

2023 Jersey City Citi Bike Data Analysis

CITIBIKE

Annual Membership	205.00
2-Day Pass*	19.00
Single Ride	4.79
Reduced Fare	5.00

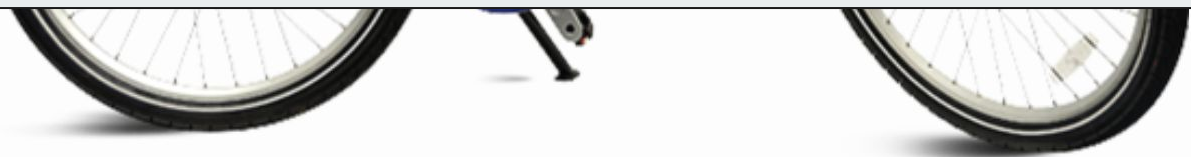
*Price per day



Presented by Wendy Romero

What are the differences between casual riders and annual members?

The purpose of this data analysis is to find the differences between Jersey City Citi Bike casual riders and annual members in 2023. Though users can purchase single rides, 2-day passes and annual memberships, as of 2023 single riders and 2-day pass users have been combined and labeled as **casual** riders in the data. Paying attention to the differences between casual riders and annual members can hopefully give insight into how to go about marketing to casual users, as it may be more profitable for users to be annual members than casual riders.





1

Types of Visualizations: Pie Charts, Bar Charts, Line Plots, Heat Maps.

3

Data Cleaning: making sure all columns and data types matched in the 2023 monthly datasets before merging them, removing columns with irrelevant data.

2

Python libraries: Pandas, Matplotlib, Seaborn, and Numpy.

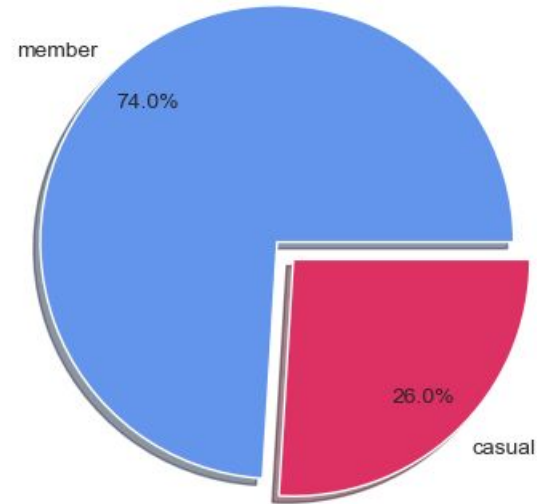
4

Data Transformations: Merging 2023 month datasets into one 2023 year dataset, renaming columns, creating new data frames,

Data Source

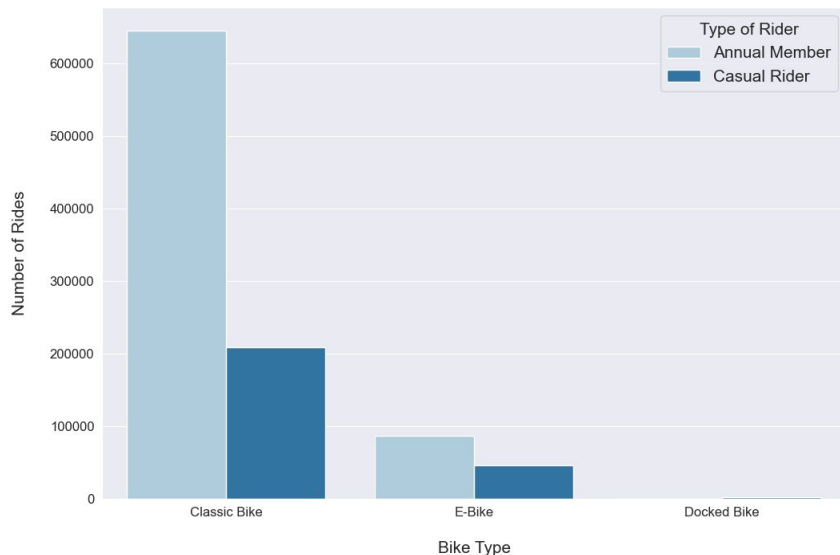
- The Citi Bike Trip Data was found at: <https://citibikenyc.com/system-data>
- This dataset includes information on Jersey City and Hoboken area trips start and end stations, start and end times, start and end latitudes and longitudes, as well as whether trips were taken by casual riders or annual members.
- The (merged) dataset contains 988,8851 rows and 13 columns

Number of Citibike Annual Members vs Casual Riders

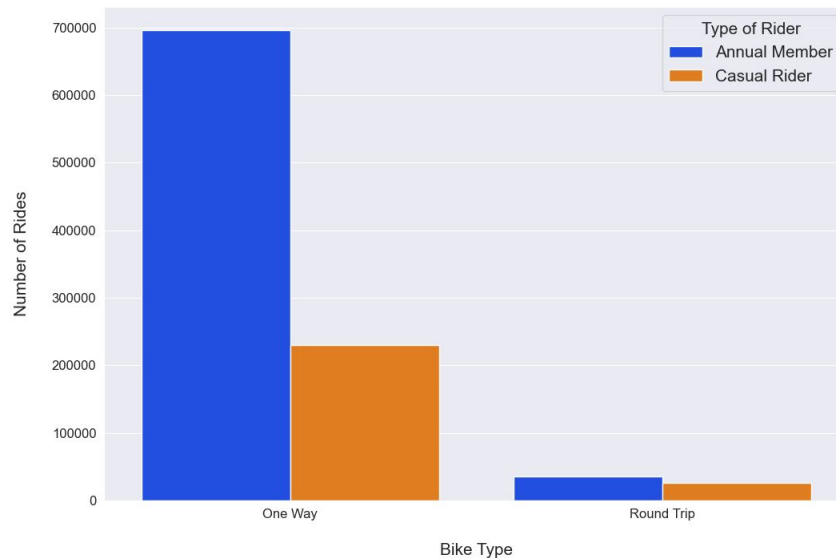


Ride Preferences in 2023

2023 Bike Type Preference Casual Riders vs Annual Members



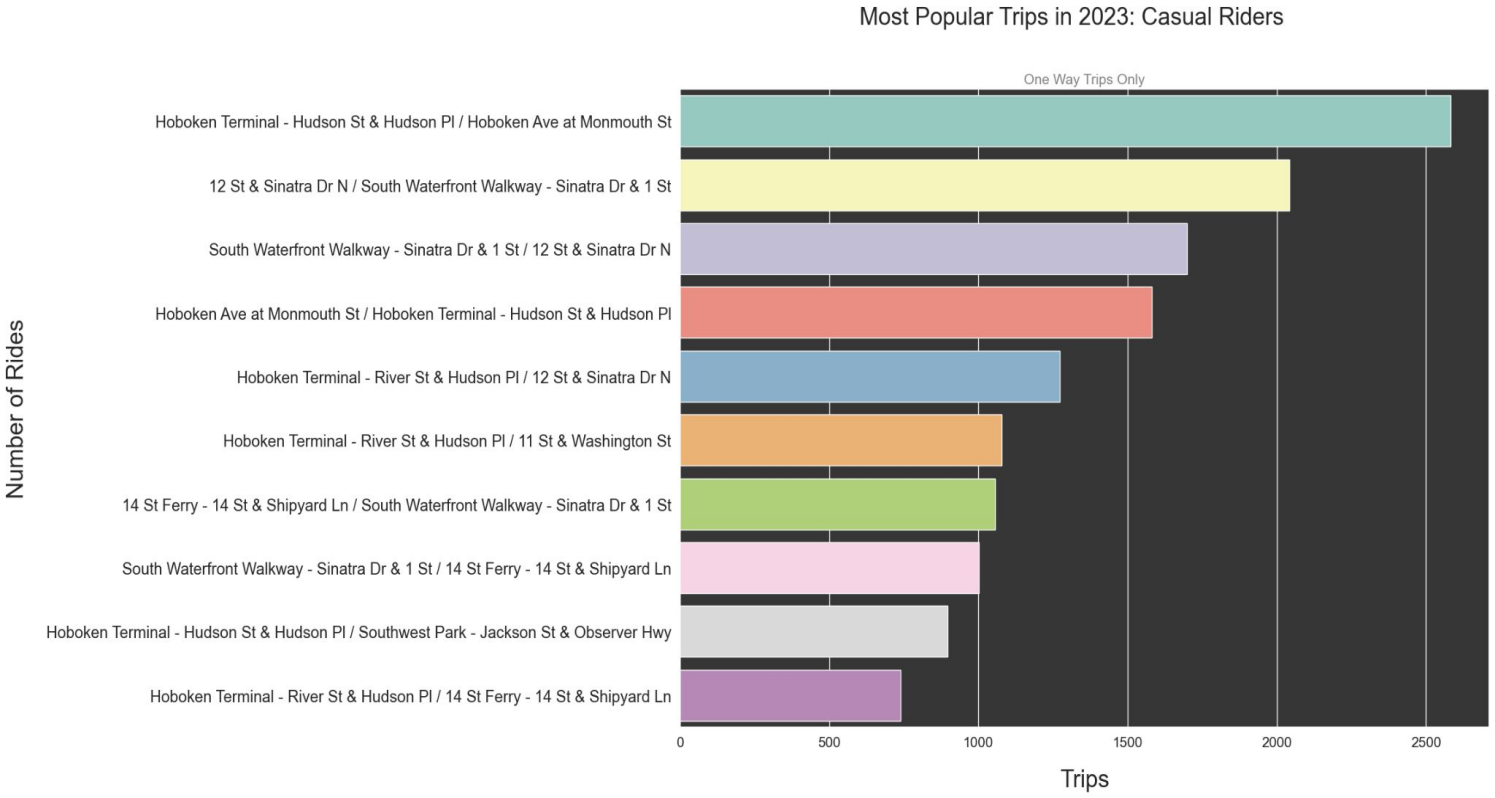
One Way vs Round Trip Rides Citibike in 2023



In 2023 most rides, both by casual riders and annual members were one way rides, and most were on classic bikes rather than ebikes.

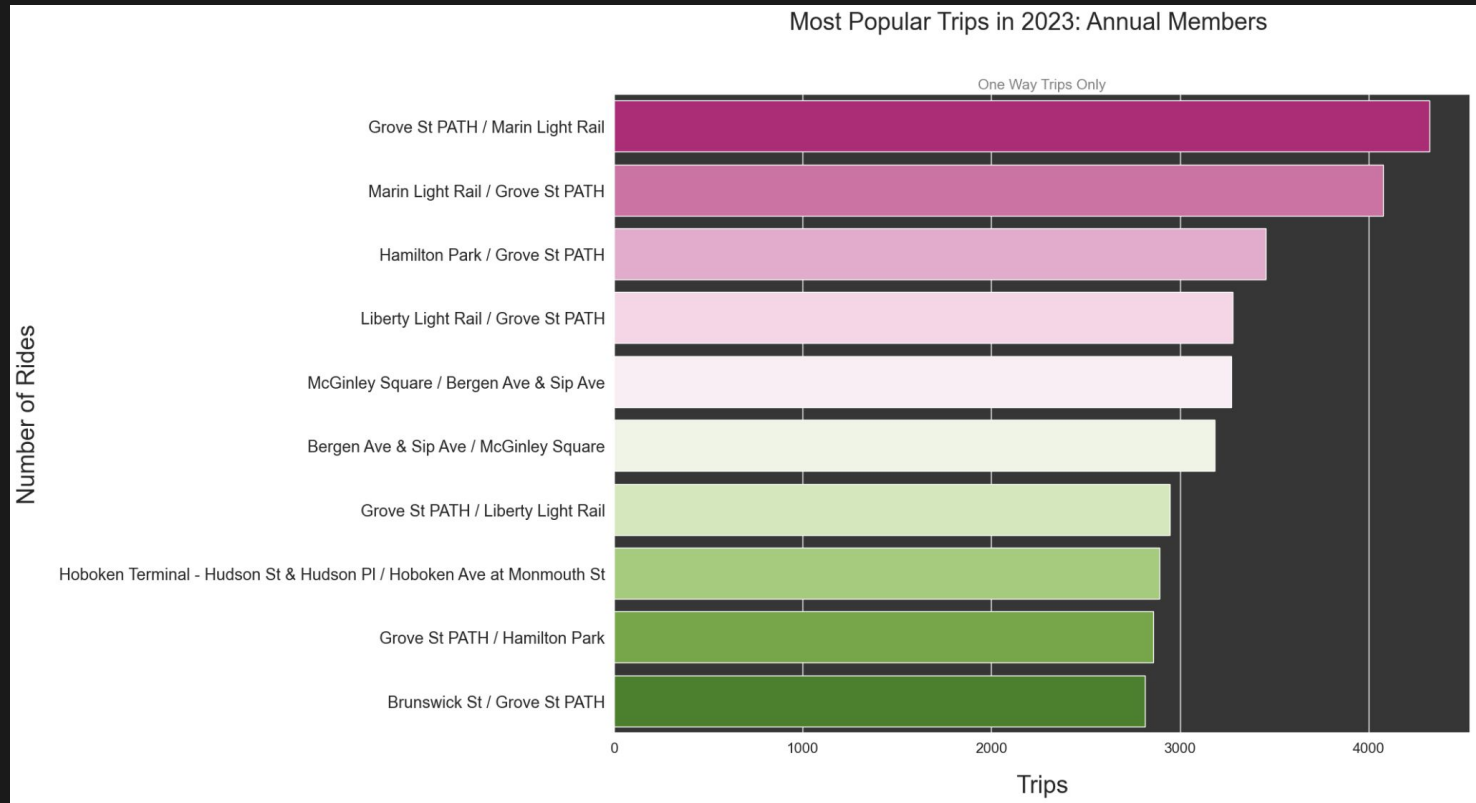
Top Ten Trips in 2023: Casual Riders

The most popular one-way trips for casual riders in 2023 began and ended in Hoboken.



Top Ten Trips in 2023: Annual Members

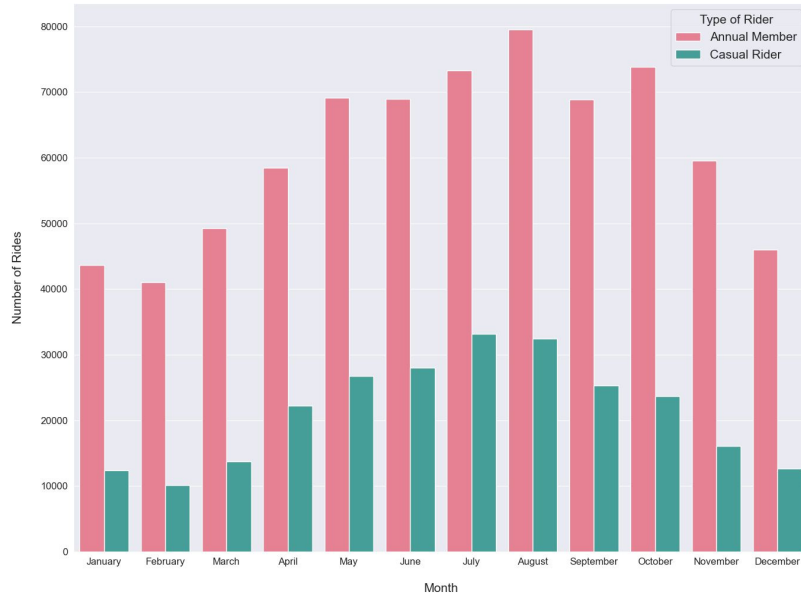
The most popular one-way trips for annual members in 2023 began and ended in Jersey City.



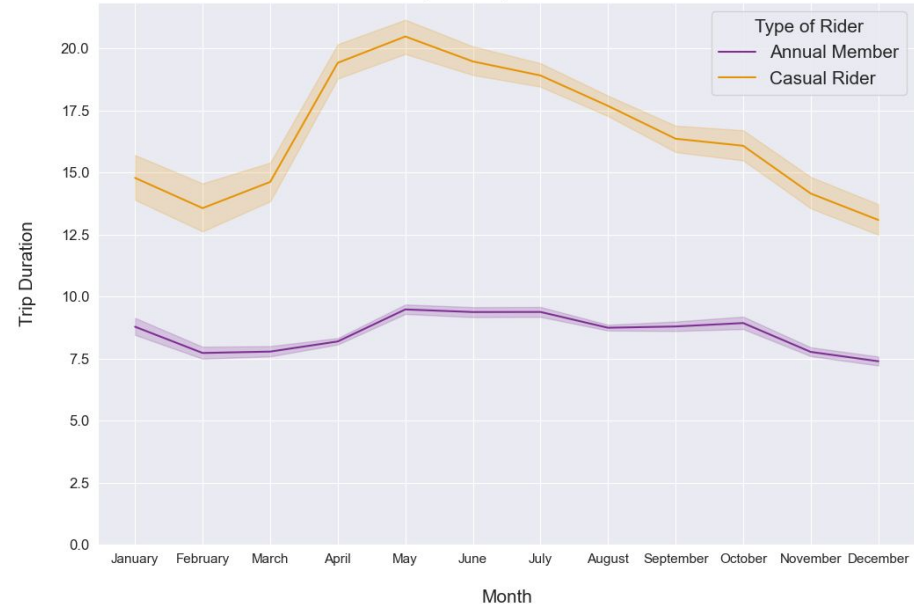
Trips by Month

The most popular months for trips amongst Casual Riders are July, August and June. The most popular days for annual riders are August, October and July. Casual riders take longer trips in May, June and July. Annual members take longer trips in April, May and June.

2023 Months By Ride Popularity Casual Riders vs Annual Members



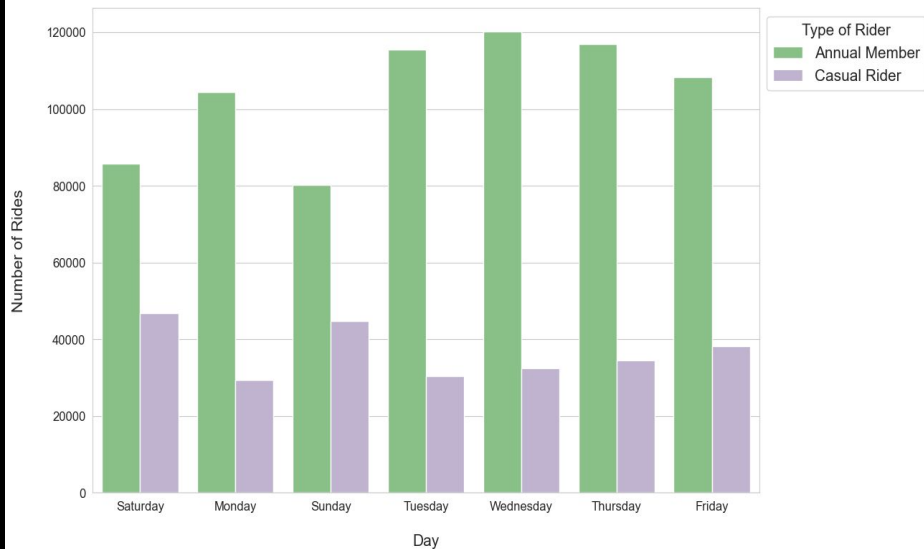
Trip Duration by Month in 2023



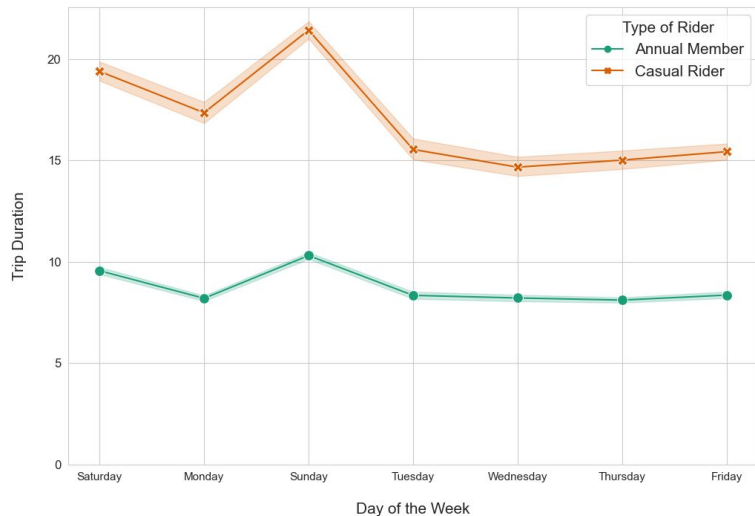
Trips by Day of the Week

The most popular days for trips amongst Casual Riders are Saturday and Sunday. The most popular days for annual riders are Wednesday and Thursday. Both casual riders and annual members take longer trips over the weekend.

2023 Day of the Week By Ride Popularity, Casual Riders vs Annual Members



Trip Duration by Day of the Week in 2023



Conclusions

- We can conclude that annual members took more rides in 2023, in part due to being a large majority of the users of citi bikes in 2023.
- However, casual members consistently took longer rides than casual members.
- Both casual riders and annual members preferred to take one-way trips, and ride classic bikes .
- And the top one-way trips amongst casual riders were trips starting and ending in Hoboken.
- While the top one-way trips amongst annual members were trips starting at and ending at stations in Jersey City.





Suggestions

- Since most of the top trips being taken by casual riders are starting and ending in Hoboken, it may be worthwhile to increase marketing to Hoboken residents. And to continue adding Citi Bike stations in Hoboken
- Casual riders reach peak activity in the early summer months, and thus the summer months are a great time to increase marketing to casual riders when they are most frequently using Citi Bikes.

Jersey City

53

stations

Hoboken

29

stations

Thank you.

