



# NYC Taxi Dataset Analysis – Power BI Dashboard Project



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Tools Used: Power BI, NYC Taxi Dataset



Date Range: January 2015 sample



Dataset Source: NYC Taxi & Limousine Commission (TLC)



Size: 50+ columns, millions of rows (sampled)



## Project Objective

This project explores and analyzes the NYC Taxi dataset to identify patterns in:

- Taxi usage across time and geography
- Payment methods
- Fare and tip behavior

The ultimate goal is to uncover actionable insights that could support transportation policy, ride-sharing strategies, and customer experience enhancements.



## Dataset Overview

The NYC Taxi dataset from TLC includes extensive records on:

- Pickup/drop-off locations
- Distance traveled
- Fare details
- Payment methods
- Tipping behavior

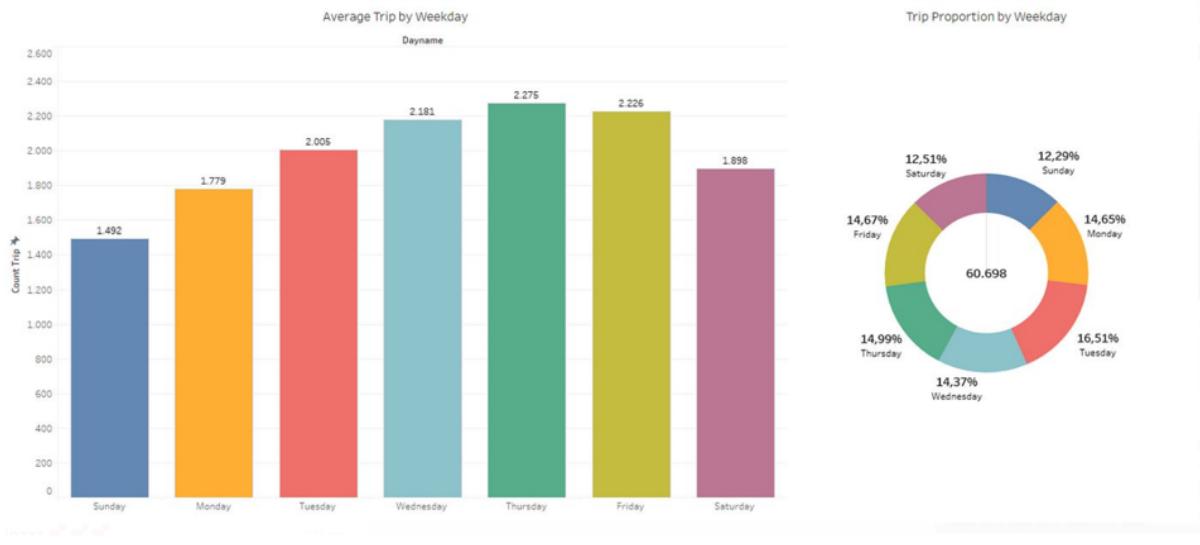
The dataset provides a strong foundation for high-volume, real-time transportation analysis.

# ? Key Questions Addressed

## 1. What is the most common trip distance?

 Insight:

Most rides are under 3 miles, indicating frequent short-distance travel—common in busy metro areas.

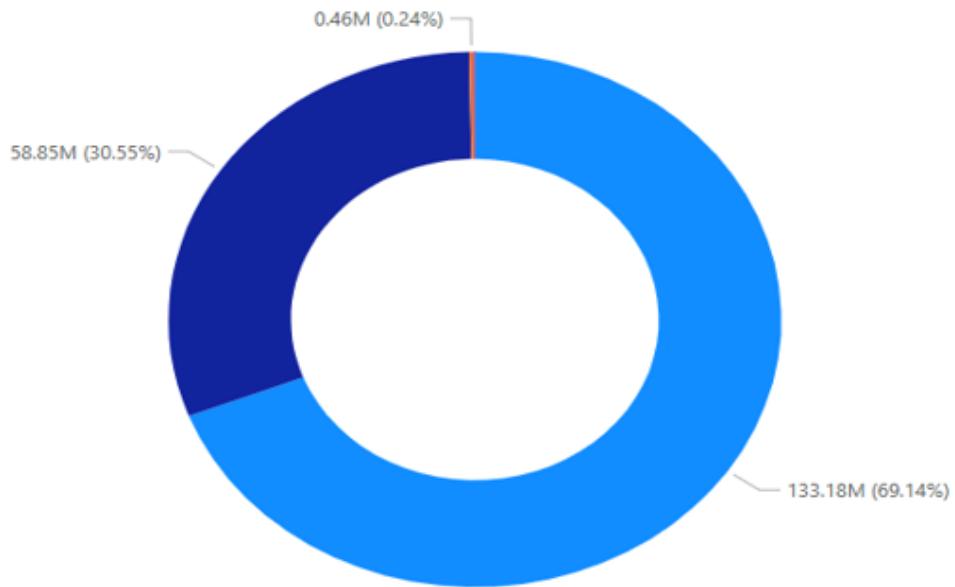


## 2. What are the most preferred payment methods?

### ✓ Insight:

- Apple Pay dominates (69.14%)
- Credit/Debit cards follow (30.55%)
- Cash is minimal (0.24%)

Sum of total\_amount by payment\_type



### ❖ Implication:

Cashless, app-based payments have become the norm, suggesting a strong digital payment infrastructure among riders.

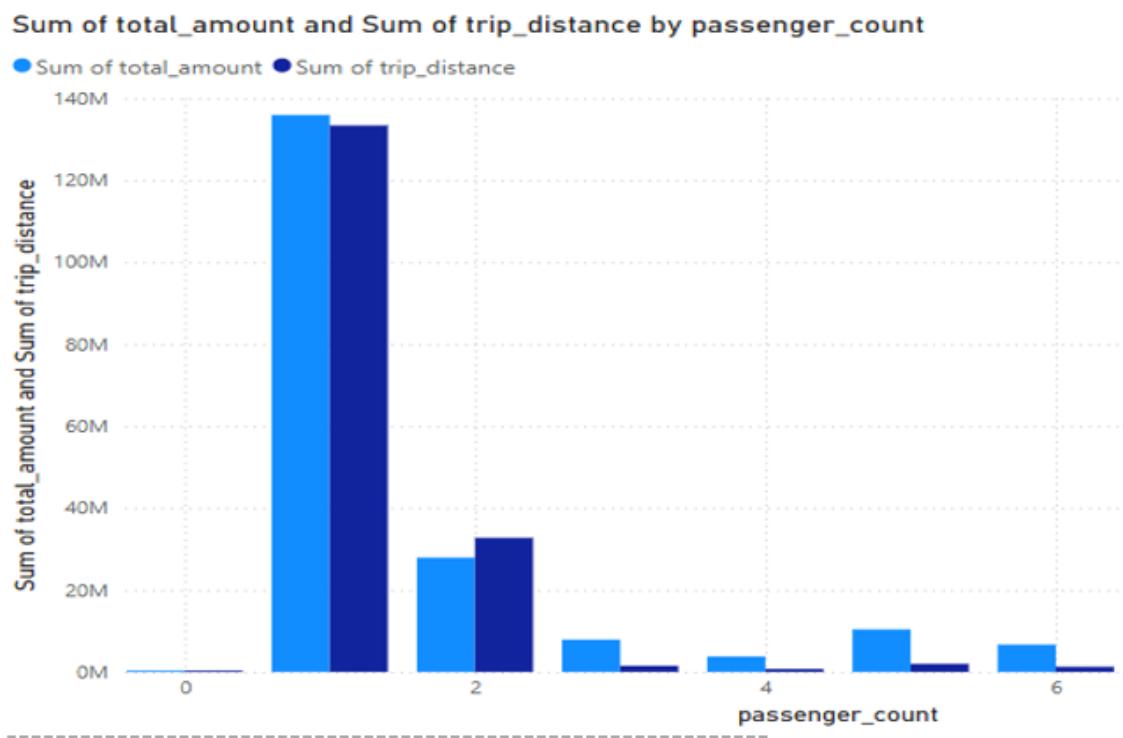
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### 3. When do riders tip the most?



Insight:  
Tips are highest during peak hours, likely due to:

- Longer trips
- Congestion-based gratitude
- Corporate travel behaviors





## Dashboard Highlights

Using Power BI, the following visuals were designed:

- Pie charts for payment distribution
- Bar charts for trip distance breakdown
- Time-based graphs to analyze tip percentages by hour

These visualizations enable stakeholders to grasp behavioral patterns in NYC's taxi ecosystem quickly.



## Key Takeaways

- Short trips dominate urban travel.
- Contactless payment is a strong preference.
- Tip behavior aligns with daily commute trends.

## **Business & Policy Implications**

- **Micro-mobility options** (like e-scooters or bike-sharing) can complement short-trip patterns.
- **App integration** with tipping options could be optimized during peak times.
- **Digital-first strategies** for payment and feedback can further enhance customer experience.