

Citi Bike Data Analysis

By Carmen Sirbu

Project Goal:

- *To better understand the behavior of Citi Bike's customer base (both one-time users and subscribers) and how they use Citi Bikes*
- *This will help us to:*
 - *Identify where more bikes should be installed*
 - *Create targeted marketing campaigns that will appeal to different customer segments*

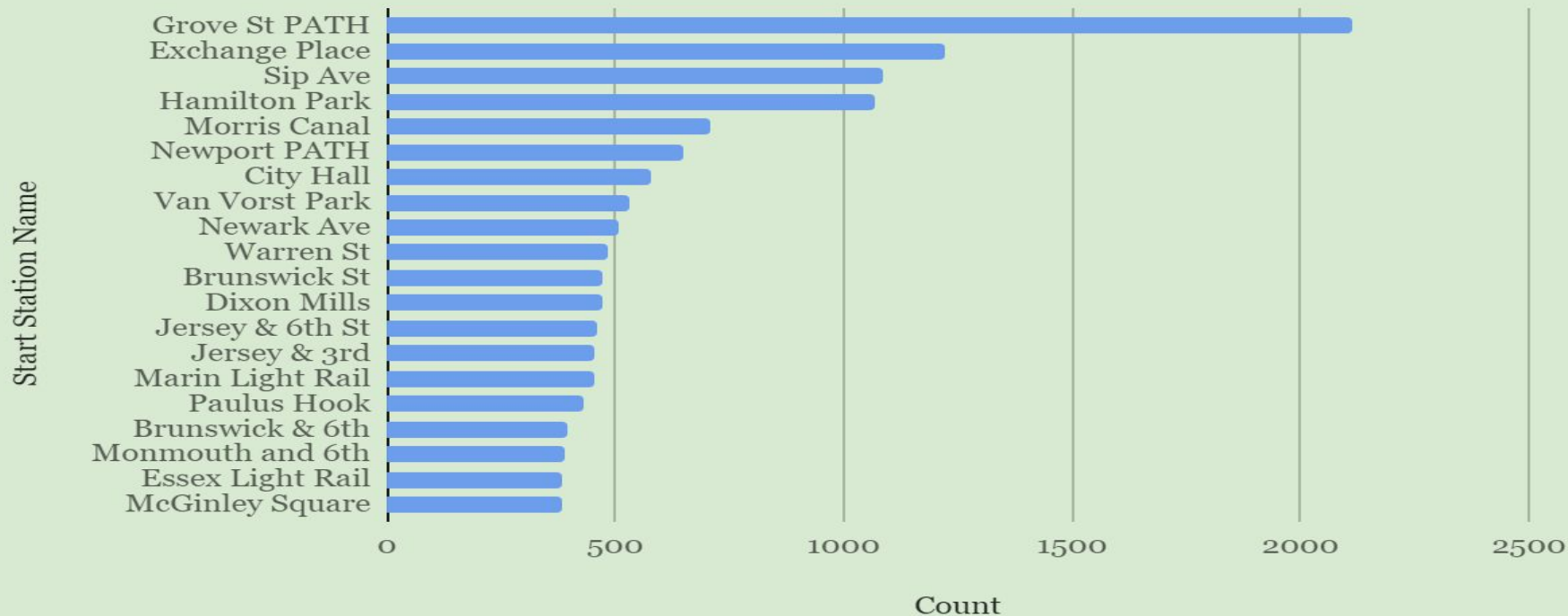
Key questions:

- What are the most popular pick-up locations across the city for Citi Bike rental?
- How does the average trip duration vary across different age groups?
- Which age group rents the most bikes?
- How does bike rental vary across the two user groups (one-time users vs long-term subscribers) on different days of the week?
- Does the factor of user age impact the average bike trip duration?

Findings & Insights

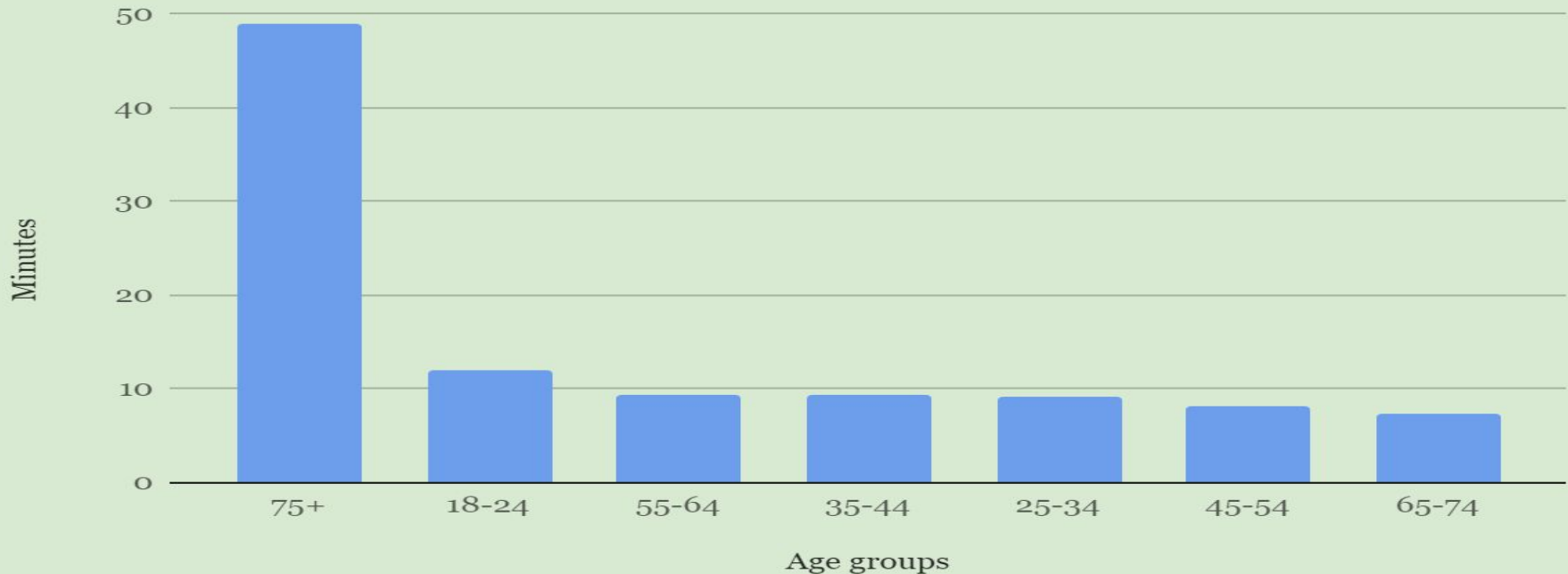
1. What are the most popular Citi Bike pick-up locations?

Count if. Start Station Name



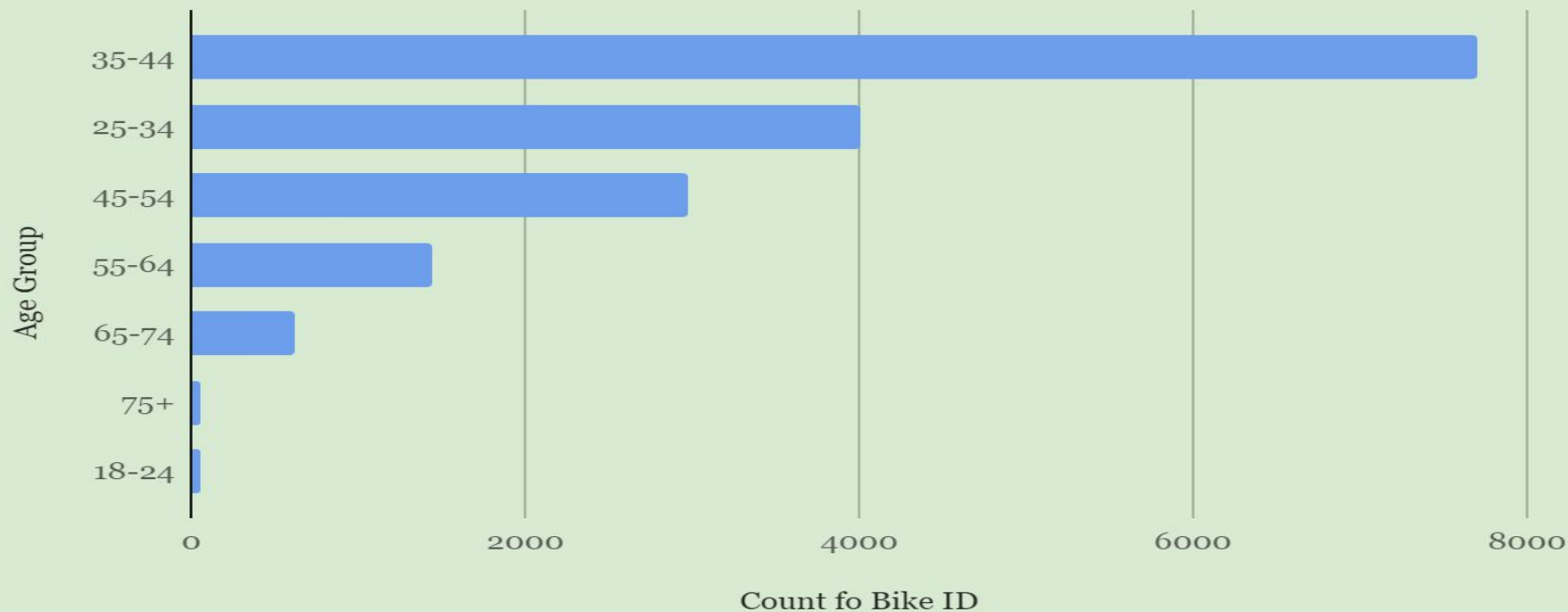
2. How does the average trip duration vary across different age groups?

Average trip duration in minutes if. Age groups



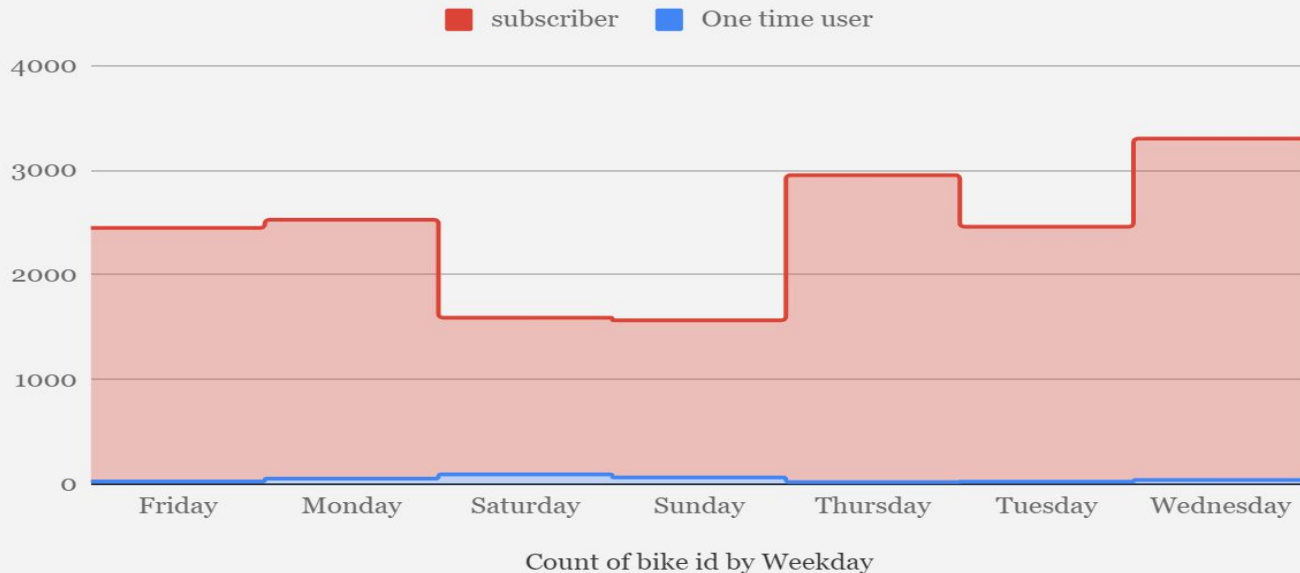
3. Which age group rents the most bikes?

Count fo Bike ID ift. Age Group



4. How does bike rental vary across the two user groups (one-time users vs long-term subscribers) on different days of the week?

One time user og subscriber



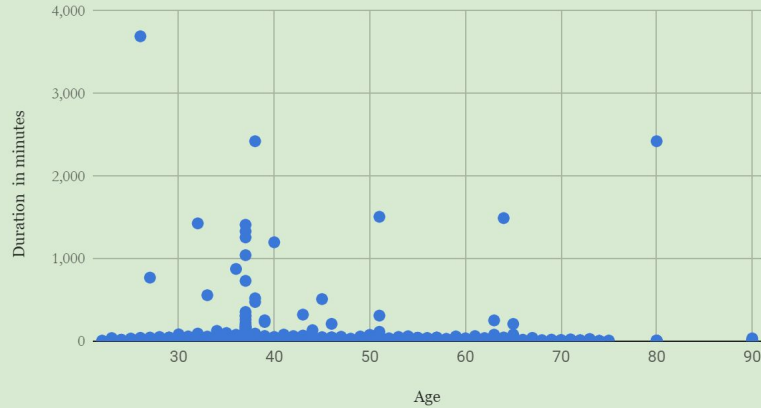
The vast majority of the users are regular subscribers.

One-time users are more likely to rent a bike during the weekend.

The subscriber user is more likely to use the bike during the weekdays, than in the weekend.

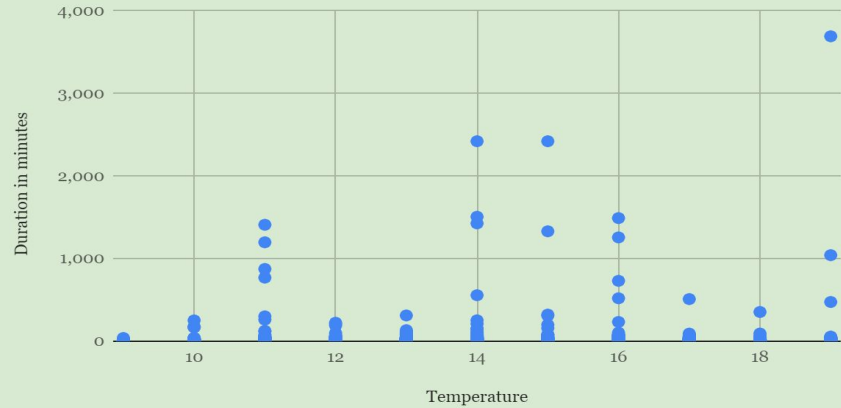
5. Do factors like weather and age impact the average bike trip duration?

Scatterplot age vs. temperature



There can be seen that the most of the trips are of short duration. So not correlation between age and duration. However, in the age bracket 35- 55 are the fleste long durations trips.

Corelation beteen duration and temeperature



The most of the trips are made when the temperature is between 14 and 16 degrees.

Summary

Summary of findings:

- **Top 5 pick-up locations for bikes:**

- *Grove St Path, Exchange Place, Sip Ave, Hamilton Park, & Morris Canal*

- **Customer base:**

- *Citi Bike's customer base consist mainly of subscriber users 98,1% and groupage 35-44 which represents 45,7% of the users.*

- **Citi Bike customer behavior:**

- *The longest trip on average is taken og the 75+ age group : 49 minutes, and the shortest of the 65-74 : 7 minutes.*

Actions & Recommendations

Recommended actions:

Product recommendations:

- *Install more bikes at Grove St Path, Exchange Place, Sip Ave, Hamilton Park, & Morris Canal.*

Marketing recommendations:

- *The Citi Bike customer base is mostly subscribers aged between 35-44, who are most active weekday. This tells us that they are probably people who live in New York and use Citi Bikes to commute. Marketing and advertising campaigns should therefore target this particular demographic.*

Thank you!