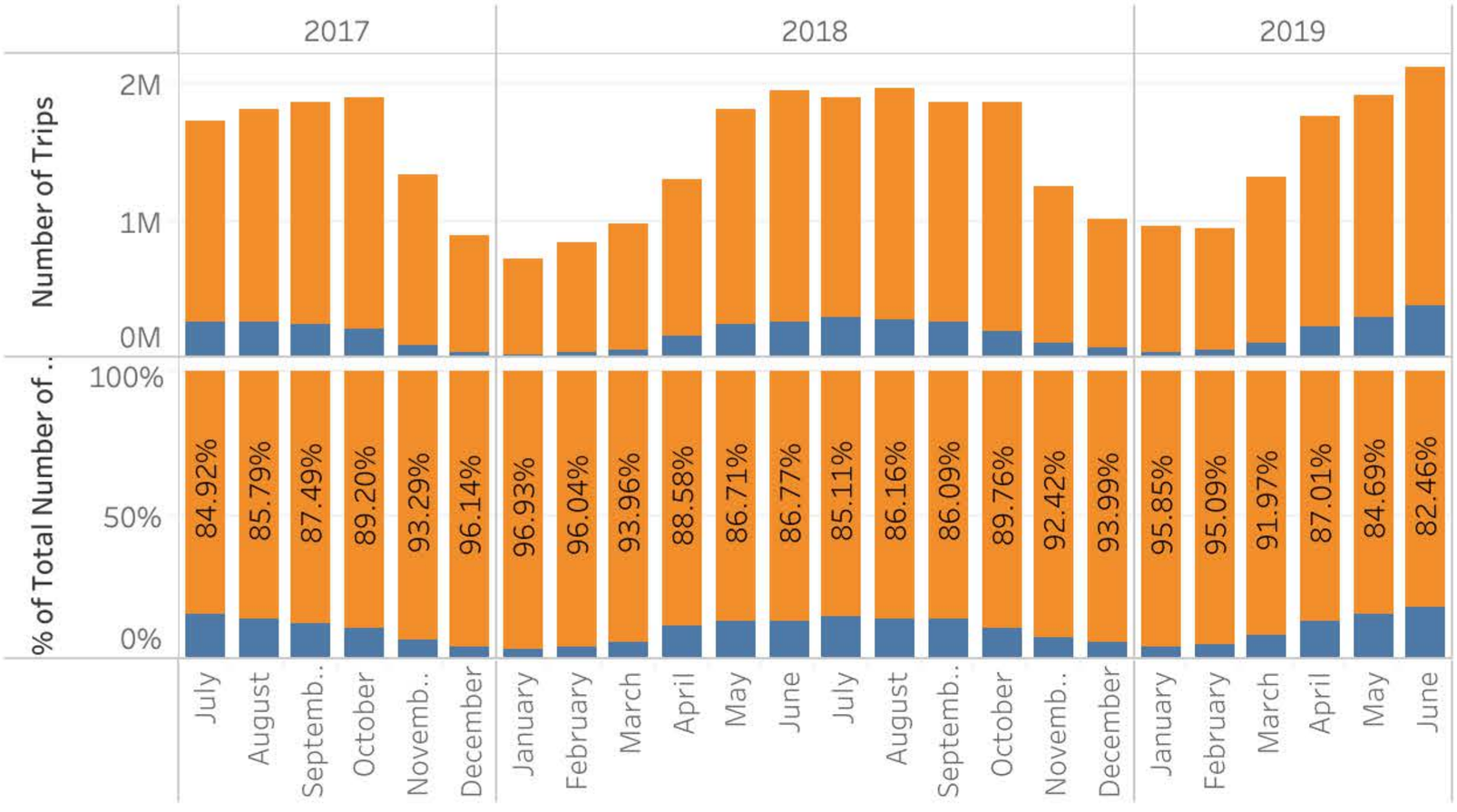
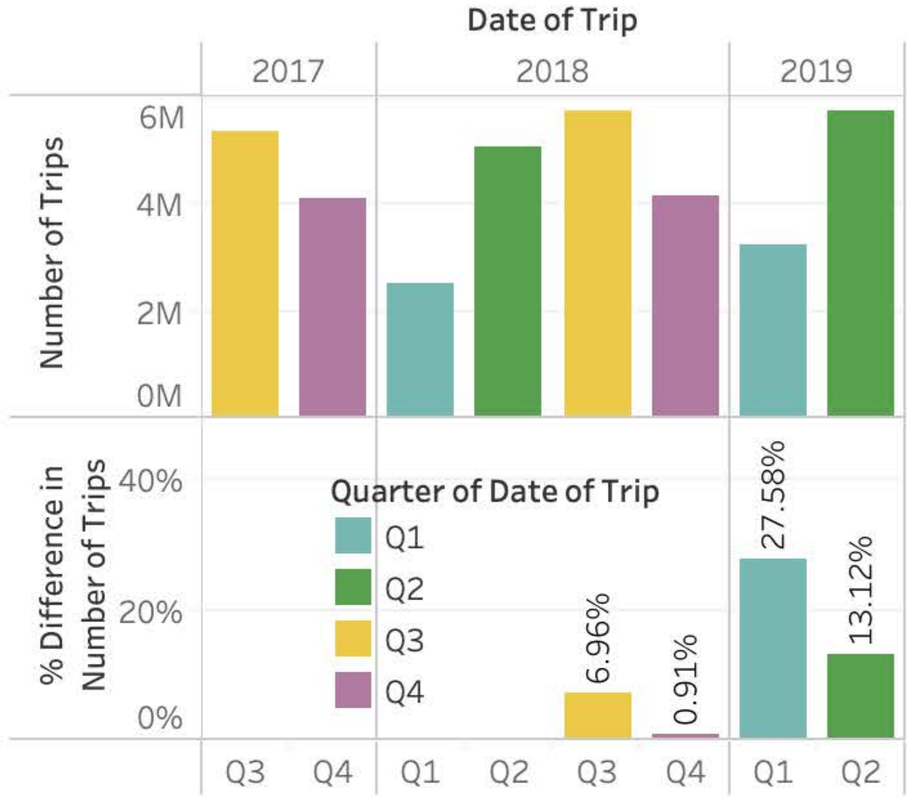
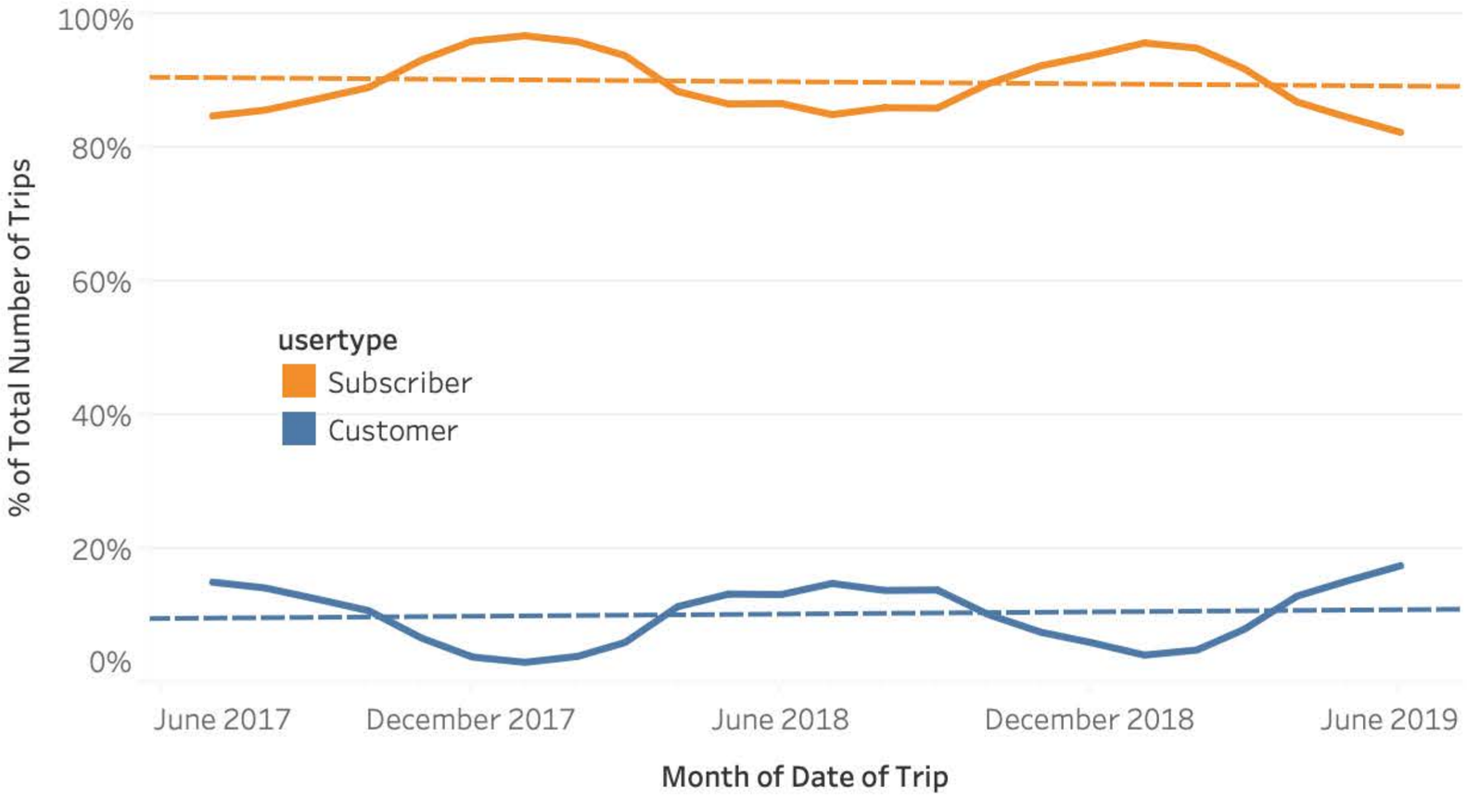
Monthly Ridership



Ride Growth per Quarter (7/2017-6/2019)



Ridership Trend 6/17-6/19

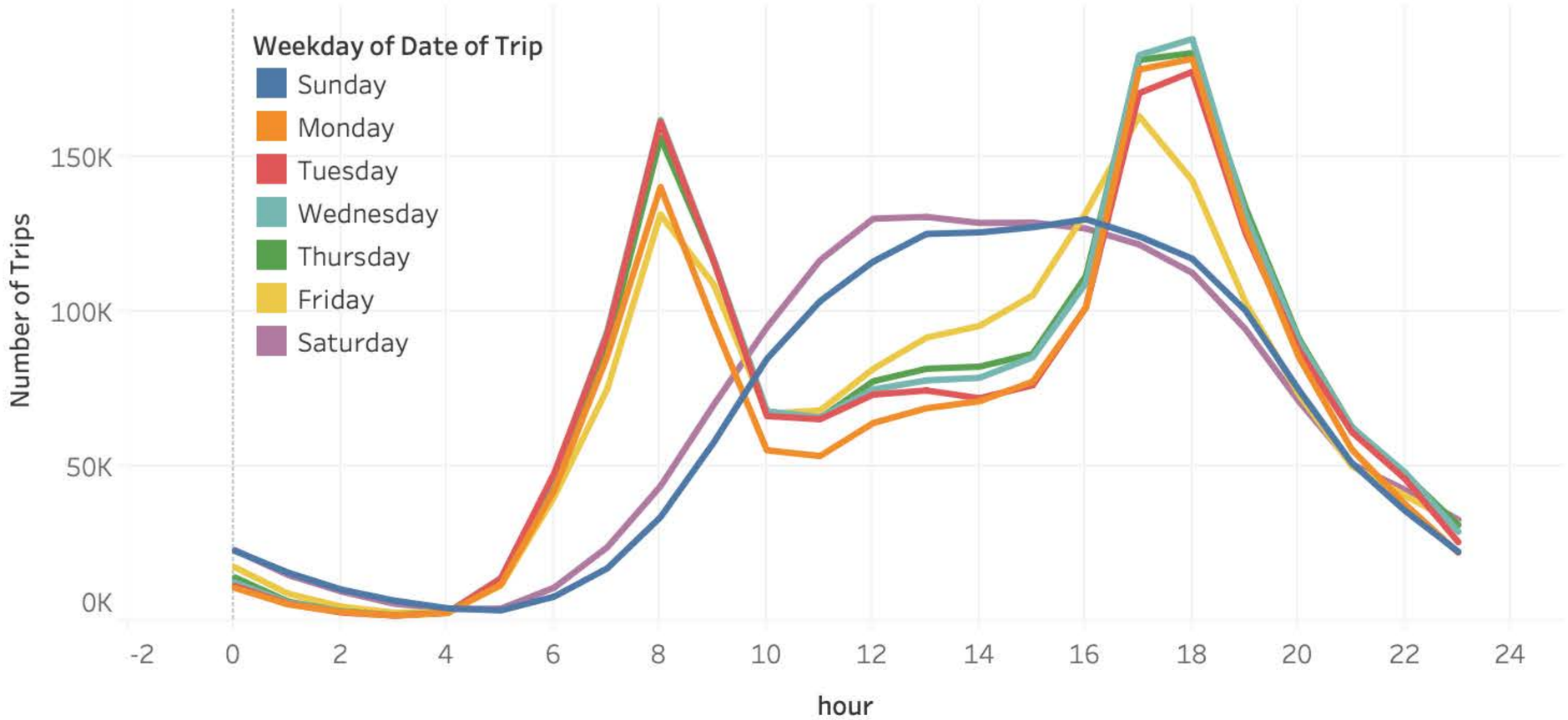


New York City Citibike Ridership

Citibike data from the July 2017 - June 2019 indicates that ridership is up overall, with over 1.7 million individual bike trips recorded in June 2019. Each of the most recent quarters show positive percent growth from the same quarter in the prior year, with the greatest percentage increase during Q1 2019.

While there is an overall increase in ridership, the largest percent of riders (>80%) continues to be annual subscribers. Over this period though, a slight increase in percentage of individual customer usage can be seen in the Ridership Trend chart at left.

Rides per Hour by Day of Week

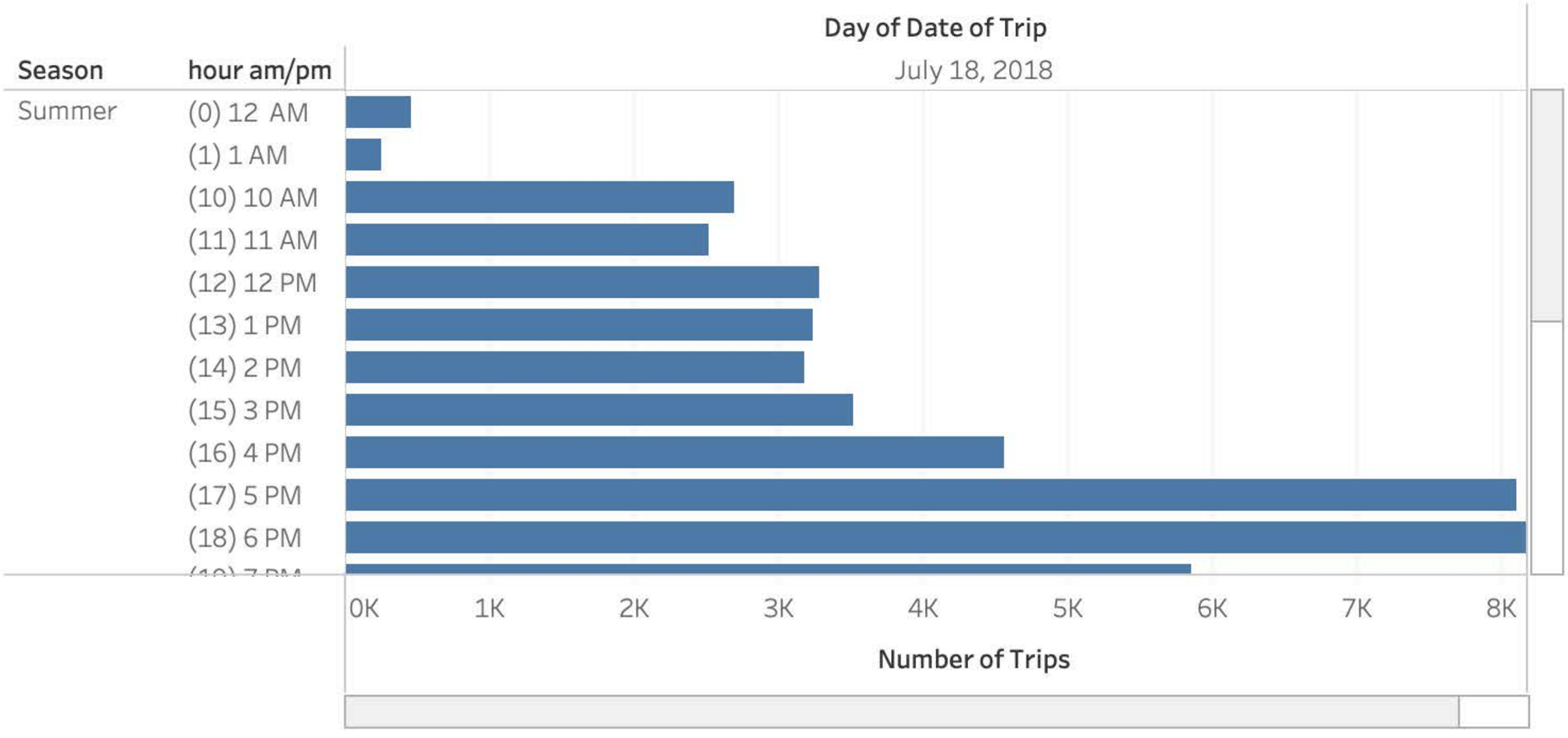


Date of Trip
7/18/2018

Season
- [ ] Fall
- [ ] Spring
- [x] Summer
- [ ] Winter

Weekday of Date of Trip
- [x] Sunday
- [x] Monday
- [x] Tuesday
- [x] Wednesday
- [x] Thursday
- [x] Friday
- [x] Saturday

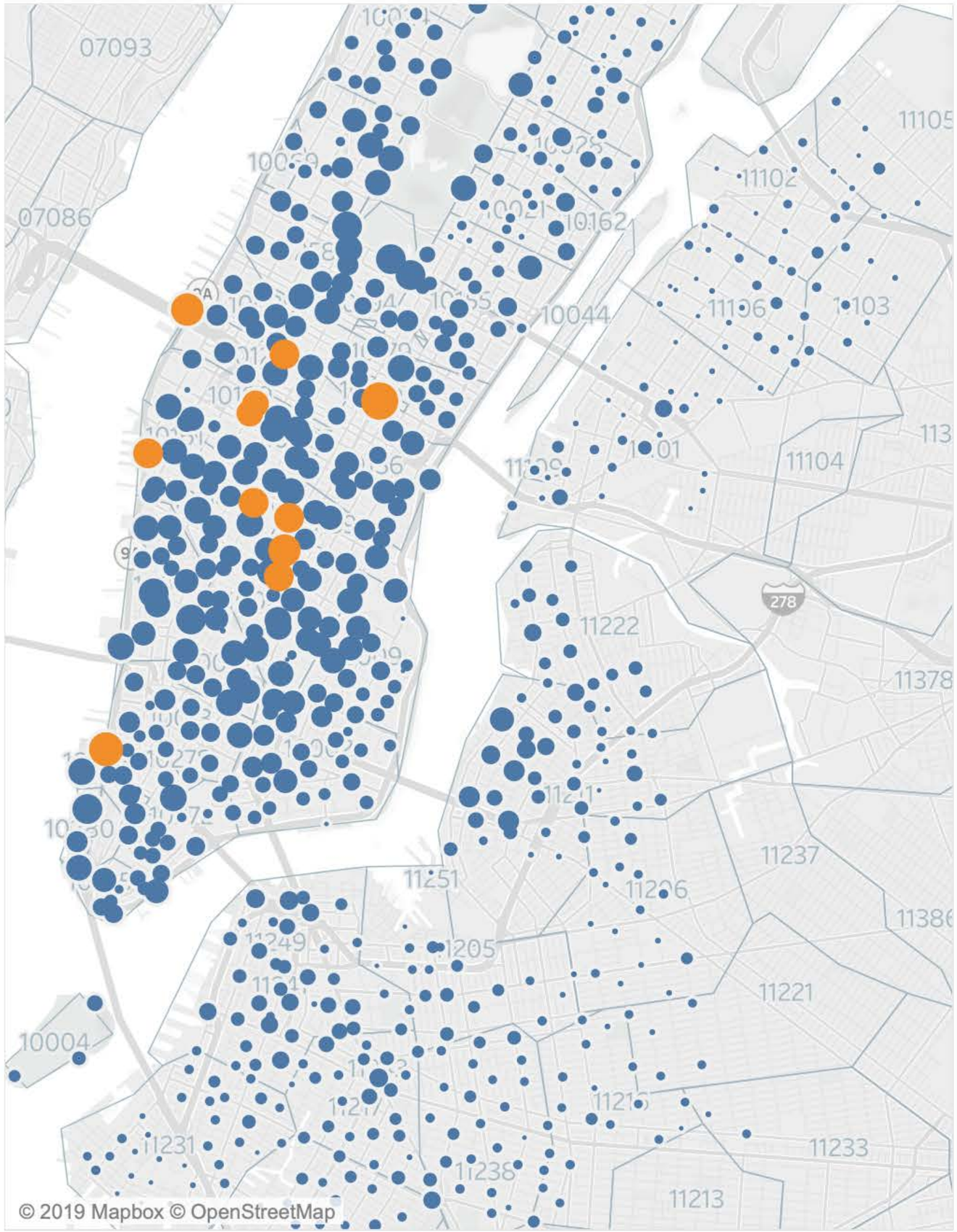
Rides per Hour 7/18/2018



Hourly Usage

While overall bike usage dips in the colder months of the year, peak hours of usage per day follow a similar pattern for each season. On weekdays, peak hours are around 8 am and 6pm, coinciding with commuting hours. If this weekday usage looks like a two-humped (Bactrian) camel in the plot above left, then weekends present the one-humped (Dromedary) camel. That is, weekend days present a smoother usage curve with peak hours occuring in the afternoon between 12 and 6pm. One can presume bikes are used more for leisure purposes on weekend days, and more for commuting Monday - Friday.

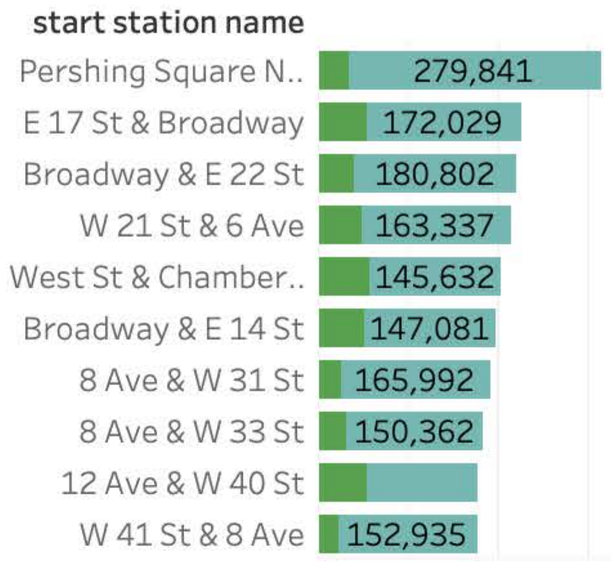
Citibike Station Locations - showing most popular



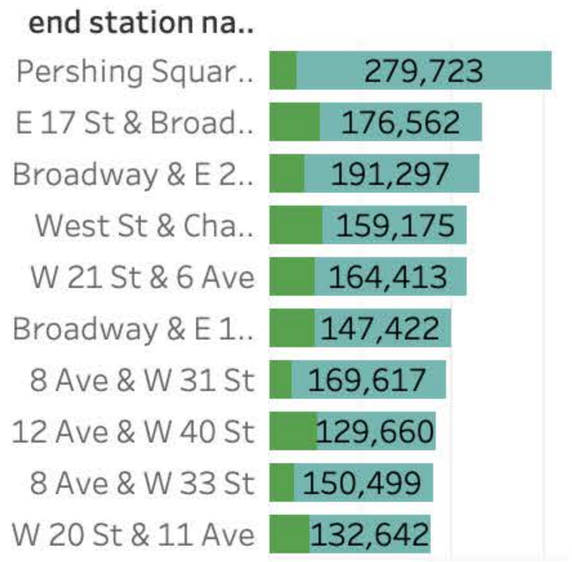
Month, Year of Date of Trip
July 2018

Top Start and End Stations
Top 10 Locations
Other

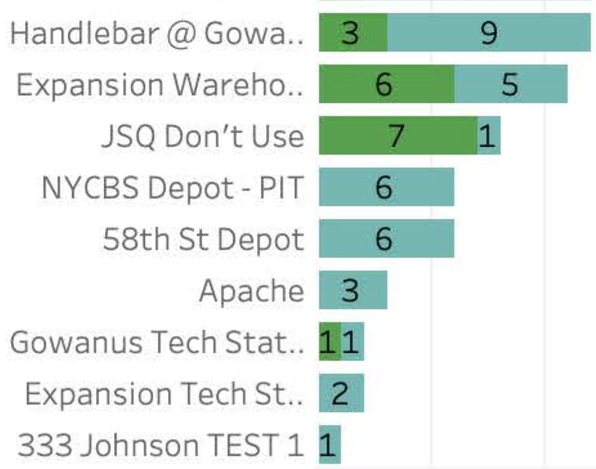
Top 10 Start Locations



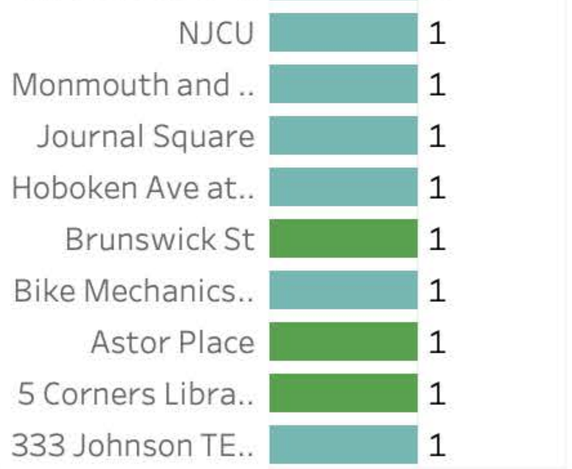
Top 10 End Stations



Bottom 10 Start Stations



Bottom 10 Ending Stations

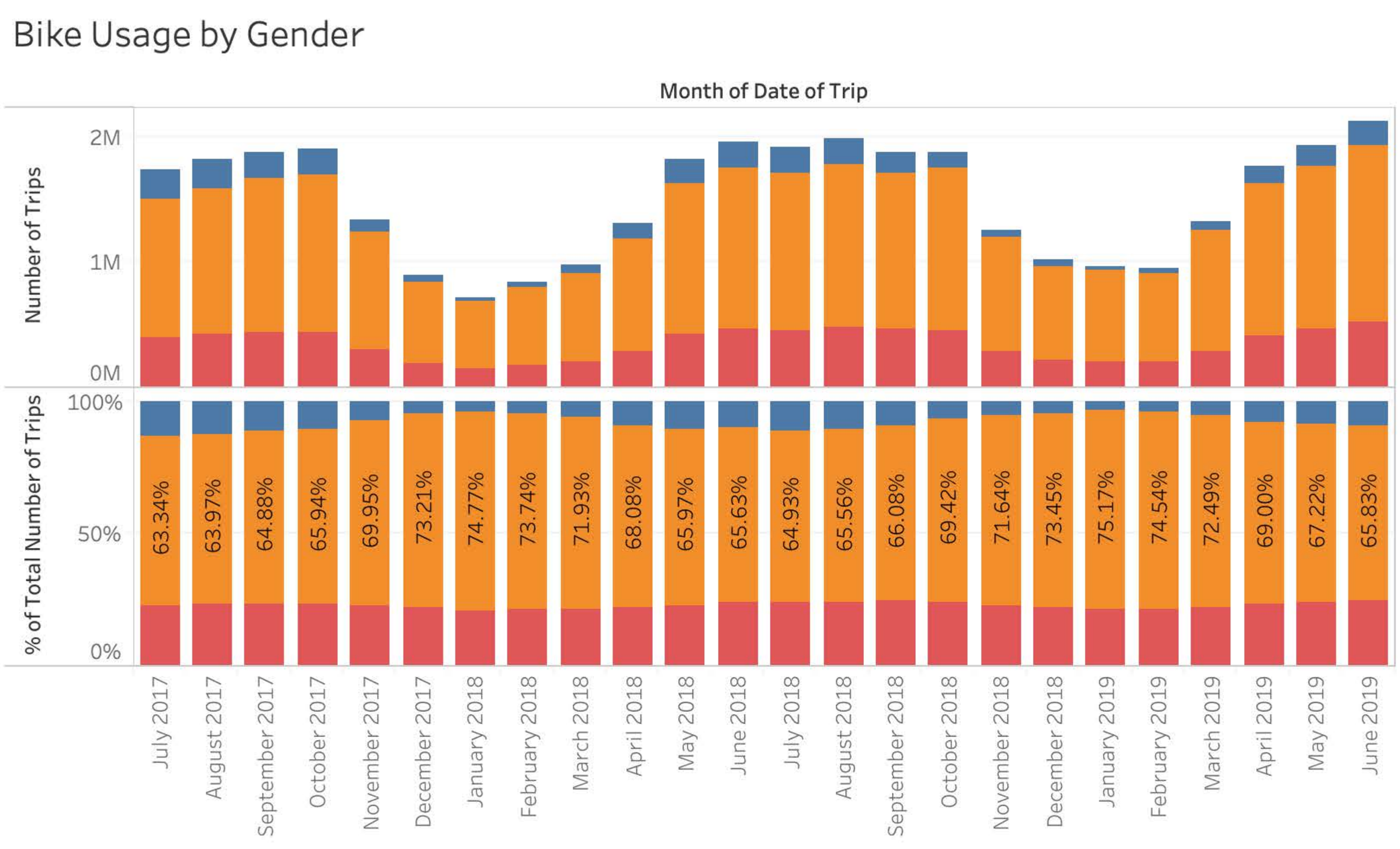


Weekend Weekday

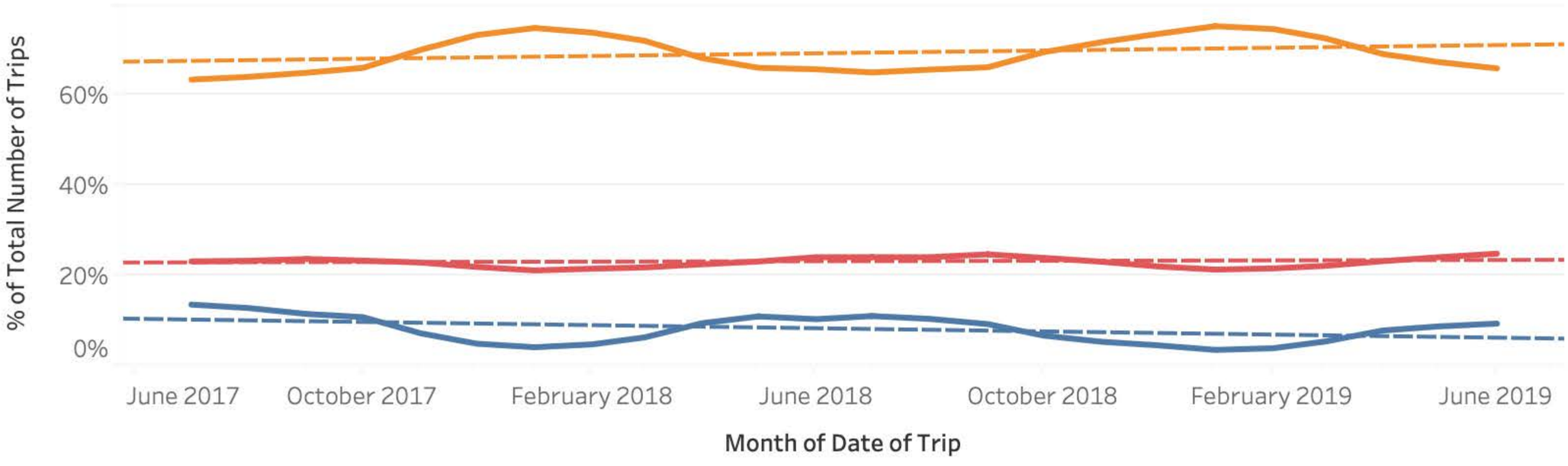
Most Used Stations

By number of rides, the top ten most used Citibike stations appear to be located in business districts near transit hubs, such as Grand Central Station (Pershing Square N), Penn Station (8 Ave and W 31/33 St), and the World Trade Center Path (West St and Chambers). The least used stations by ride count seem to be bike depots or tech servicing locations.

Bike Usage by Gender



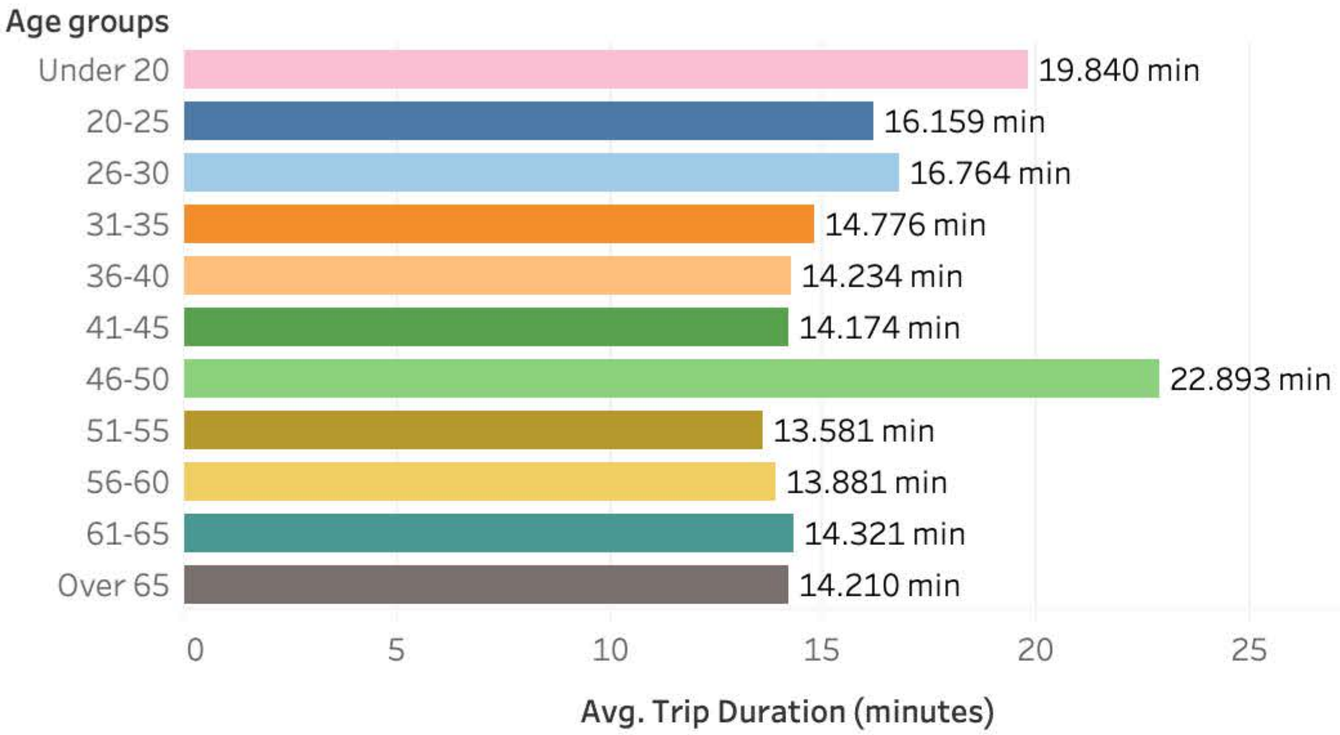
Gender Use Trend 6/17-6/19

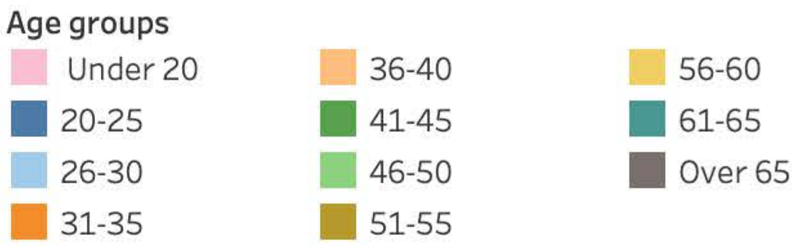


Bike Usage by Gender

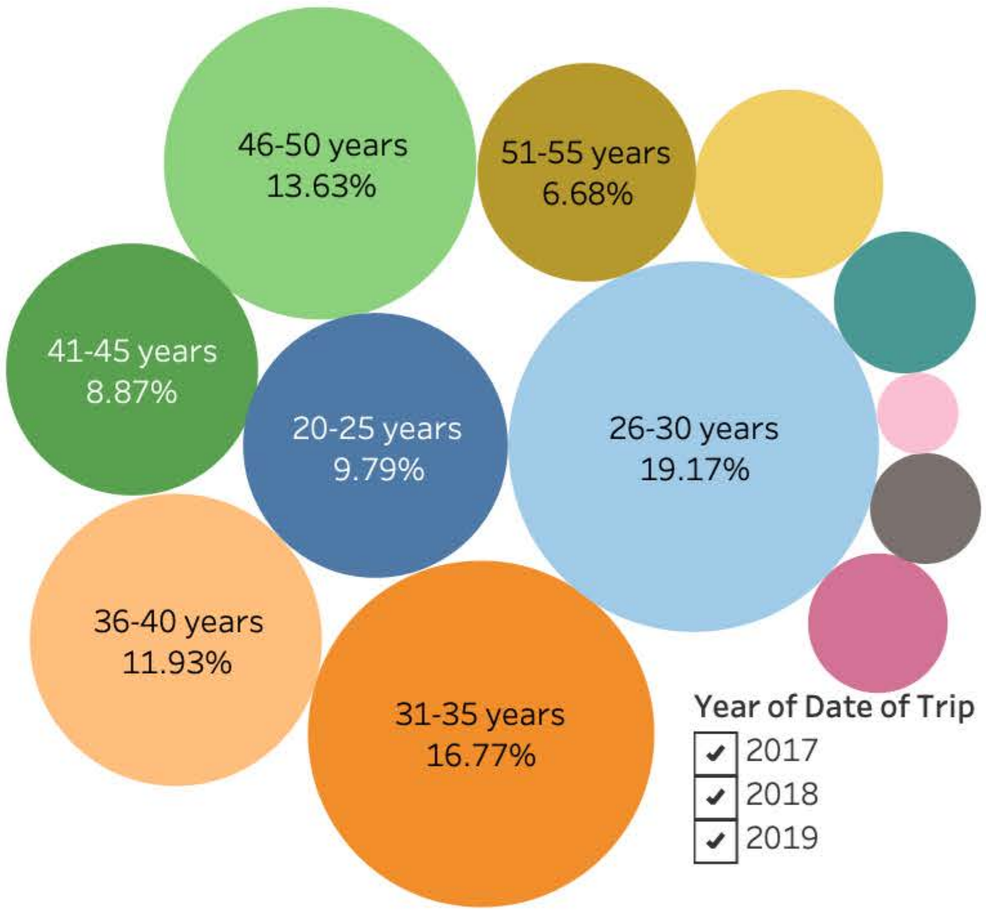
Males dominate usage, constituting above 60% of overall ridership in the summer months, and over 70% in the winter months. As hourly bike ride numbers indicate high usage for commuting purposes, one might propose that traditional female work attire may make bike usage less desirable for this purpose. However, trend lines show a very slight increase in percentage of female ridership during this period, though male ridership percentage is trending upward as well. Only the unidentified gender category percentage shows decreasing trends. Current outreach for increased female users does not show significant impact, so more or better initiatives are warranted for change.

Average Trip Duration by Age Group

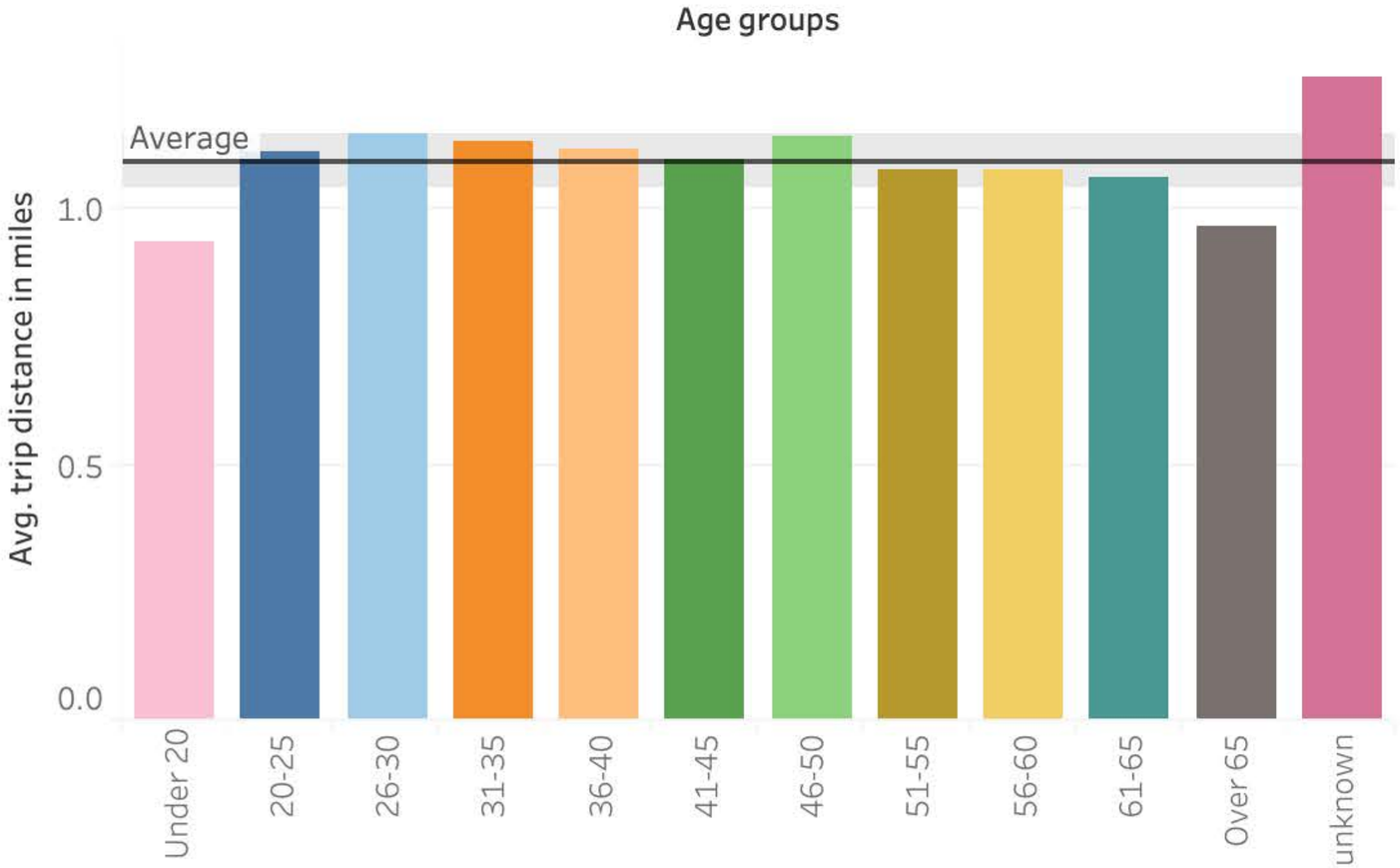




Yearly Usage by Age Group



Average Trip Distance in Miles per Age Group



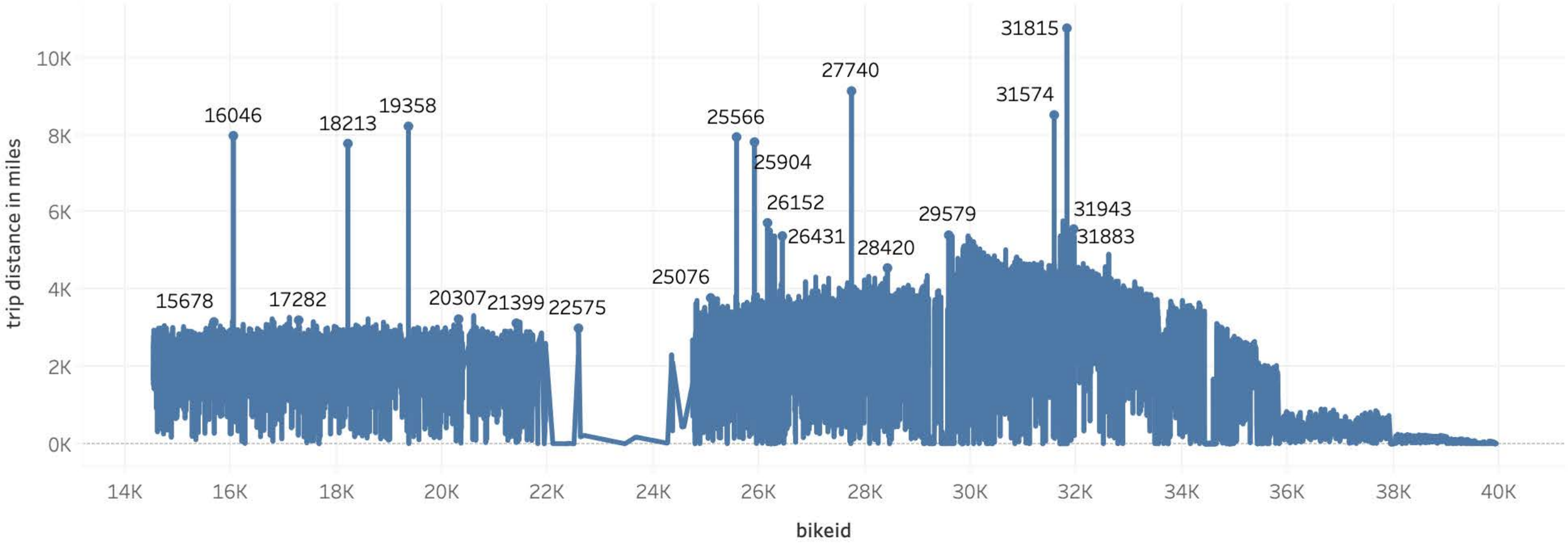
Age and Bike Usage

Average bike trip duration varies from about 13 to 23 minutes for different age groups, with most age groups averaging around 15 minutes. Surprisingly, the under 20 and 46-50 year age groups averaged longer trip durations, with 19.8 and 22.9 minutes respectively.

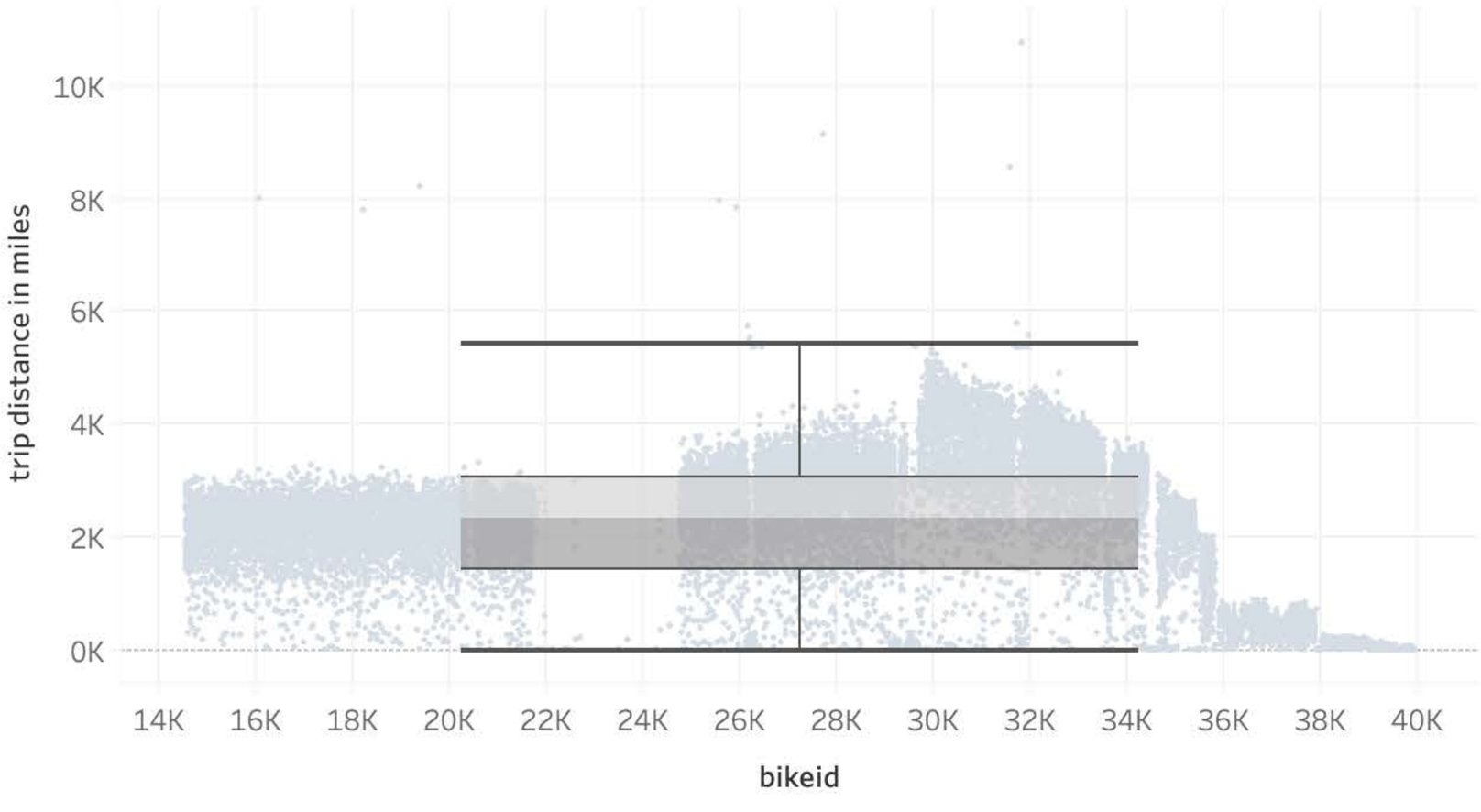
The average trip distance overall was 1.09 miles, and most age groups showed average trip lengths within 0.05 mile of this. Under 20 and over 50 users averaged shorter distances, and users with uncategorized age averaged longer distances.

Users age 26-30 make up the largest percentage of riders.

Mileage per Bike ID



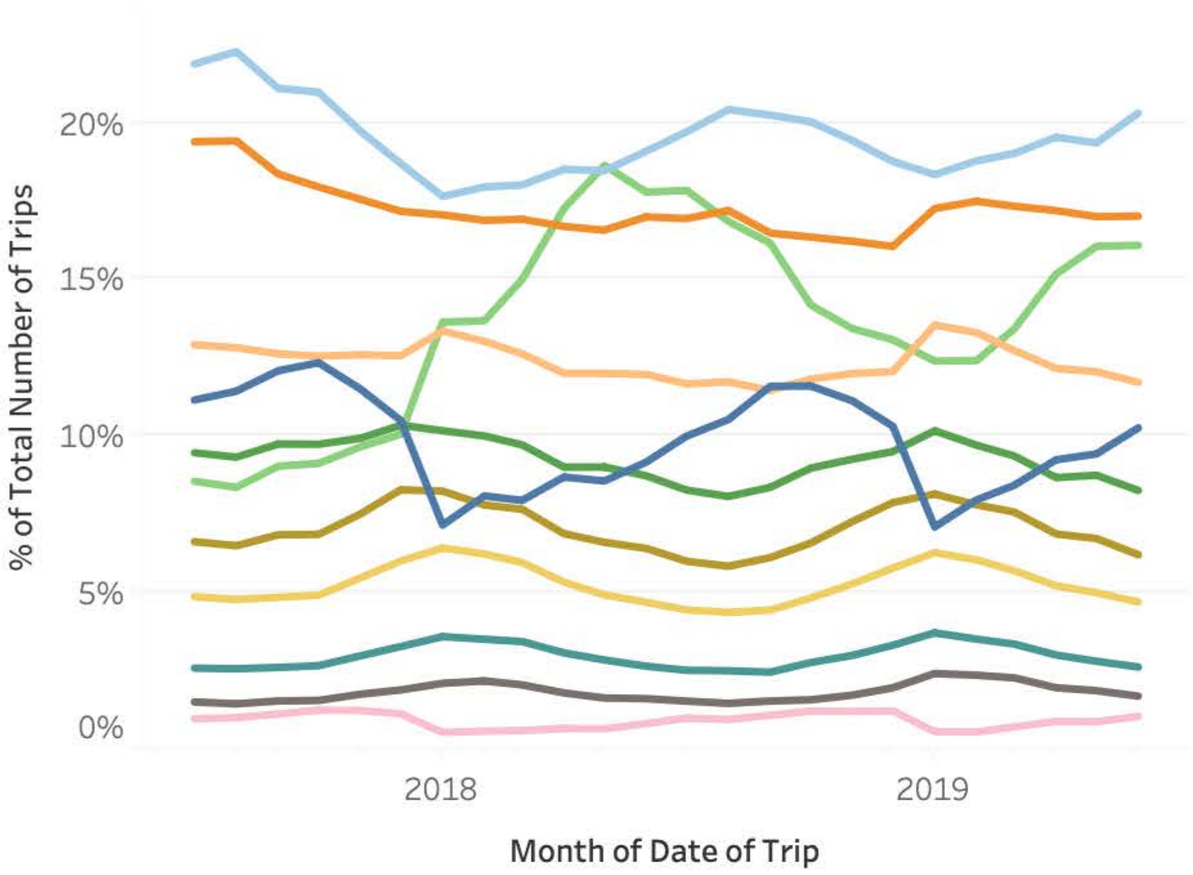
Variation in Bike Usage

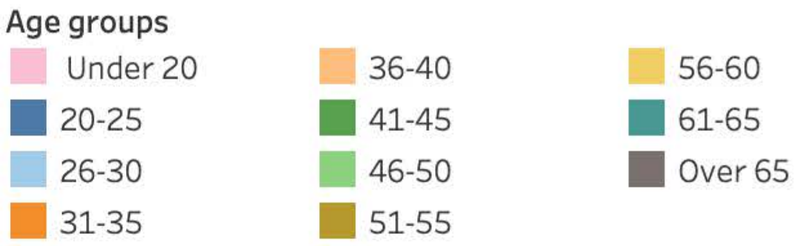


Individual Bike Usage

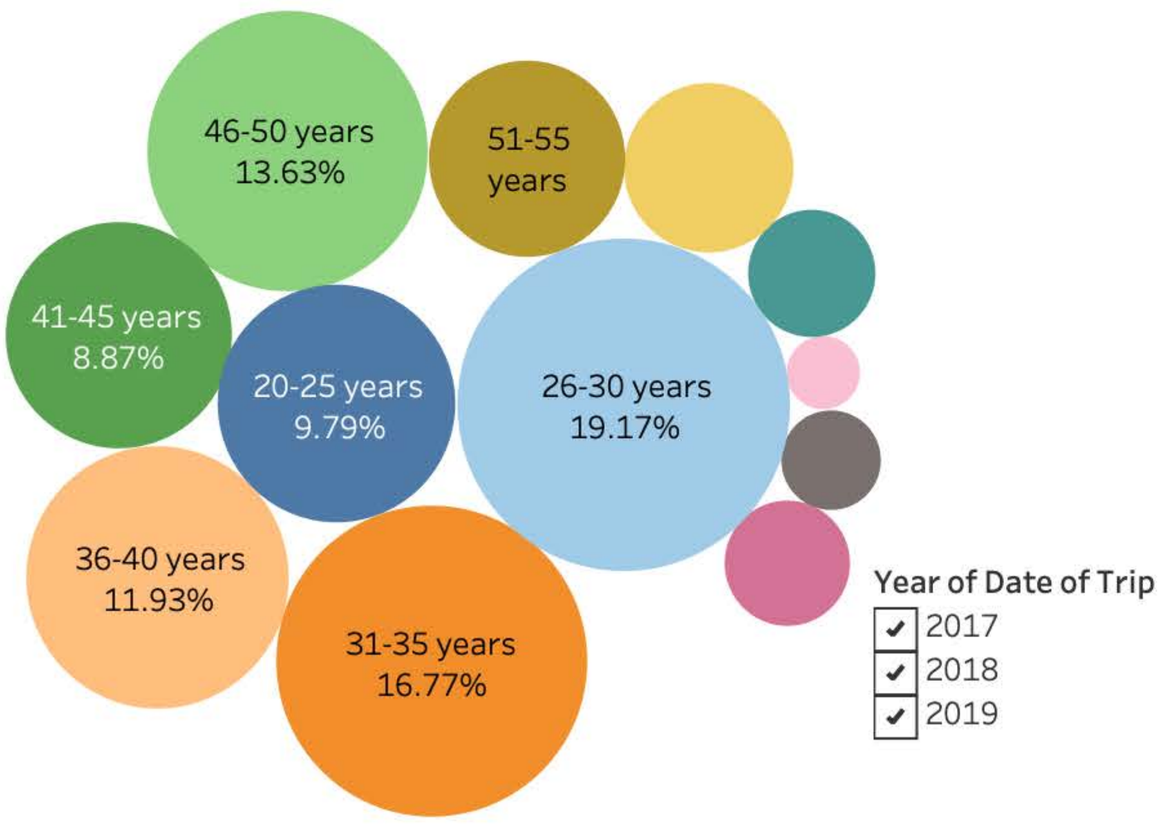
Usage varies widely per bike ID, with the median trip distance per bike at 2,348 miles. Most bikes have logged between 1,397 and 3,042 miles, but there are several with mileage approaching 8-10,000 miles, which would indicate these bikes are due for service. Some examples are Bike IDs: 16046, 18213, 19358, 27740, 31574, and 31815.

Percent Usage by Age Group 7/17-6/19





Yearly Usage by Age Group



Unexpected Phenomena

In looking at bike usage by age, it was surprising to see two age groups had plots that differed significantly from the others over this two-year time period. In particular, the 46-50 year group had a strong and growing percentage of overall usage, while the under 20 group percentage was lower and more varied than one might expect.

Another unexpected though not unusual observation came from station data. There were certain coordinates that were not valid station locations. One can conclude these are just errors in the data.

Unexpected Station Data