Citi Bike Data Analysis

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Project Goal & Key Questions

Goal

To understand Citi Bike customer behavior (one-time users vs. subscribers) and usage patterns. This helps identify optimal bike placement and create targeted marketing campaigns.

Key Questions

- Most popular pick-up locations?

- Average trip duration by age group?

- Which age group rents most bikes?

- Rental variation between user groups on different days?

- Does age impact average trip duration?
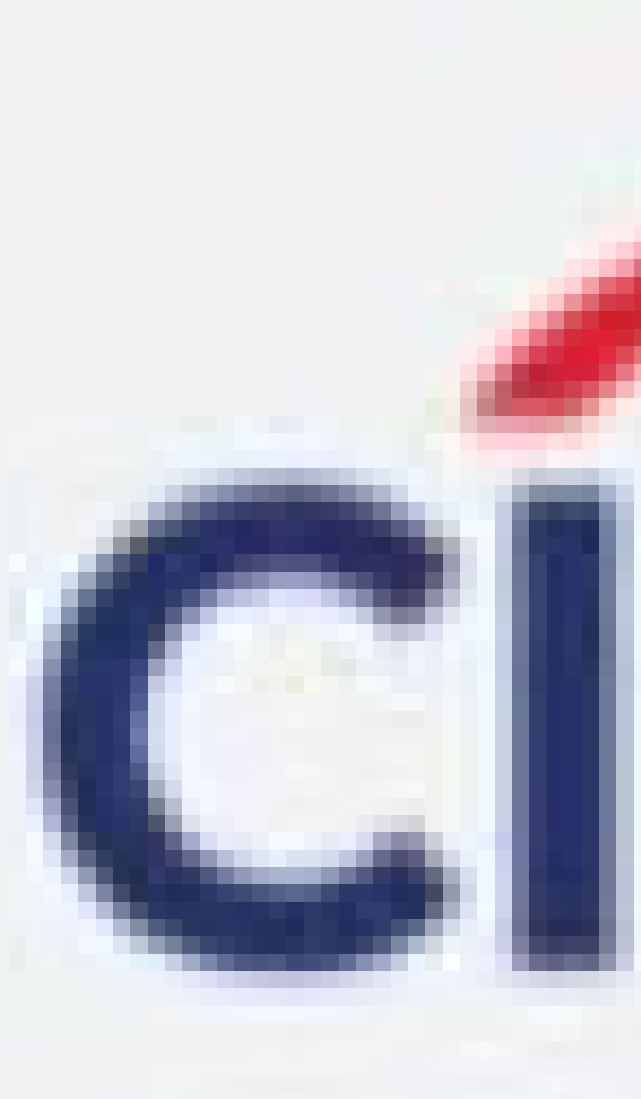
Findings & Insights

Dive into the data to uncover key patterns and behaviors of Citi Bike users.
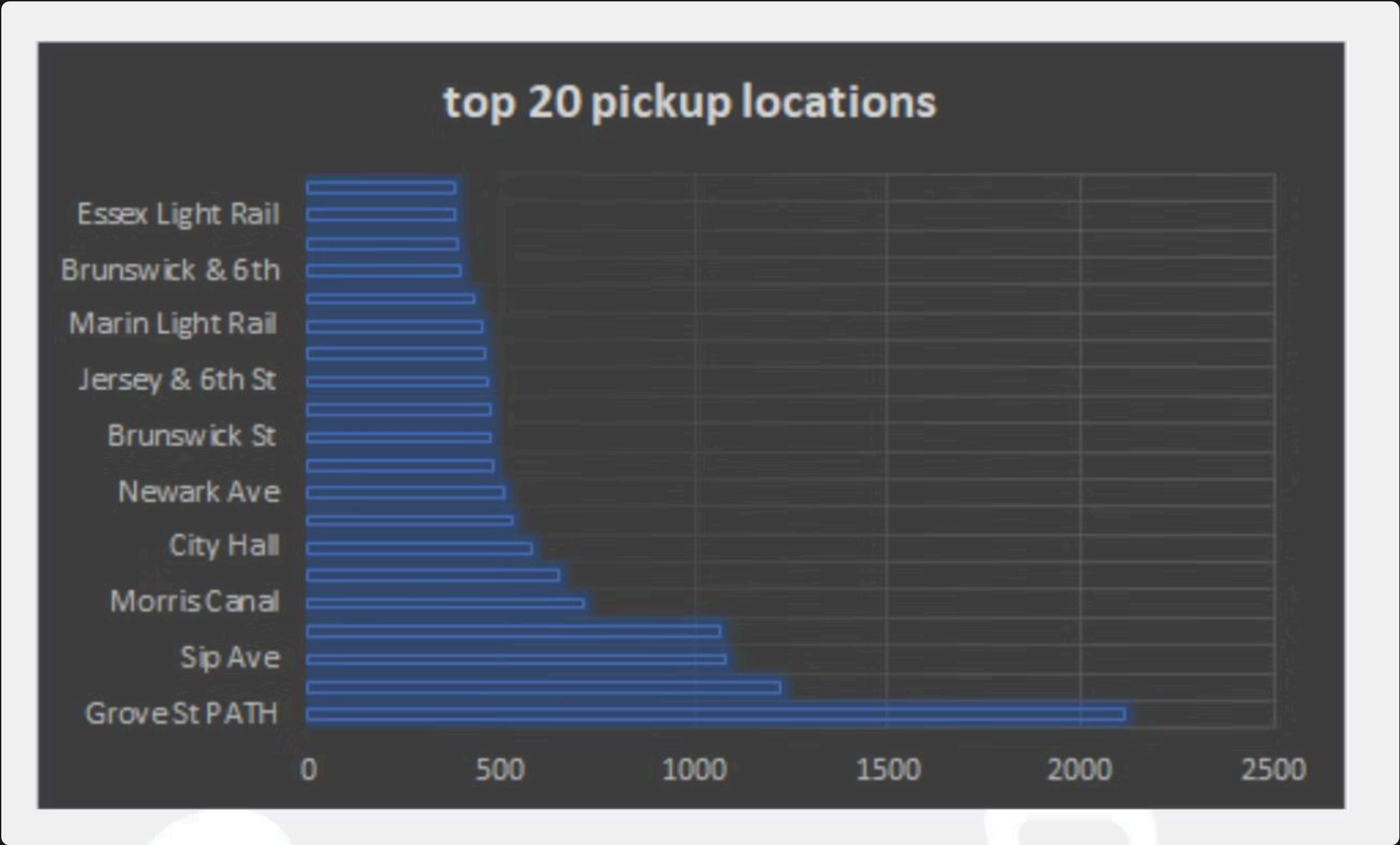
Top Pick-Up Locations

Grove St Path	Exchange Place	Sip Ave

Hamilton Park	Morris Canal

These locations are the most frequented starting points for Citi Bike rentals, indicating high demand in these areas.
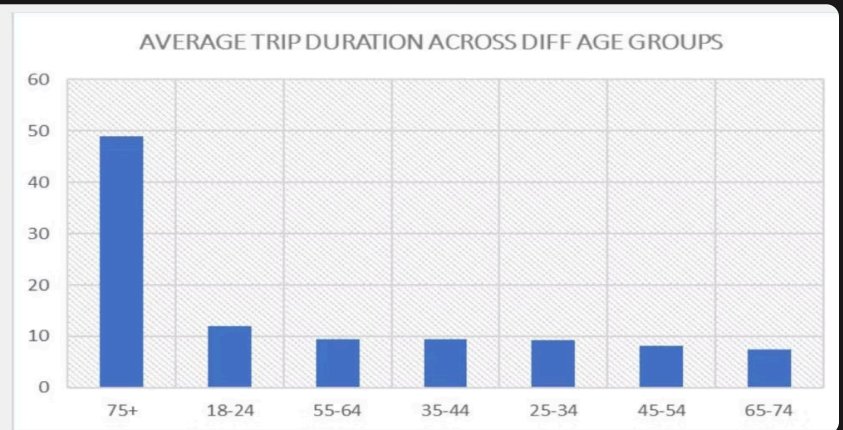

top 20 pickup locations
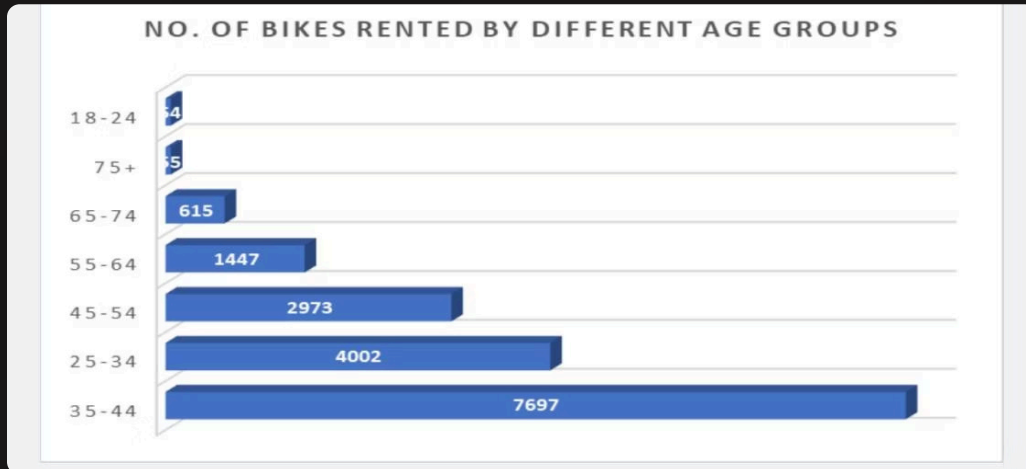
Trip Duration by Age Group

Seniors (75+) take the longest trips (approx. 49 mins), while middle-aged commuters (45-74) have the shortest (approx. 7-9 mins).

- Introduce senior-friendly long ride passes.

- Offer commuters focused short-ride packages.

- Run age-targeted marketing campaigns: leisure for seniors, speed & savings for commuters.

groups?

AVERAGE TRIP DURATION ACROSS DIFF AGE GROUPS

Age Group with Most Rentals

NO. OF BIKES RENTED BY DIFFERENT AGE GROUPS

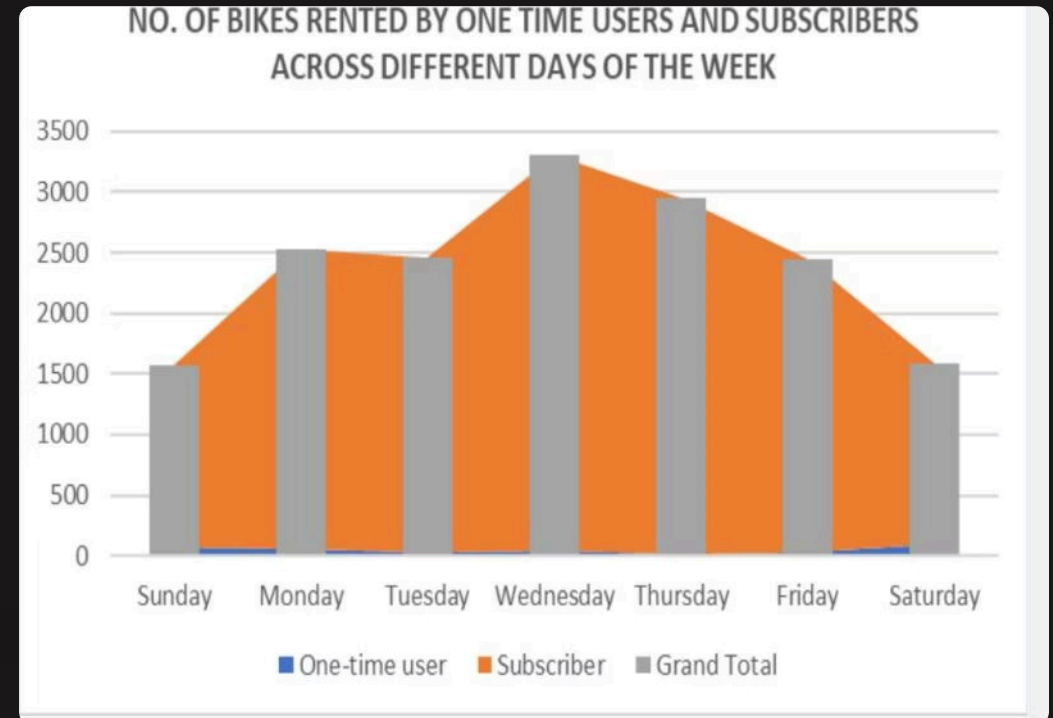| Age Group	No. of Bikes
18-24	54
75+	65
65-74	615
55-64	1447
45-54	2973
25-34	4002
35-44	7697

The 25-44 age segment rents the most bikes, making them the heaviest users.

- **Focus growth strategies on the 25–44 segment.**
- **Design commuter-friendly offers and marketing for this core group.**
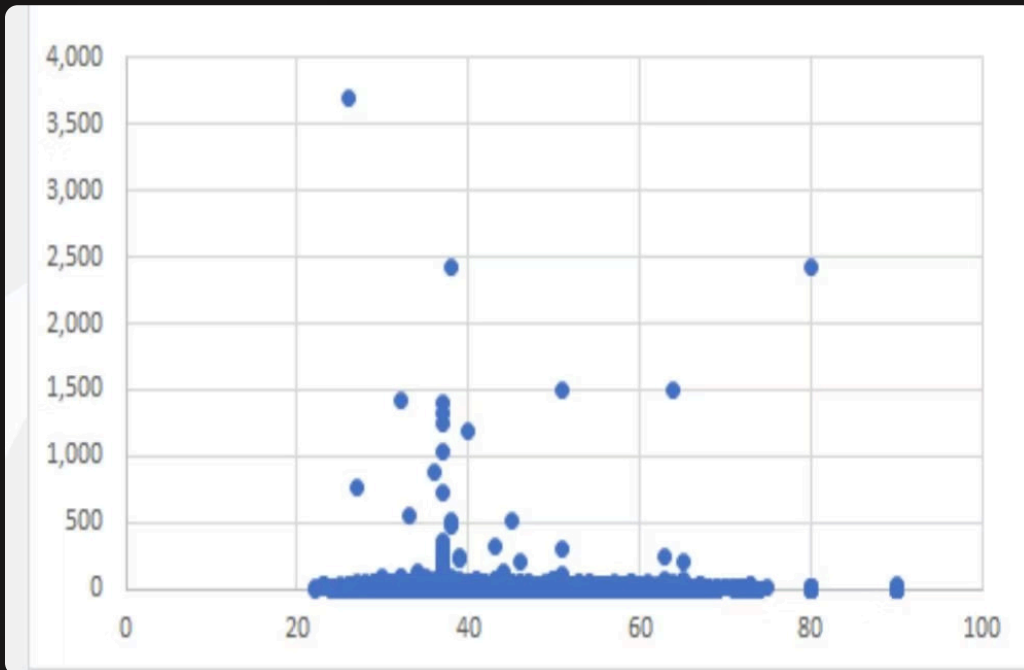- Explore niche campaigns for 18–24 (students) and 65+ (seniors).

Rental Variation: User Groups & Days

Subscribers are most active on weekdays, likely for commuting. One-time users primarily appear on weekends, indicating leisure use.

- **Focus subscriber retention on weekdays with commuter perks.**

- **Promote casual/day-pass offers on weekends for leisure riders.**

- **Run targeted weekend campaigns (tourist zones, parks, events) to grow one-time users.**

NO. OF BIKES RENTED BY ONE TIME USERS AND SUBSCRIBERS ACROSS DIFFERENT DAYS OF THE WEEK

Legend: One-time user, Subscriber, Grand Total

Impact of Age on Trip Duration

Age significantly impacts trip duration. Seniors (75+) have consistently longer trips, while 25-60 year olds dominate short-duration rides.

- **Design long-ride options for seniors (75+).**
- **Maintain short-trip commuter plans for 25–60 riders.**
- Monitor extreme outlier rides (500+ mins) for errors or misuse.

Made with GAMMA

Summary of Findings

- **Top 5 pick-up locations:** Grove St Path, Exchange Place, Sip Ave, Hamilton Park, & Morris Canal.

- **Customer base:** Dominated by working-age subscribers (25–44) for short, commuter trips. Seniors (75+) ride for leisure with longer durations. One-time users are mainly weekend leisure riders.

- **Customer behavior:** Seniors 75+ take the longest trips ($\approx$49 mins), while middle-aged commuters (45–74) record the shortest ($\approx$7–9 mins).

Actions & Recommendations

Product Recommendations

- Install more bikes at the top 10 most popular pick-up locations.

Marketing Recommendations

Focus marketing on young working professionals (25–44) with commuter-friendly offers and messaging, as they are the primary subscriber base and most active on weekdays.

Thank you!