

Analysis of CitiBike Usage in Jersey City (June 2023 to August 2023)

Overview

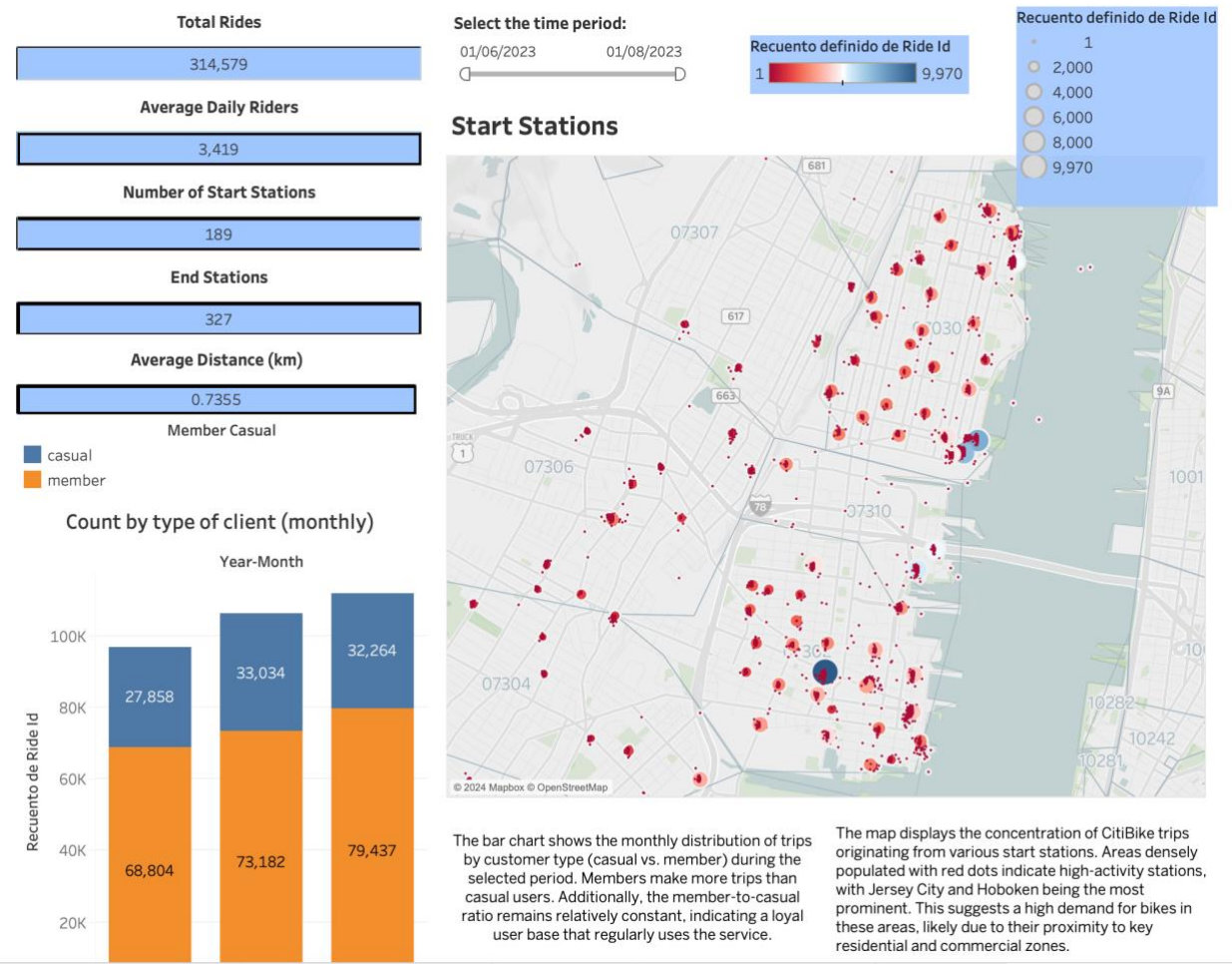
This analysis presents an in-depth look at CitiBike usage in Jersey City from June 2023 to August 2023. The dashboards and visualizations provide insights into ride patterns, user demographics, and station usage.

Dashboards and Visualizations

Summary Data

Overview of CitiBike Usage: This dashboard showcases key metrics such as total rides, average daily rides, number of start and end stations, and average distance traveled. The map visualizes start station distribution, indicating high and low usage areas.

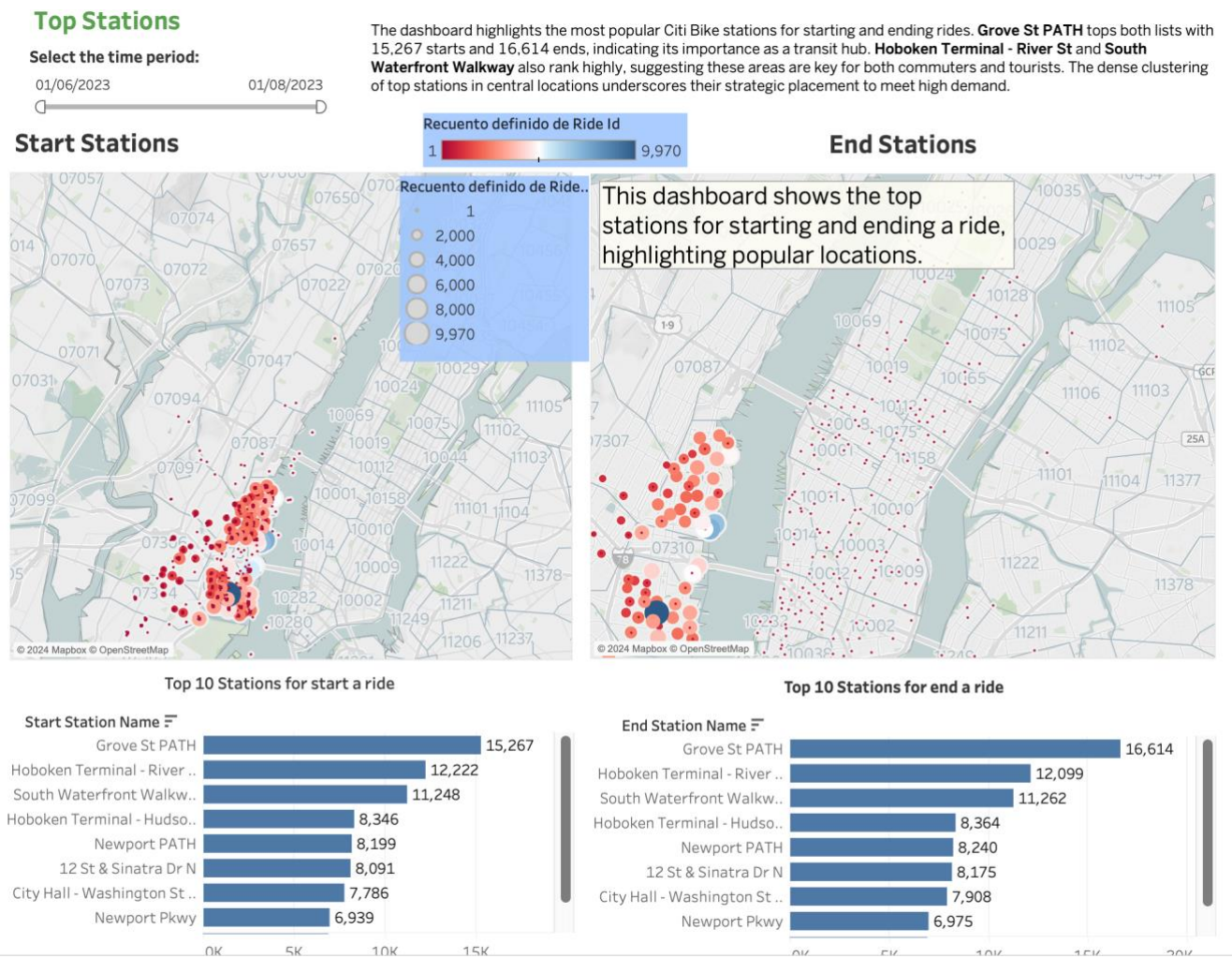
Key Insights: The summary data reveals significant usage of CitiBike with a high concentration of start stations in central locations.



Top Start and End Stations

Top Start and End Stations: The bar charts highlight the top 10 stations for starting and ending rides. Grove St PATH leads in both categories, signifying its importance as a transit hub.

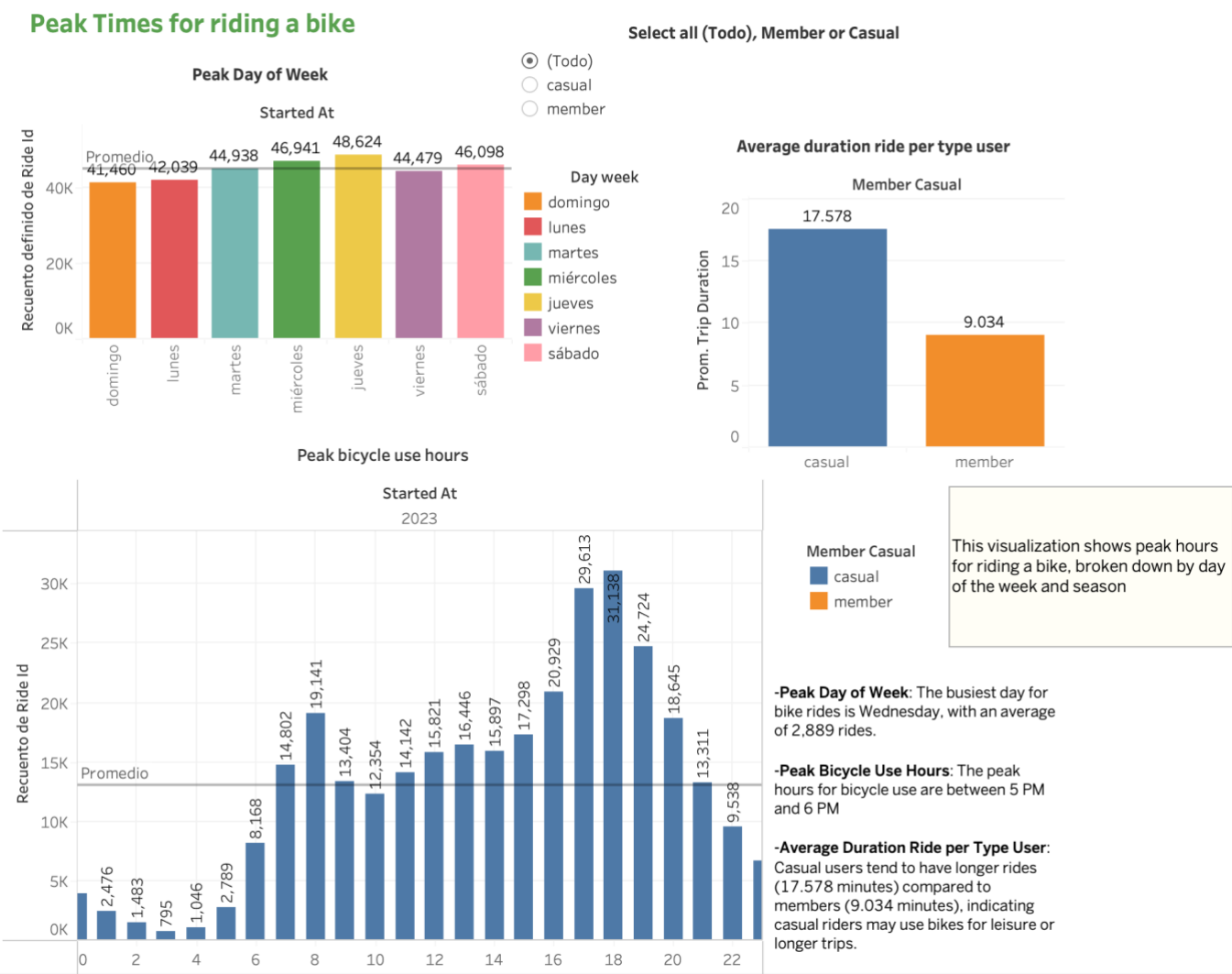
Maps: Maps provide a visual representation of the most popular start and end stations, illustrating strategic placement to meet high demand.



Peak Riding Times

Peak Day of Week and Hours: The visualizations show peak riding times, with the highest activity on Wednesdays and during evening hours, reflecting commuting patterns.

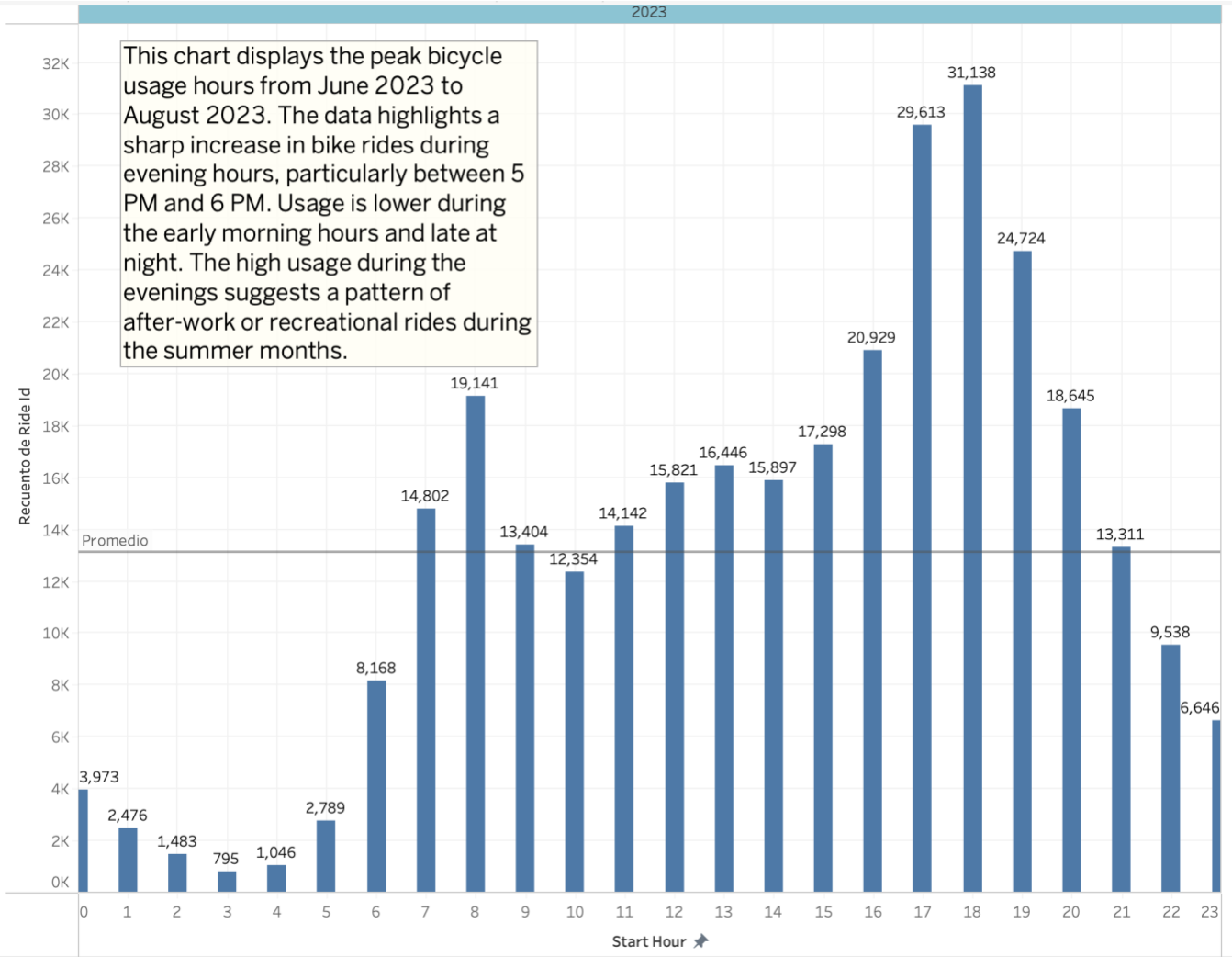
User Insights: The data suggests a strong correlation between bike usage and commuting hours, indicating CitiBike's role in daily commutes.



Peak Bicycle Use Hours

Seasonal Peak Hours: This heatmap displays bike usage by hour and season, with a noticeable peak in summer evenings.

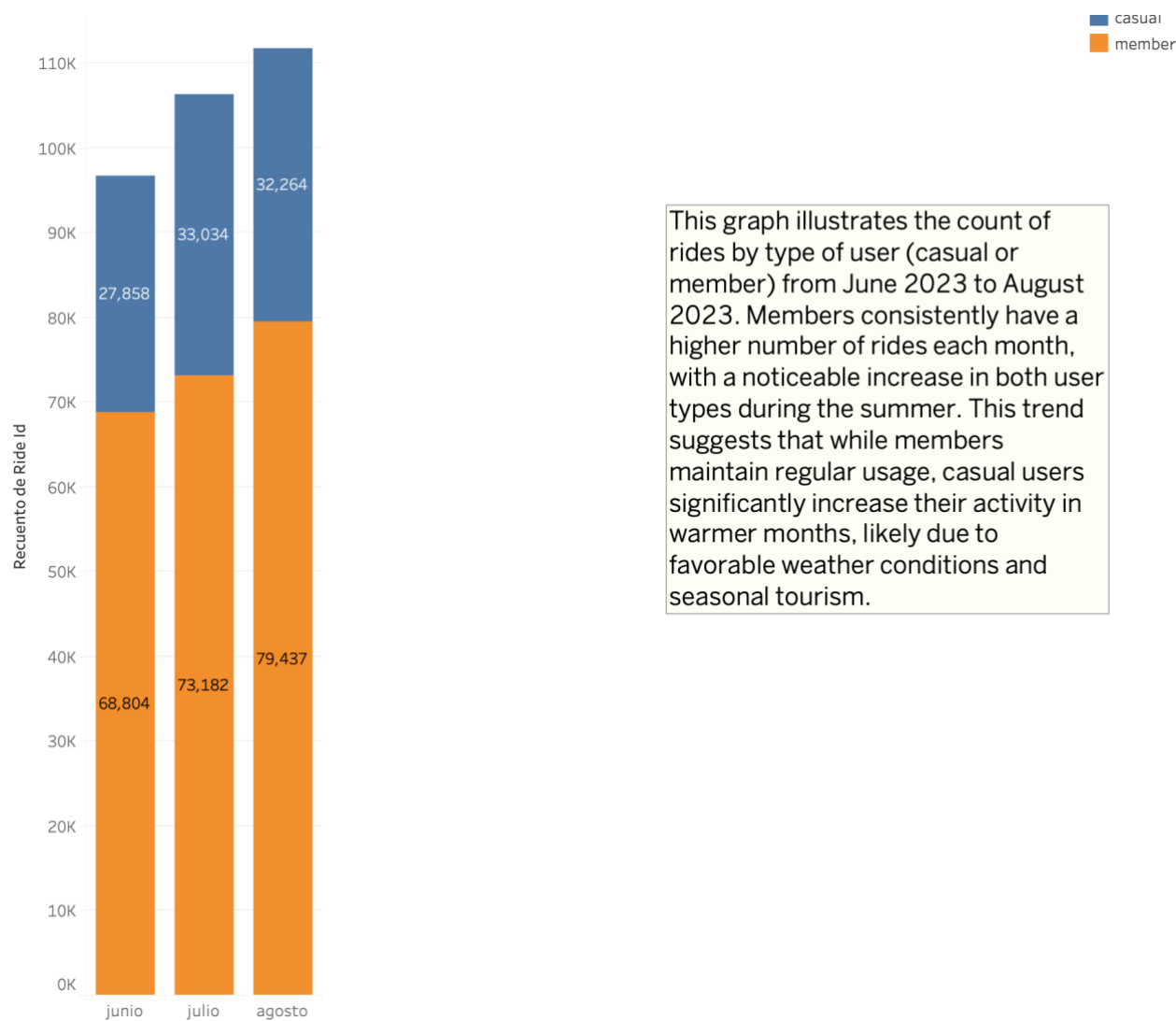
Detailed View: The bar chart further breaks down usage during summer, highlighting high activity between 5 PM and 6 PM.



Casuals and Members Usage Count

User Type Analysis: The stacked bar chart illustrates monthly rides by casual and member users, showing higher member usage and increased casual rides in summer.

Trend Analysis: Members maintain consistent usage, while casual usage spikes in warmer months due to favorable weather and tourism.

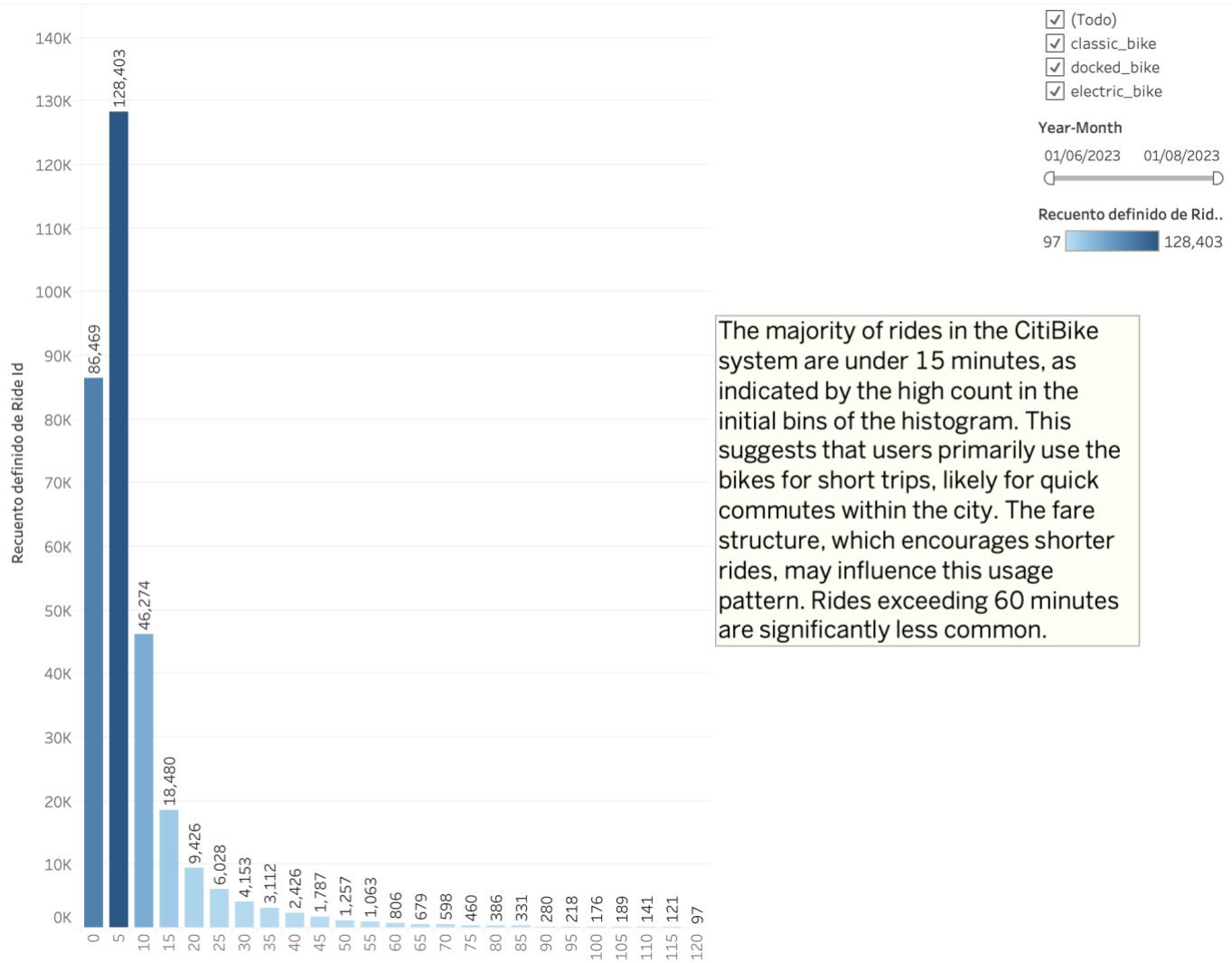


This graph illustrates the count of rides by type of user (casual or member) from June 2023 to August 2023. Members consistently have a higher number of rides each month, with a noticeable increase in both user types during the summer. This trend suggests that while members maintain regular usage, casual users significantly increase their activity in warmer months, likely due to favorable weather conditions and seasonal tourism.

Histogram of Ride Durations

Ride Duration Histogram: The histogram shows most rides are under 15 minutes, suggesting short trips, likely for quick commutes.

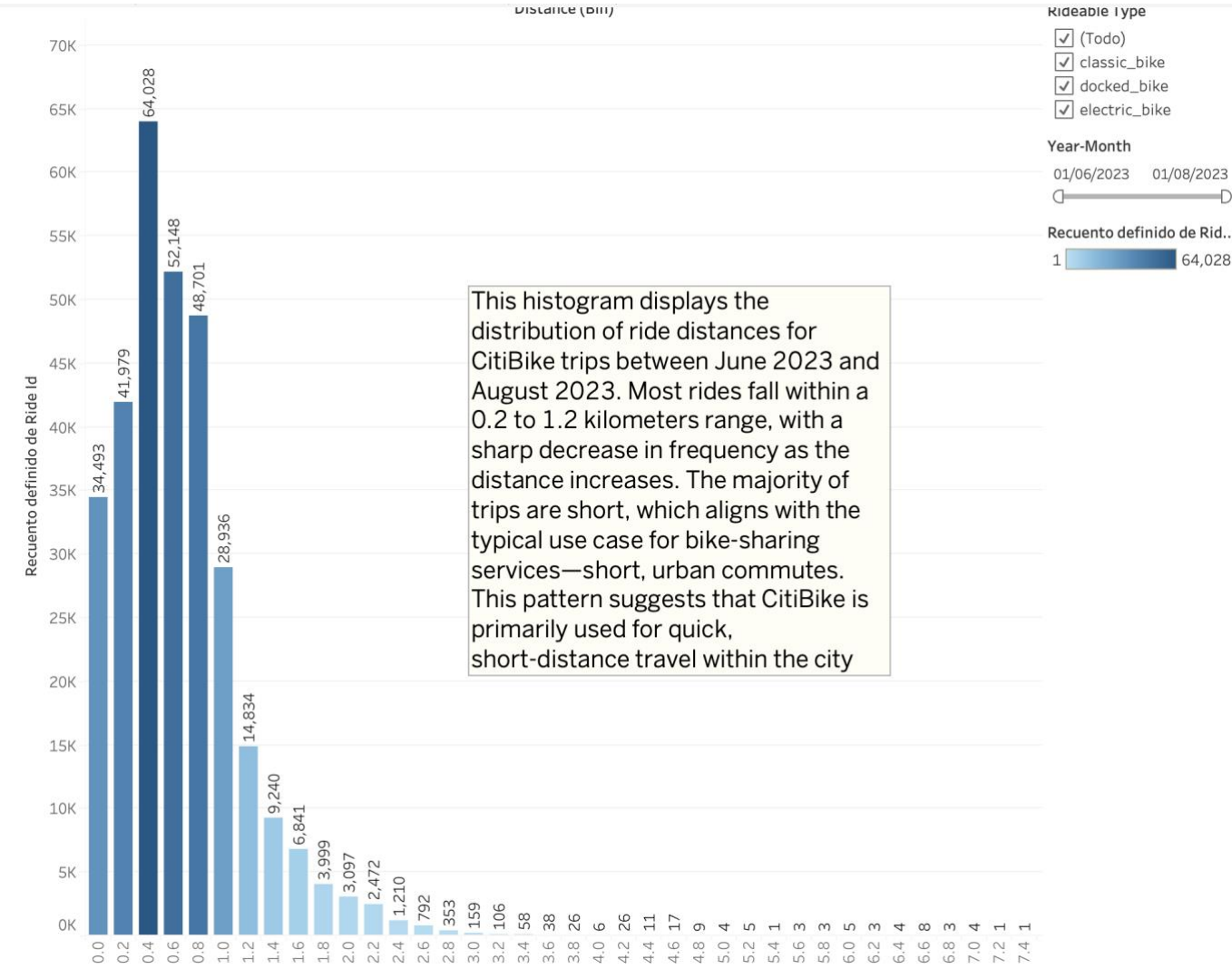
Usage Pattern: The fare structure promoting shorter rides influences this pattern, with rides over 60 minutes being rare.



Histogram of Ride Distances

Ride Distance Histogram: This histogram displays the distribution of ride distances, with most rides between 0.2 to 1.2 kilometers, aligning with short urban commutes.

Distance Insights: The pattern indicates CitiBike's primary use for short, intra-city travel.



Interesting Data Discoveries

- *Peak Usage Times:* High activity during commuting hours underscores CitiBike's role in daily transportation.
- *Short Trip Durations:* Predominantly short trips align with the bike-sharing service's intended use.
- *Station Popularity:* Key stations like Grove St PATH are central to transit, reflecting high usage.

Trends and Patterns

- *Commuting Patterns:* Peak usage in mornings and evenings highlights CitiBike as a preferred commuting option.
- *Membership Impact:* Higher member rides indicate a reliable user base, while casual users spike during summer.