

For this project, I decided to look at the Jersey City side of the NYC Citi Bike program. As with most things New York, New Jersey typically gets often overlooked. Besides, seeing that is a smaller dataset, it is easier to manipulate and process in Tableau Public.

The phenomena I was interested in was the differing use of the Citi bikes in Jersey City based on the season, i.e. spring, summer, fall and winter. The effect that these seasons had on the type of bike choose and the distance/MPH that the different bikes were ridden.

For this analysis, I choose 3 specific months from 2021 (June, September, and December) and 1 from 2022 (March) to get the most recent data. To get the data I was looking to visualize, I first needed to combine and clean the data in Excel. The 4 months were downloaded as csv files and then combined into a single Excel workbook. To get accurate data, I needed to create columns that would allow filtering. I created additional columns that represented the distance that bikes traveled (when they were dropped at different stations) as well as an MPH column based on distance traveled/duration. Data on bikes that were not returned to a station had to also be filtered out since they had no end station data.

In the Tableau story, the first item in the story is a map of the Jersey City stations with a count of total rides for the 4 months of data. The locations are represented in color and by size for comparison. The higher ridership is definitely present along the shoreline and closer to the bridge across the Hudson River, indicating travel to the New York City side of the river.

The second dashboard, Jersey City Stations Overview, consists of a count of total rides by the JC stations, using their starting location. In a side-by-side comparison, the comparison chart on the first dashboard is the average miles ridden by bike type. The interesting detail of this comparison is the top ride count stations do not make the top 10 for average miles ridden by either type of bike.

The third and fourth dashboards are a comparison of Warm weather and cooler weather months. Note the lower proportion of rides out of the port stations in Hoboken during the cooler seasons. I suspect this is due to business commuters taking a bike when the weather permits, choosing an alternative source during the cold.

The 5th dashboard is a bar chart of each seasonal month showing the riders by type and station. The data shows that warmer months ridership was increased along the South Waterfront Walkway. This indicates more leisurely intent, as compared to the cooler months. Additionally, the number of riders using the Hoboken Terminal stations are the busiest for either bike type.

The next dashboard is a single chart comparing the user type with the type of bike ridden. The interesting fact from this is the members utilize a classic bike at a much higher percentage then the casual rider. This could indicate a higher fitness level or desire for a ride of enjoyment more than purpose.

The final dashboard has 2 visuals on it. The top visual shows the MPH of each type of bike. The interesting part of this chart is 2-fold: the riders go faster in the cooler months and that the delta between the 2 types increases as well. Meaning, the electric bike goes even faster in cooler weather. Contrast the speed increase to the distance decrease that is represented in the bottom visual.

Overall, the data indicates possible improvements considerations:

- Increase the number of electric bike availability during the colder weather months
- Validate safety considerations due to the increased speed of the electric bikes to ensure proper training
- Market the fitness aspects of the classic bike to the casual riders to increase membership
- Determine if a program specifically geared to the business commuters crossing the Hoboken Terminals would be appropriate.