Valentina Villarroel
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CitiBike Analysis

My Tableau story consists of 3 parts. The first shows a map of station which use color and size to indicate how many times they have been visited to start or end a trip. From this visualization, one takeaway is clear: people use CitiBikes more on the left side of the bay than on the right. This distinction is particularly stark on the lower right side of the left side of the bay. Analyzing this fact, I would hypothesize that this is due partially to infrastructure differences. More accessible public transportation would decrease bike usage and more bike-friendly road design would increase bike usage. Of course, population density could also play a role. These are not things one can infer from the visualization, but are good questions to investigate based on our takeaways.

The second part of my Tableau story investigates fluctuations in CitiBike use over time. From the first visualization (Rides Per Year), one can see a significant jump in CitiBike use from 2020 to 2021. I would hypothesize that this is due to the pandemic. It makes sense that people would opt for biking for leisure and for transportation, as indoor activities were more dangerous and public transport was a high risk for transmission. The second visualization (Full Time Comparison) corroborates this hypothesis as we see an incline in rides begin in December 2020, right when the vaccine was approved and distribution began. Of course, we cannot prove this solely based on the visualizations, but it is a well planted hypothesis. Finally, our last visualization (Month to Month Comparison) shows how ride amounts vary from month to month to help us identify yearly patterns. The takeaway here is pretty obvious: people tend to ride bikes more in warmer months (summer, fall and spring) and less in cooler months (winter).

Our final portion of the story focuses on station popularity. Our two visualizations one the right hand side of the dashboard (Most Popular Stations to Start Ride and Most Popular Stations to End Ride) show that the 5 most popular stations to start and end a ride are the same in both cases (albeit in different orders). I would guess that is because people are traveling to and from these stations consistently, as if by habit or schedule. Our other two visualizations (Start Station Popularity By Hour and End Station Popularity By Hour) seem to confirm this claim. The peaks happening at one station around 8am/9am are matched by a trough late at 5pm/6pm for starting a ride. The opposite is true for ending a ride. This would lead me to believe that people are riding bikes to and from work around these stations.