**Observations of New York City CitiBike Data for July, 2019**

**Dashboard #1**

*Comparison of Start and End Stations*

Looking at the data, the Top 10 Start and End Stations are the same stations. This is most likely because they are located in Manhattan where both tourists and businesspeople are traveling from. These stations would be the most used if one was trying to maneuver around the most popular parts of the city. The majority of the Bottom 10 for the Start Stations were in the Hoboken area and the majority of the Bottom 10 for the End Stations were on Long Island. This may be because they are further away from the commerce and tourist areas. Also, those who would be biking would have a long commute to these outer stations.

**Dashboard #2**

*Comparison of Gender Data*

When looking at the raw data, the Unknown gender data accounted for about 10% of the total data. As a result, I removed the Unknown variable and analyzed the two traditional genders. Overall, 72.1% of riders were male and 27.9% of riders were female. Clearly, CitiBike services are used by males more than females. This could be for a variety of reasons, but it is likely that males are just more comfortable using bicycle transportation than women.

*Comparison of Use of Day of the Week*

Looking at the use of CitiBikes by the day of the week shows that weekday use is more prevalent than weekend use, most likely because the subscribers are commuters that work from Monday through Friday. I did notice a dip in use on Thursday and Friday, which I attribute to users missing Thursday, July 4th and Friday, July 5th since they were holidays for many this past July.

*Comparison of Birth Date Data*

When analyzing the birth date data, it was clear looking at it that some of the data was not correct. There were birthdates from the 1800s included in the data. As a result, I decided to remove any person with a birthdate before 1919 because, well, it’s possible (though very unlikely) that a 100 year wanted to use CitiBike to satisfy an activity on their bucket list. Once these dates were removed, I looked at the data using a bubble chart. Other than 1969 (see below for more information on this), the years that were most prevalent were in the 1980s through mid-1990s. This is not surprising information as this group is both in the middle of their careers as well as likely to believe in alternate transportation. They are probably also more athletically more inclined than older commuters.

*Comparison of Customers and Subscribers*

Subscribers use Citibikes much more often than one time customers. This is most likely because subscribers are regular commuters that use CitiBike as their means of transportation to work.

**Two Surprising Observations found in this data:**

1. 1969 was a very popular birth year, even more so than the 1990s. 1969 was the birth year of 109,189 people, or a bit more than 10% of the data. This makes me think that this may be the default year used in their birth date because it is unlikely the people who are 50 years old account for 10% of those using CitiBike.
2. I was surprised at how many people used the CitiBike stations on the weekends. Although I do believe that tourists may use the service, most of CitiBike’s customers are subscribers. There was not as a severe drop off on the weekends as I expected that there would be because commuters are not going to work in the city.