Tableau Homework – Citi Bike Analytics Write-Up

(Map Write-up & Overall Analysis Write-Up)

1. Map Specific Write-up
   1. For this analysis, a map visualization was a great method to bring to life Citi Bike behavior in NYC and the surrounding area. By utilizing location data for the specific stations, as well as temperature gradient coloring, you’re able to understand the most frequented Citi Bike Stations geographically. I looked at Citi Bike Data comparing two snapshots in time, October 2019 vs October 2020. Furthermore, to use a manageable dataset as well as try to analyze the behavior of individuals using Citi Bikes for leisure riding or commuting, I decided to focus on Jersey City which is right across the Hudson river from Manhattan and included in the NYC Citi Bike database.

Within this subset of data on Citi Bike Ridership, a couple major findings can be discovered from looking at a side by side map of October 2019 vs October 2020. First, you will notice that overall Citi Bike Utilization is down comparing these two time domains. This most certainly can be attributed to the COVID-19 pandemic. The second finding is you notice a slight shift in the stations where Citi Bikes are utilized from. In 2019 they are primarily used from stations that are directly coupled with train stations. This indicates that Citi Bikes, for many, are a leg in one’s commute to and from work or other responsibilities. In 2020 there is a slight change, where overall utilization is down, but you see specific stations not necessarily close to train stations with higher utilization. This indicates to me that with everyone working from home during the pandemic, there was more riding for leisure rather than commuting.

1. Overall Analysis
   1. Unexpected Phenomenon #1
      1. While analyzing the data, the first phenomenon I discovered that was unexpected, yet aligned with what the map indicates was that Average trip duration was longer in 2020 than in 2019. The visualization on the left as you toggle the year filter will illustrate that average ride durations increased in 2020 over 2019. However, the second visualization on the left will show that overall utilization by station is down. This was an unexpected phenomenon yet the data from the second visualization proved to me that Citi Bike ridership in Jersey City is directly correlated to commuting on public transit to Manhattan, so as a result people are taking longer leisure bike rides around Jersey City versus their regimented commuting rides of 2019.
   2. Unexpected Phenomenon #2
      1. The second unexpected phenomenon I discovered in the data was related to the Citi Bikes themselves. In October 2020 there were more unique Citi Bikes used than in October 2019. Intuitively you would think that since 2019 had substantially more utilization, we would see more bikes used. However, recognizing the affects of the COVID-19 pandemic, it is likely that in 2019 where riders in Jersey City were using the bikes heavily in the same routines, the same bikes were left at similar stations. Because of this, not as many new bikes were circulated in the Jersey City Area. Following that, when you look at October 2020 where leisure riding outpaces commuting, you find that individuals are riding longer distances, and into different areas of the city. Thus, this allows for a wider range of unique bikes to be circulated through the Jersey City area.