Citi Bike Data Analysis

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Project Goal:

- **To better understand the behavior of Citi Bike's customer base (one-time users and subscribers) and how they use Citi Bikes in New York City**

- **This will help us to:**

    - Identify where more bikes should be installed
    - Create targeted marketing campaigns that will appeal to different customer segments
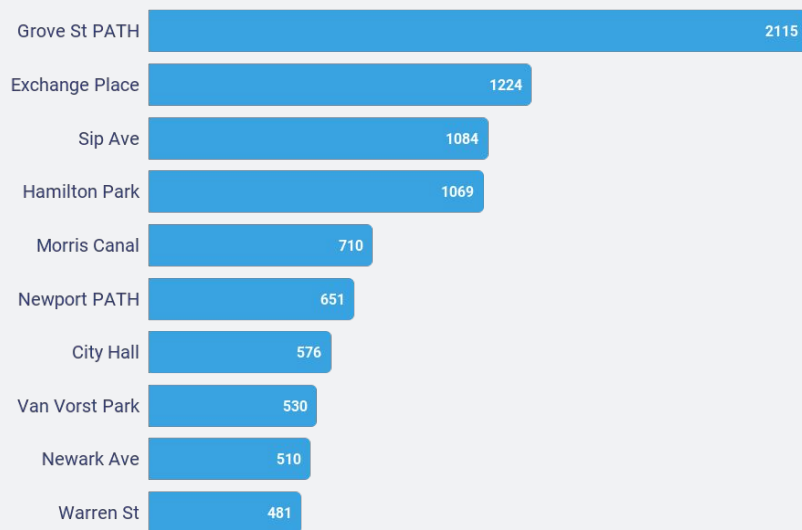
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Key questions:

1. What are the most popular pick-up locations across the city for Citi Bike rental?

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

3. Which age group rents the most bikes?

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

5. Does the factor of user age impact the average bike trip duration?

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Findings & Insights

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

Top 10 most popular pick-up stations from NY CitBikes

Station	Count
Grove St PATH	2115
Exchange Place	1224
Sip Ave	1084
Hamilton Park	1069
Morris Canal	710
Newport PATH	651
City Hall	576
Van Vorst Park	530
Newark Ave	510
Warren St	481

*Grove St Path, Exchange Place, Sip Ave, Hamilton Park, & Morris Canal are the **most popular** pick-up locations.*

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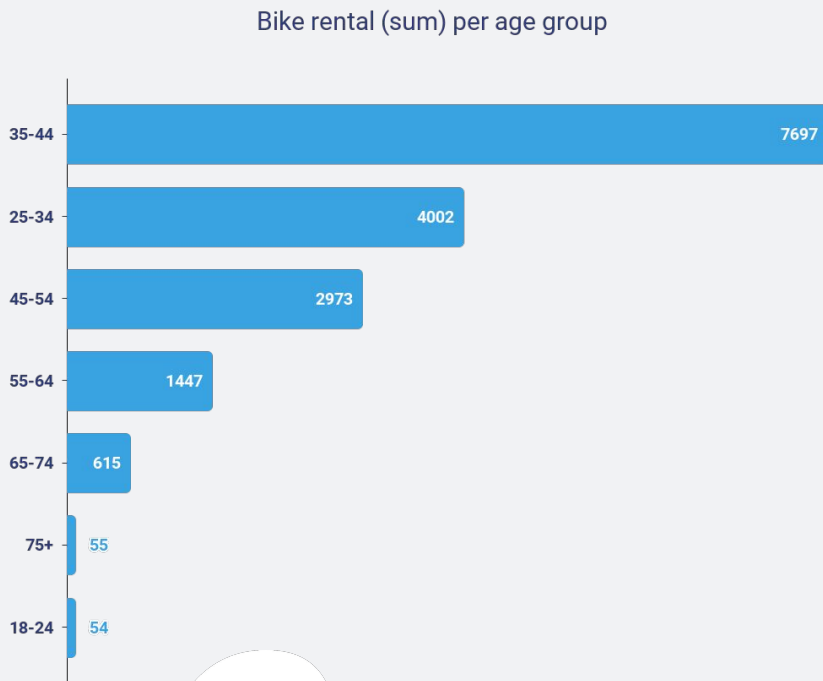# 2. How does the average **trip duration** vary across different **age** groups?

Average trip duration (min) per age group
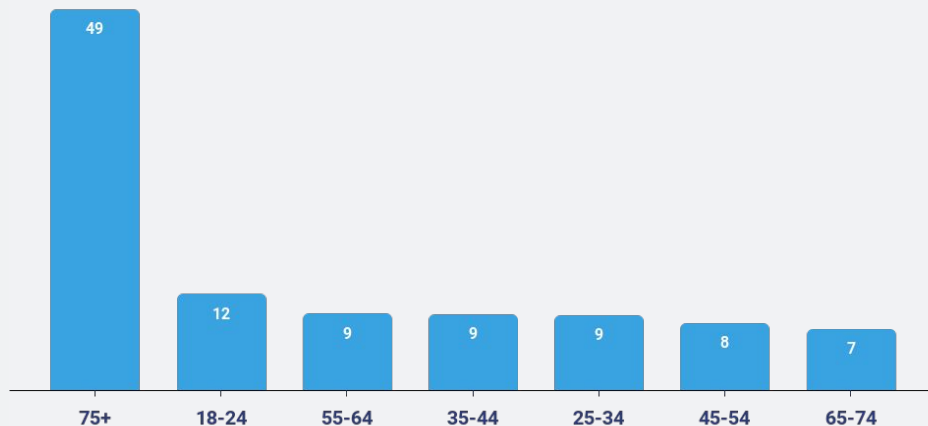
*75+ year olds take the **longest trips** (on average)*

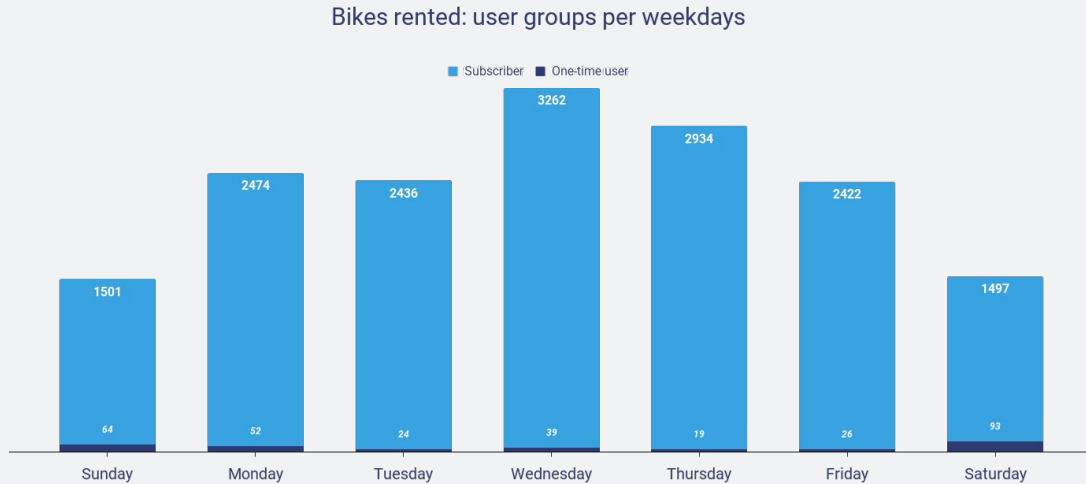*65-74 and 45-54 year olds take the **shortest trips** (on average)*

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3. Which age group rents the most bikes?

Bike rental (sum) per age group

Age group	Value
35-44	7697
25-34	4002
45-54	2973
55-64	1447
65-74	615
75+	55
18-24	54

35-44 year olds rent the ***most bikes***

75+ and 18-24 year olds rent the ***least bikes***

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4. How does **bike rental** vary across the two **user groups** on different days of the **week**?

Bikes rented: user groups per weekdays

■ Subscriber ■ One-time user

| Day	Subscriber	One-time user
Sunday	1501	64
Monday	2474	52
Tuesday	2436	24
Wednesday	3262	39
Thursday	2934	19
Friday	2422	26
Saturday	1497	93

Citi Bike customer base is predominantly made up of long-term subscribers

Subscribers are more active during the week

One-time users are more active on weekends

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5. Does **user age** impact the average **bike trip** duration?

Corralation: age / trip duration
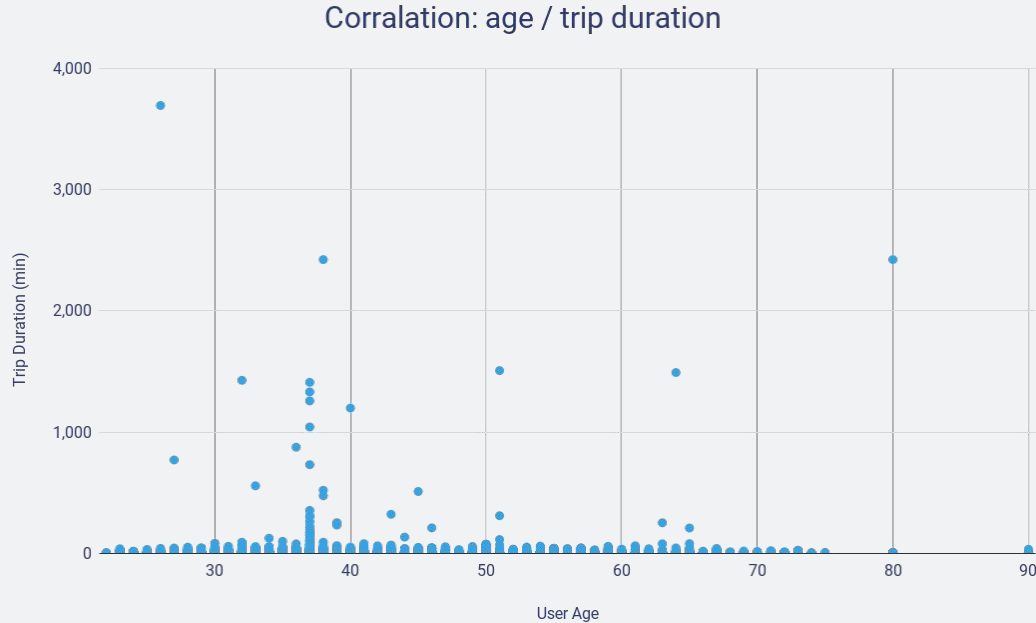
*No relationship was found between **user age** and **trip duration***

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Summary

Summary of findings:

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

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

- **Customer base:**

  - Mostly long-term subscribers who are more active during the week
  - One-time users more active at weekends
  - Most bikes rented by 35-44 year olds

- **Citi Bike customer behavior:**

  - 75+ year olds take longest average trips, but rent the least bikes
  - 65-74 and 25-34 year olds take the shortest trips on average

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Actions & Recommendations

Recommended actions:

- **Product recommendations:**
  - Install more bikes at Grove St Path, Sip Ave, Newport Path, Newark Ave, Van Vorst Park.

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

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Thank you!