

Data set comes from three different csv files, each containing a single month on citibike information located in the NYC and New Jersey area: May, June, and July 2021 are the months in the three csv's.

### **Trend 1 “ Where are the top ten end and start stations and why”**

At first glance the End and Start stations are evenly distributed throughout, but out of the end and start stations that are on the map, the top ten stations by casual and member for each category are all in the New Jersey area.

To answer the question of why this is, it was necessary to look closer at how all of the start and end stations are distributed in the data. Once the data was put to the map, it was clear to me why all top ten stations by member and casual where in New Jersey. It is because all start station are located in New Jersey. Out of the distinct 76 start stations they all lay in the New Jersey area. This means that all members and casual costumers in the data set had to start in new Jersey, therefore this is why the numbers are higher per station in New Jersey opposed to NYC. New Jersey not only has all of the start stations but many rides end in New Jersey as well. But in NYC all stations are end stations in the data set.

Data set shows that 100 percent of all start stations are in the new jersey area. The data derived does not have ample information to explain why this is, so further data collection will be necessary to answer the question of why 100% of start stations are in New Jersey in the months May, June, and July 2021.

### **Trend 2 “Most popular bike by casual and member and start and end date”**

When plotting start date and end date by month against bike type and rider id, it was found that all bikes are showing to be docked in the month of May.

It is not clear why this is. Further data collection and analysis is required to answer this question.

After May there is a big spike in bike usage as shown on the line chart. The most active months based on rider id. To look into the specifics of which bike is being used and by which member, A bar chart was needed to show the count of rider Id in each category in the three months timespan.

34 percent increase in classic bike activity in July can be show in the classic member column. Members using classic bikes in July account for 21% of all bikes used. Casual Classic bikes take up 15 % of all bikes use in the month of July. Classic bike used by both costumer types, account for 36% of all bikes use in July alone.

This makes sense because tourism and people on summer break would account for the sharp increase in bike use during this time of year.

**First phenomenon is that there was a concentration for start and end station in new jersey.**

**Second phenomenon is that classic bike is the overall favorite across the board.**