DATA ANALYTICS | COHORT 24

NYC Yellow Trip Analysis

NYC Yellow Taxi Trip Records (January 2016)

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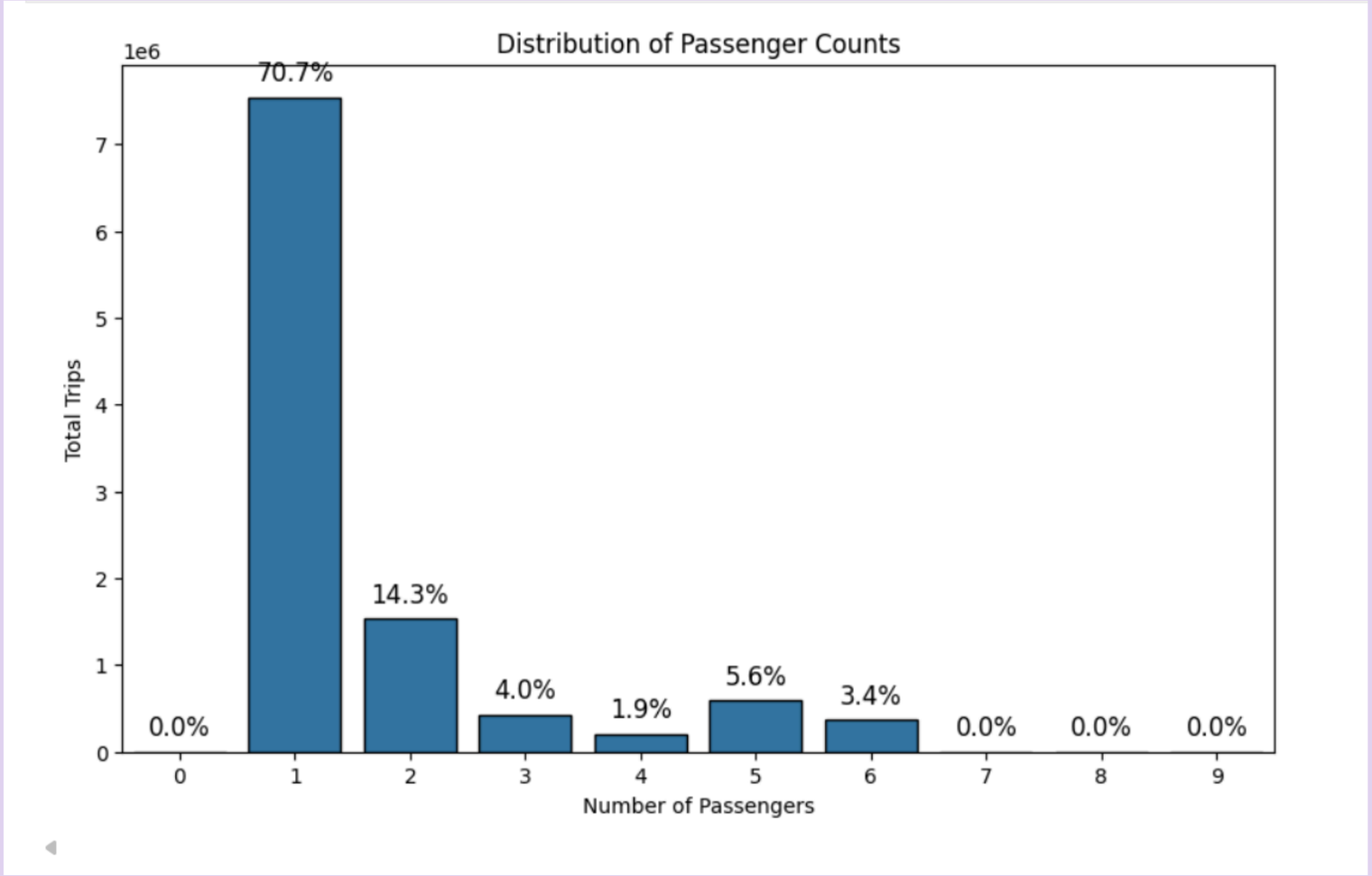
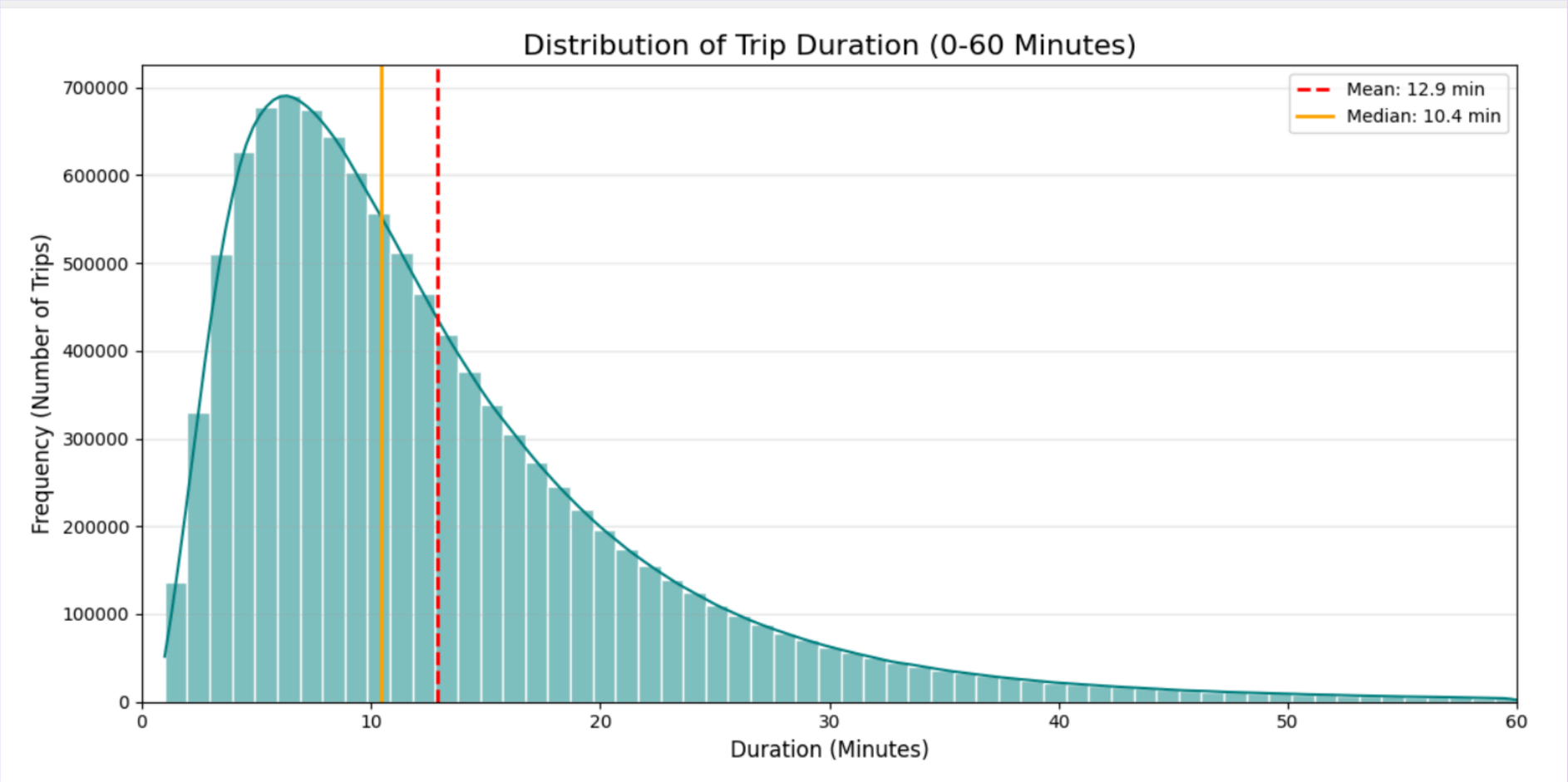
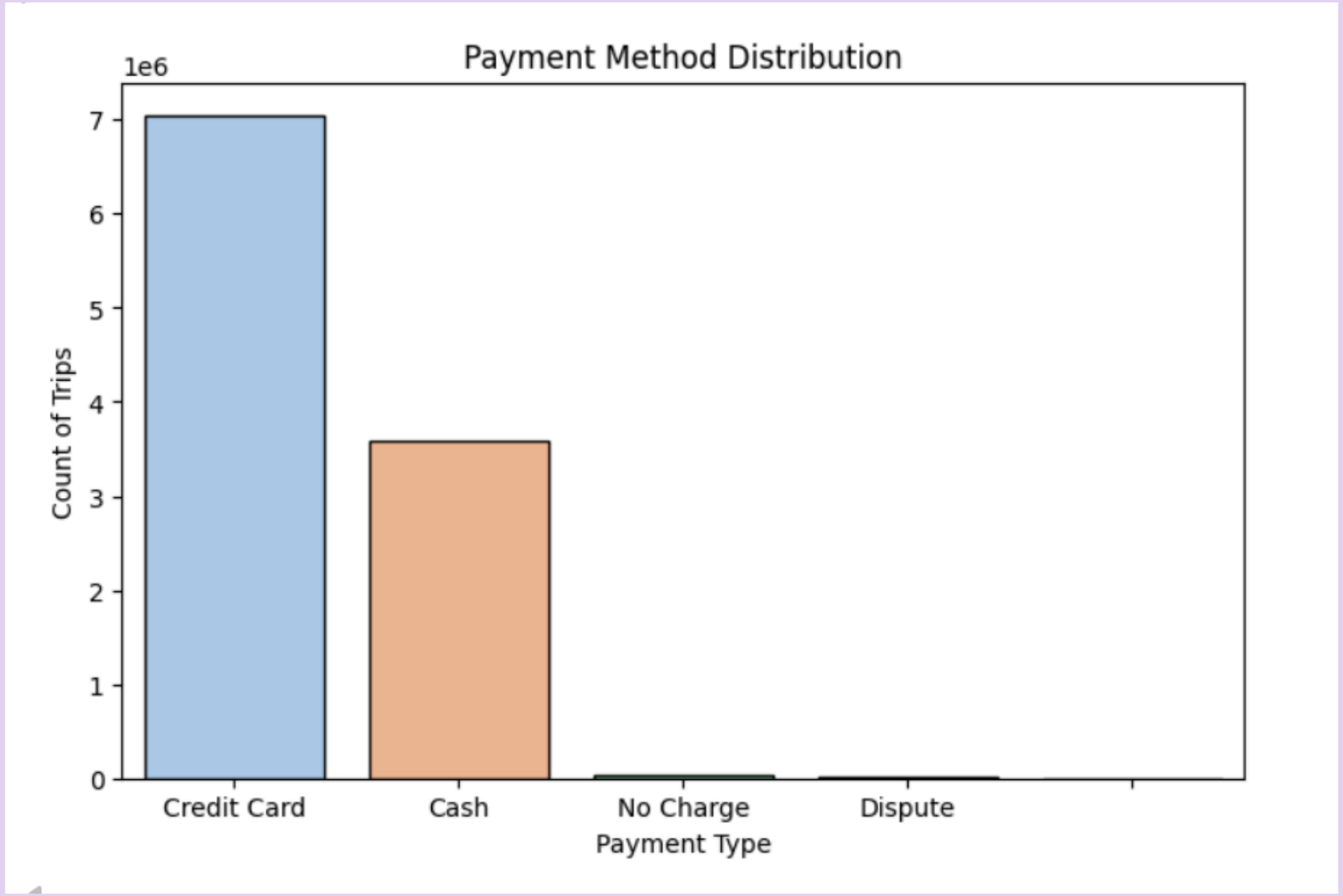
What is the distribution of passenger counts? Is the "Yellow Cab" primarily a solo-commuter vehicle or a group-transport vehicle?



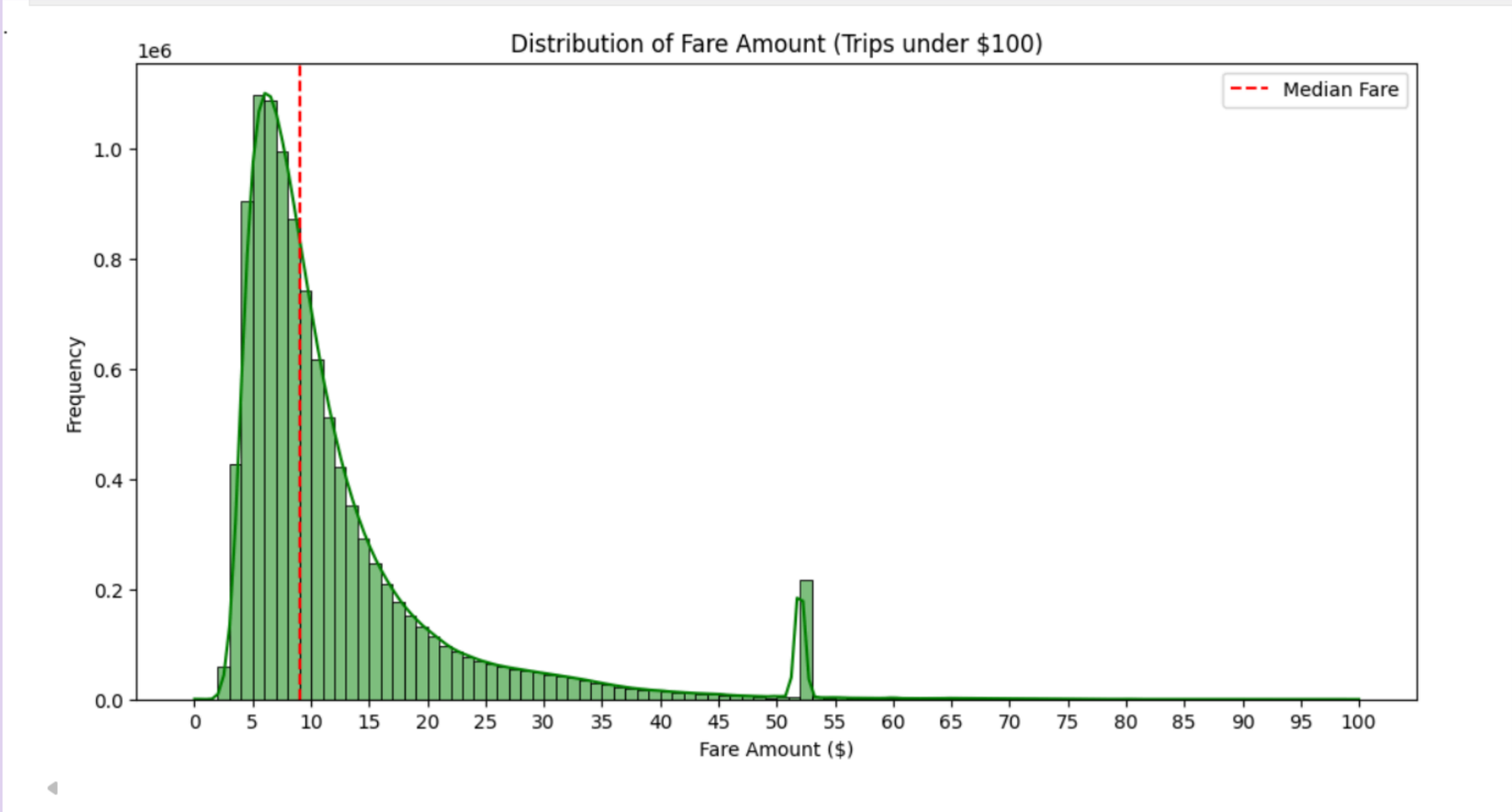
Short Hops vs. Long Hauls: What is the operational 'Sweet Spot' for our fleet?



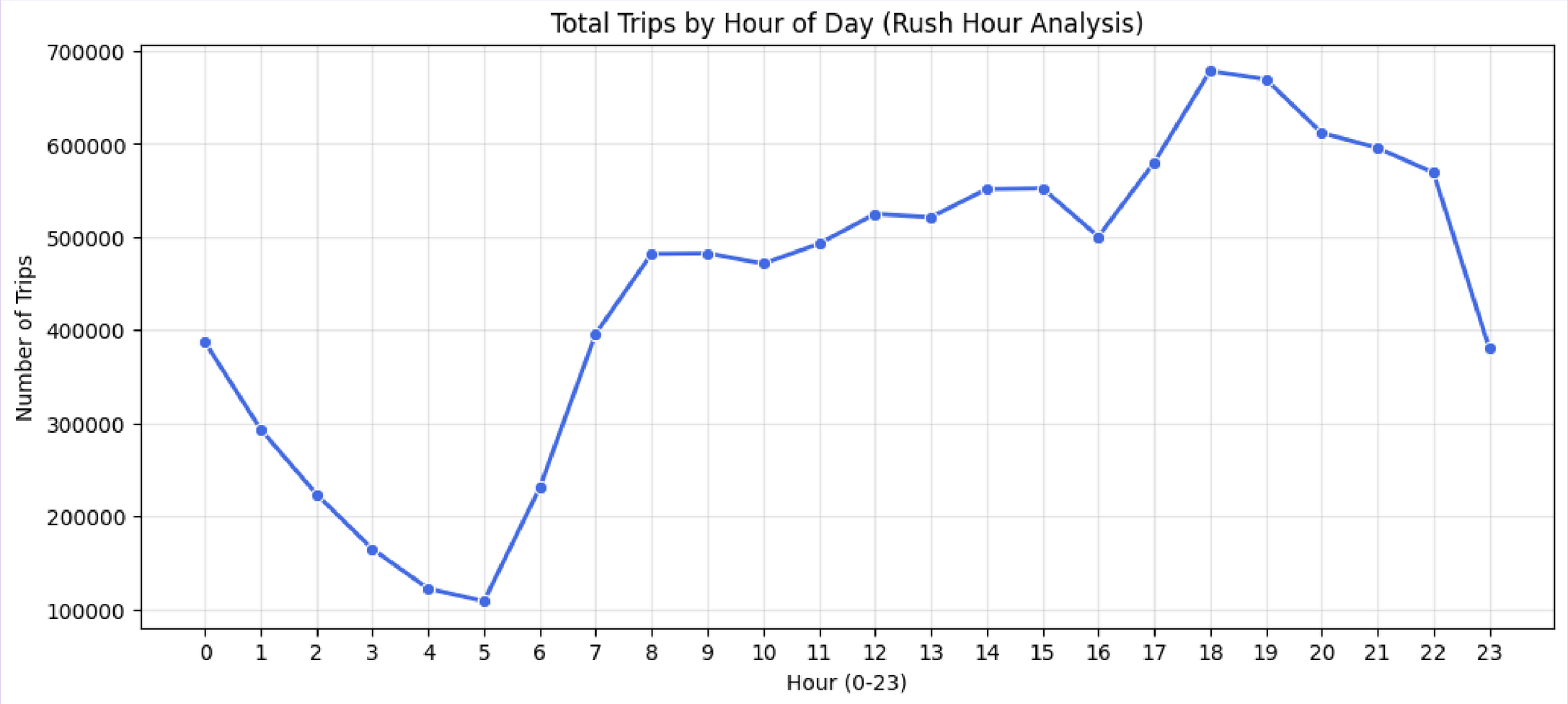
Payment Type preference



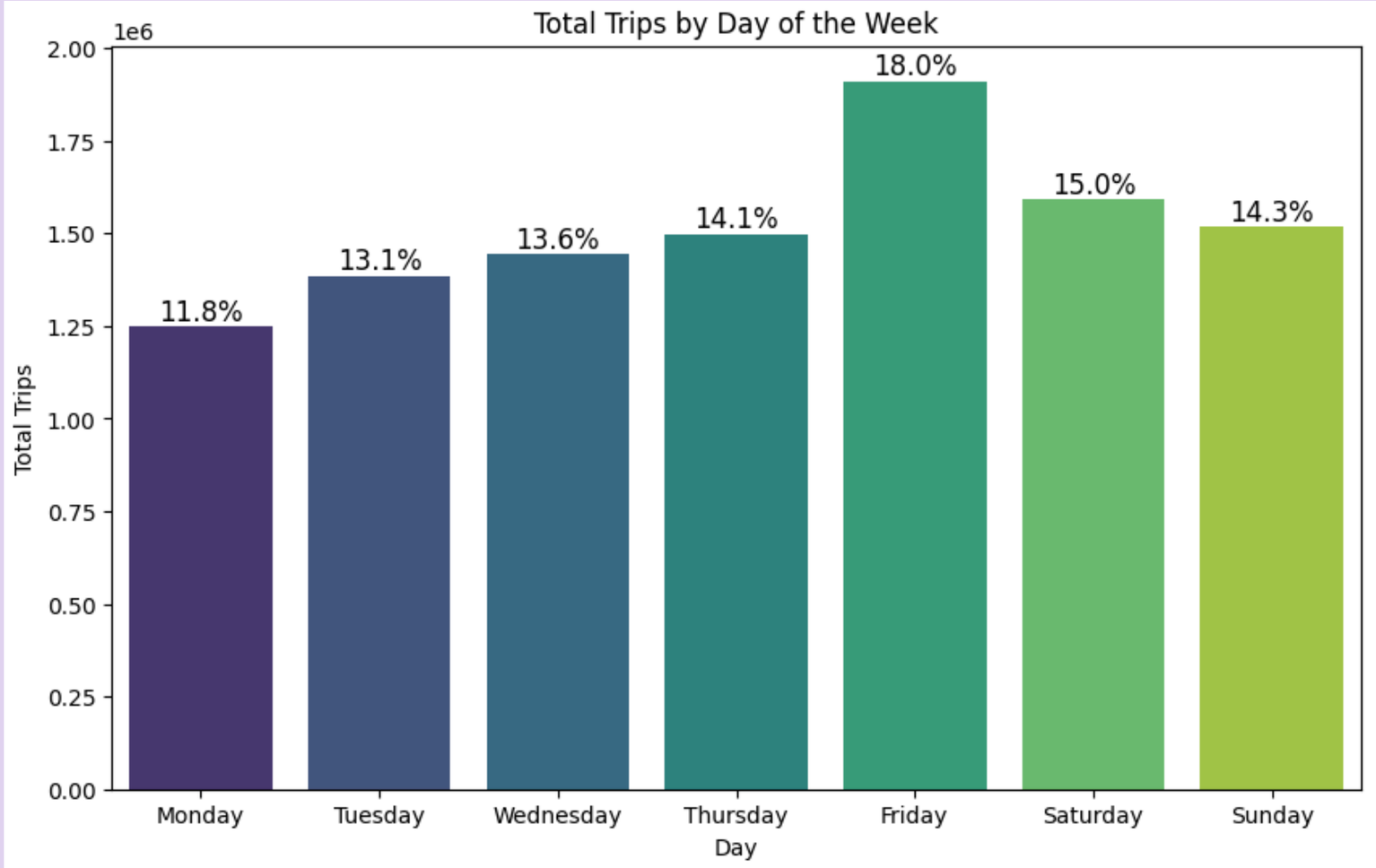
Fare amount analysis



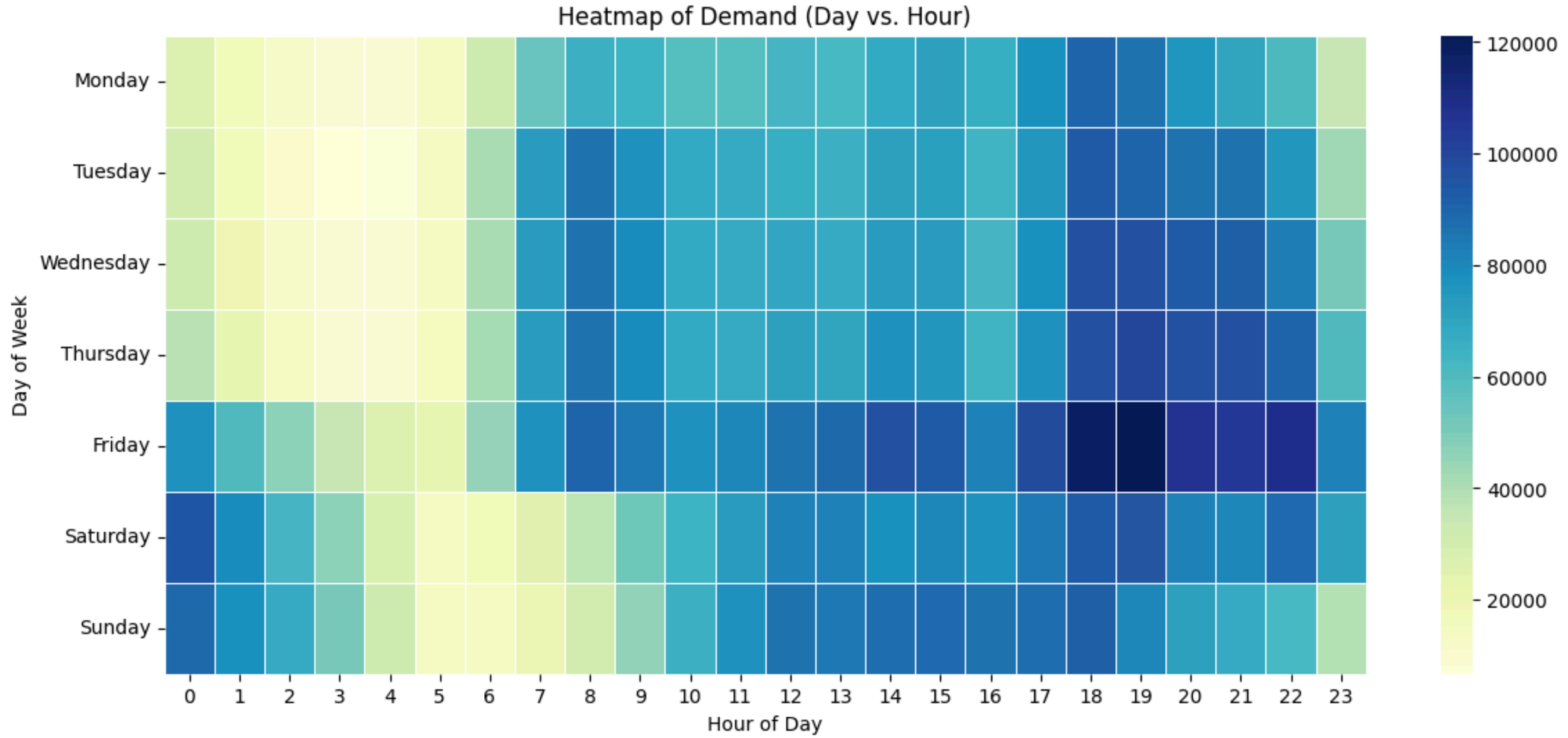
Peak Demand Identification: During which specific hour of the day is the volume of taxi trips highest?



Peak Demand Identification: On which specific day of the week does the highest volume of taxi trips occur, and what is the percentage drop-off on the least busy day?



The Ultimate View: What specific time block in the entire week is the busiest?



Average cost per mile

Empty markdown cell, double-click or press enter to edit.

```
# Calculate the Cost Per Mile Column
df_allcleaned['cost_per_mile'] = df_allcleaned['total_amount'] / df_allcleaned['trip_distance']


# Get the Average
average_cpm = df_allcleaned['cost_per_mile'].mean()
print(f"\nAverage Cost per Mile: ${round(average_cpm, 2)}")
```

[20]

...

```
Average Cost per Mile: $8.07
```

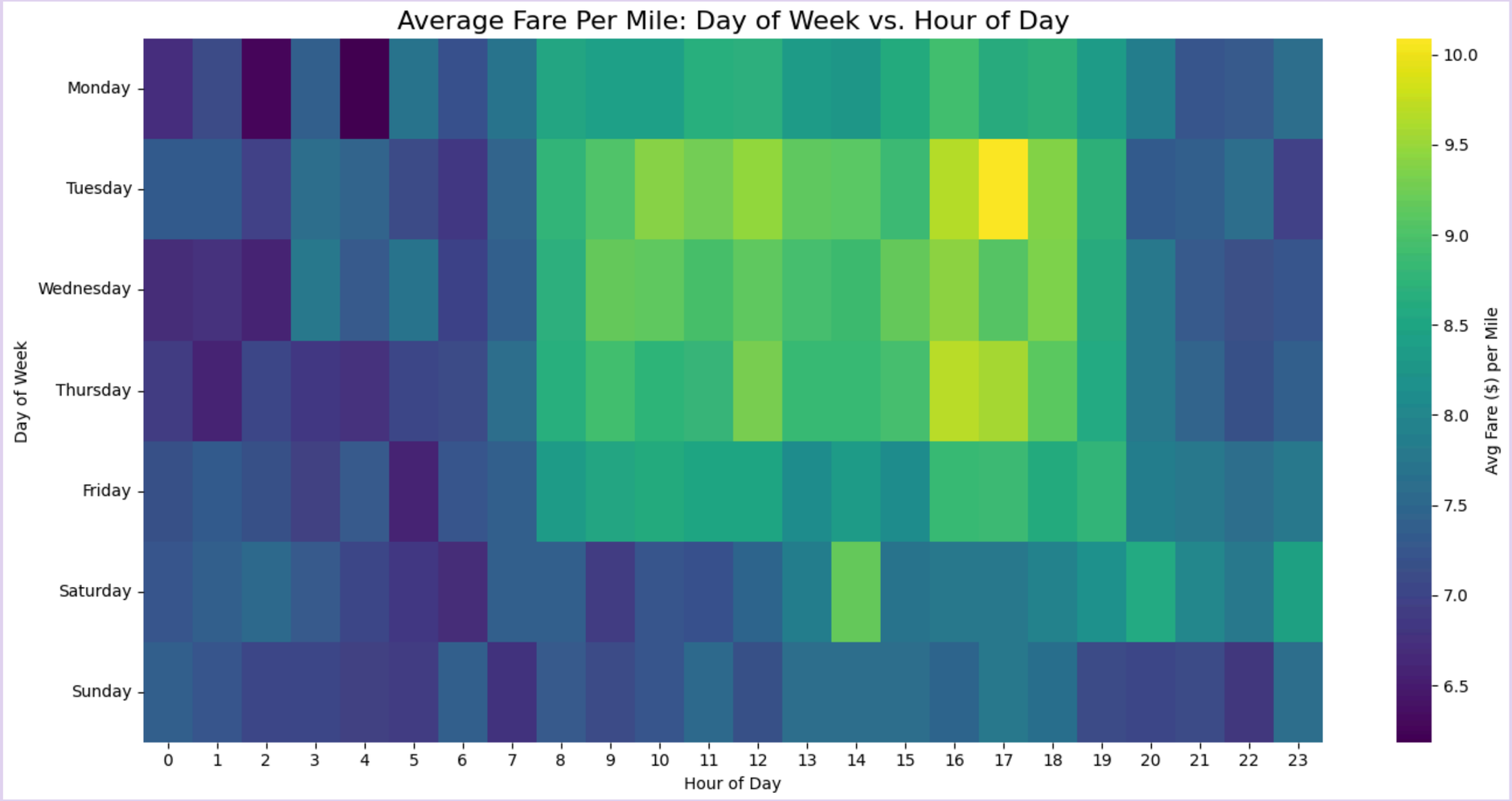
Average traffic speed in NYC

```
[32]
avg_dis=df_allcleaned['trip_distance'].mean()

avg_time=df_allcleaned['trip_duration_min'].mean()

print("Average Distance:", avg_dis)
print("Average Time:", avg_time)
```

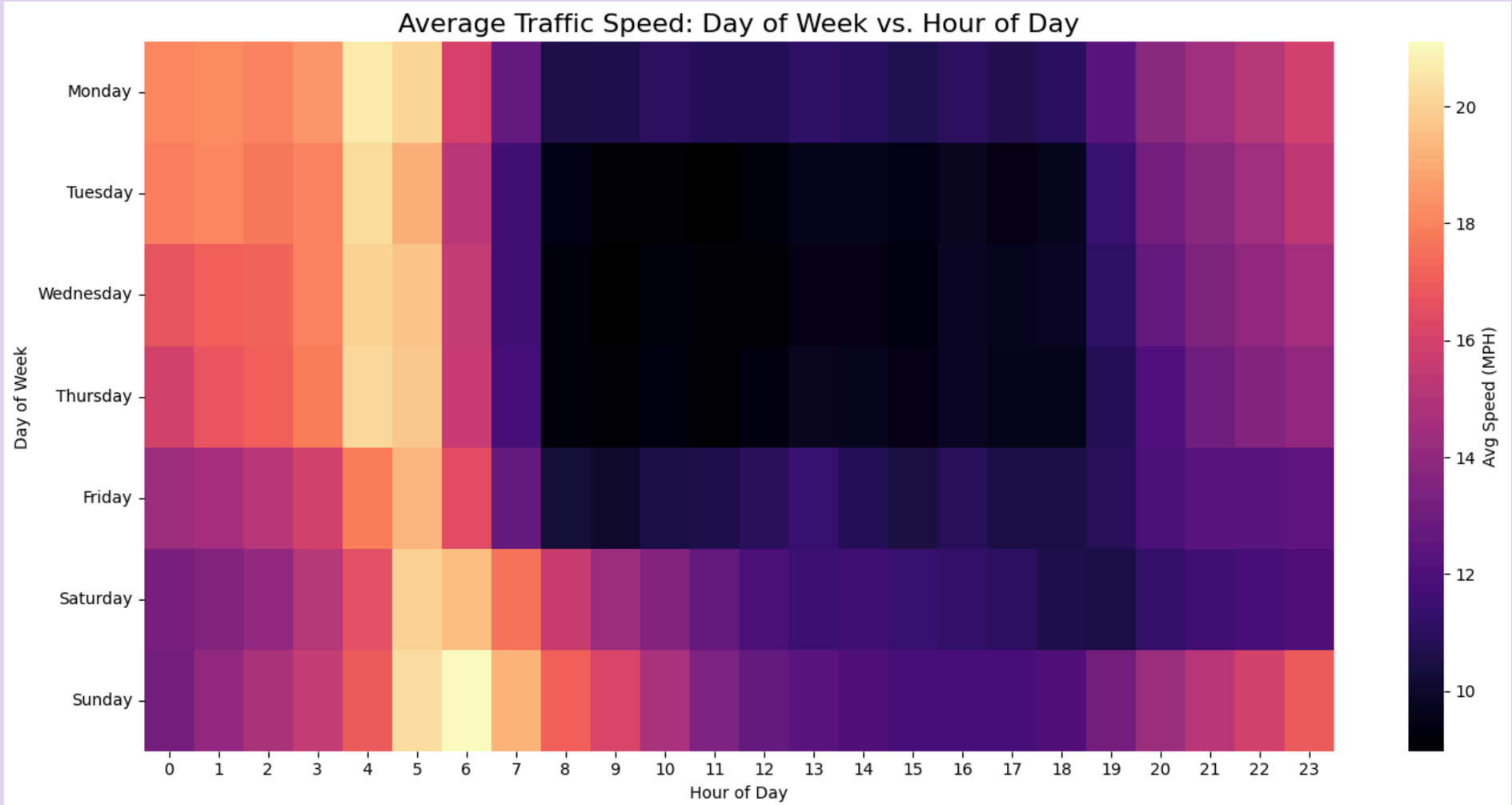
```
Average Distance: 4.6880147706958155
Average Time: 15.323667357521181
```

Average speed in nyc is 18.35 mph

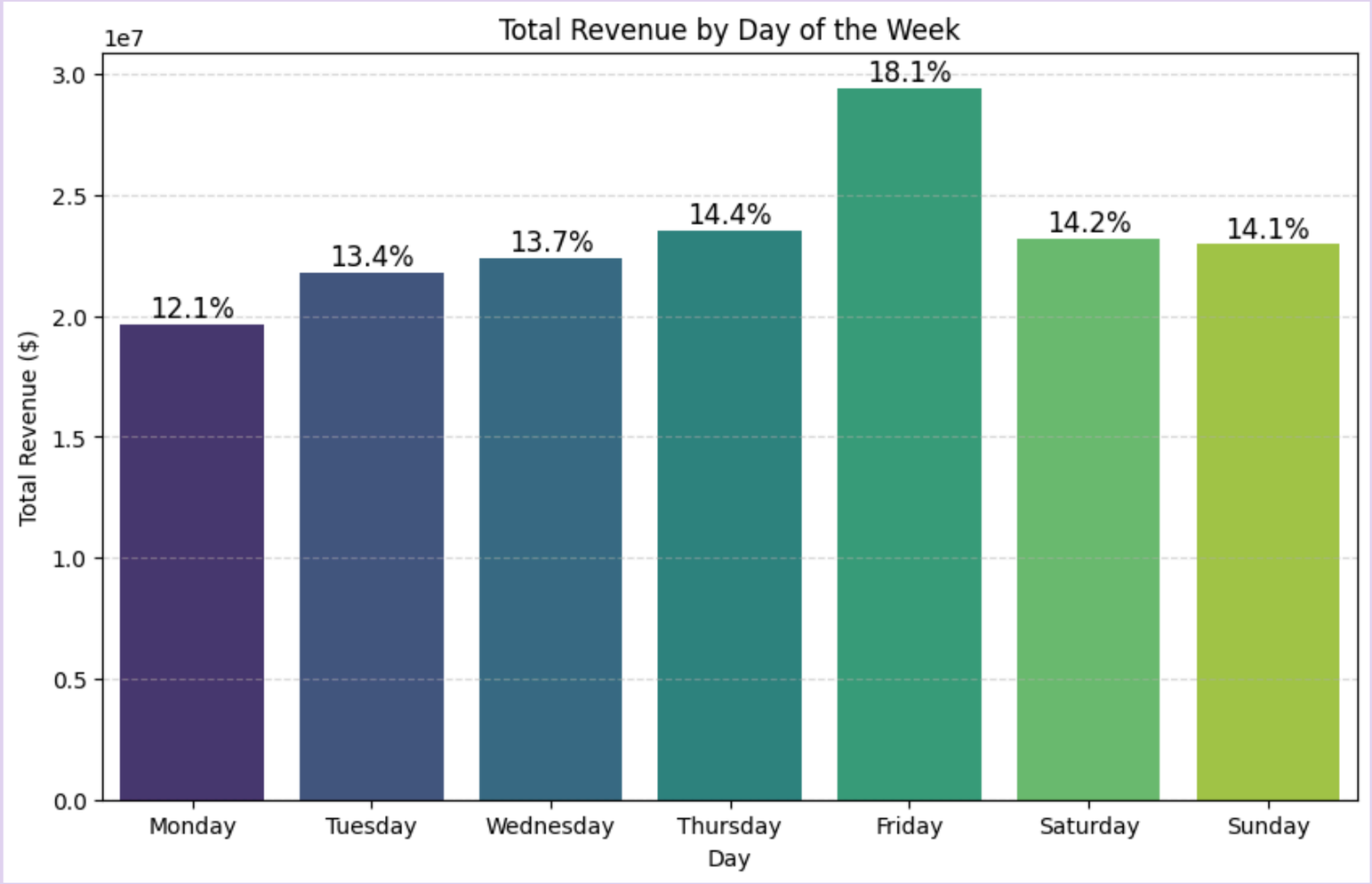
How does the average fare per mile change throughout the day and week?



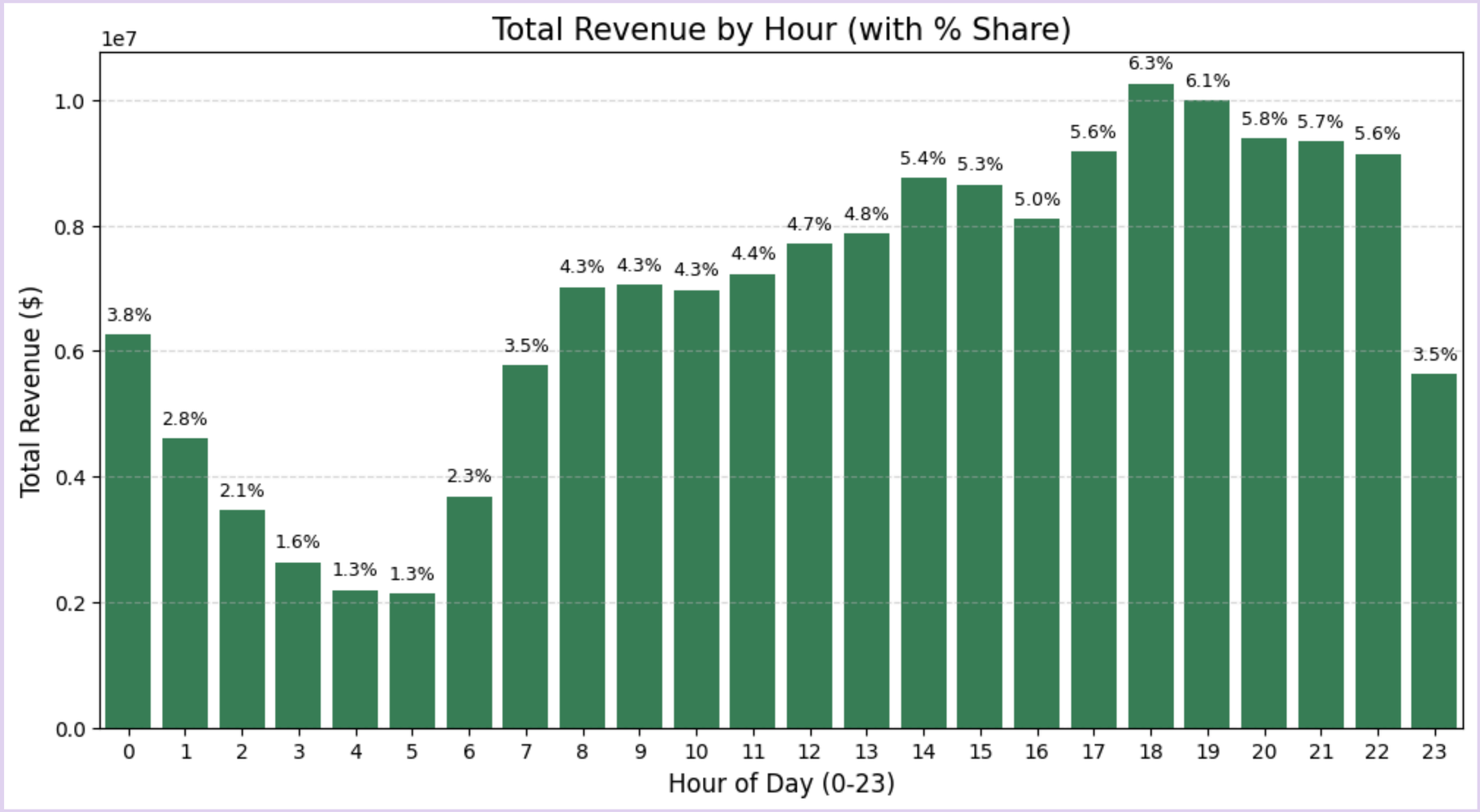
How does traffic congestion impact the effective hourly earnings of our drivers?"



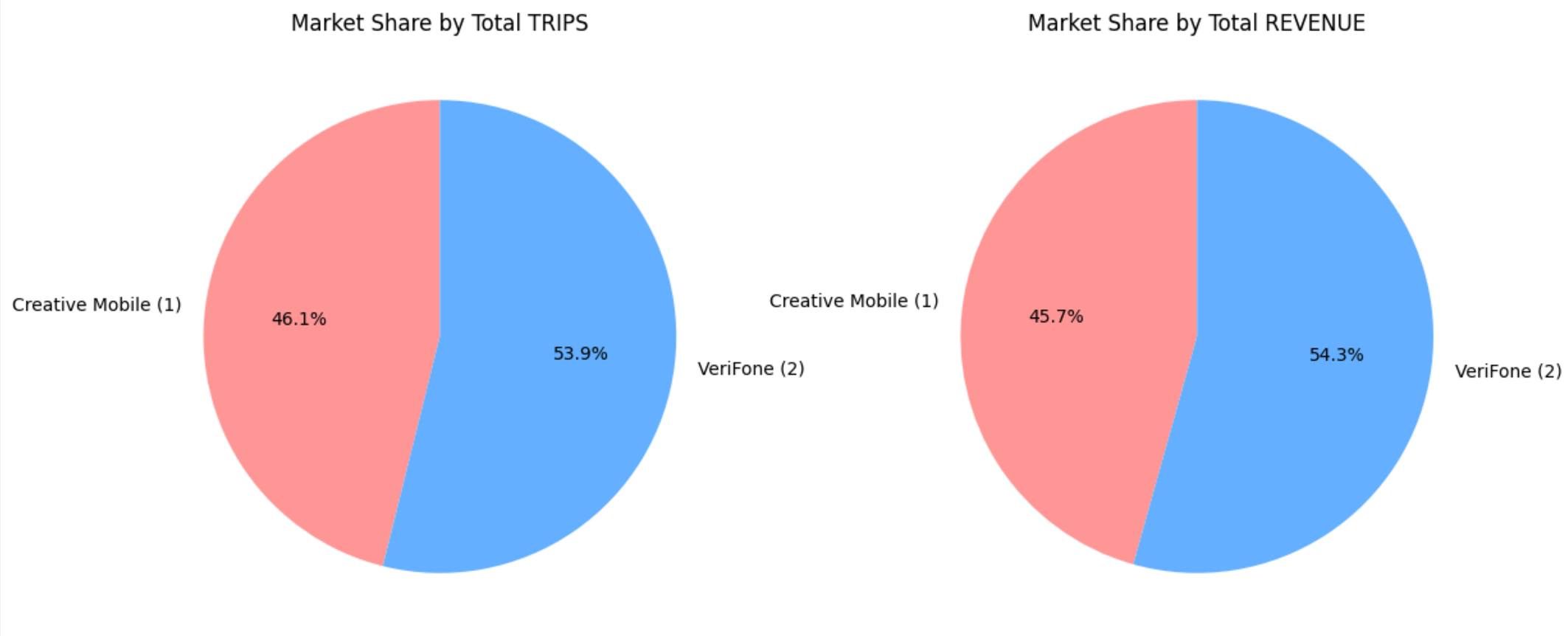
The Revenue Peak Analysis: Which specific day of the week generates the highest total gross revenue?



The 'Money Hour' Identification: Which specific hour of the day captures the highest percentage of the total market revenue?



Vendor analysis



Ratecode Analysis