **Time Analysis** for hourly trends
    - **Details** for trip-level data
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## ✍️ Author

**Name:** Mohammad Ali **Tools Used:** Power BI, Excel **Goal:** Provide actionable insights from Uber data to drive decisions in ride-hailing businesses.