

# CITI BIKE ANALYTICS

**Data Date Range:** 09/2017 - 09/2018

**Total records (number of trips):** 19,389,128

## **Metadata used in analysis:**

- Trip Duration (seconds)
- Start Time and Date
- Stop Time and Date
- Start Station Name
- End Station Name
- Station ID
- Station Lat/Long
- Bike ID
- User Type (Customer = 24-hour pass or 3-day pass user; Subscriber = Annual Member)
- Gender (Zero=unknown; 1=male; 2=female)
- Year of Birth

**Context:** Since 2013, the Citi Bike Program has implemented a robust infrastructure for the largest bike sharing program in the United States. The following report analyzes the program's utilization and overall impact within New York City. In particular, the following questions will be answered:

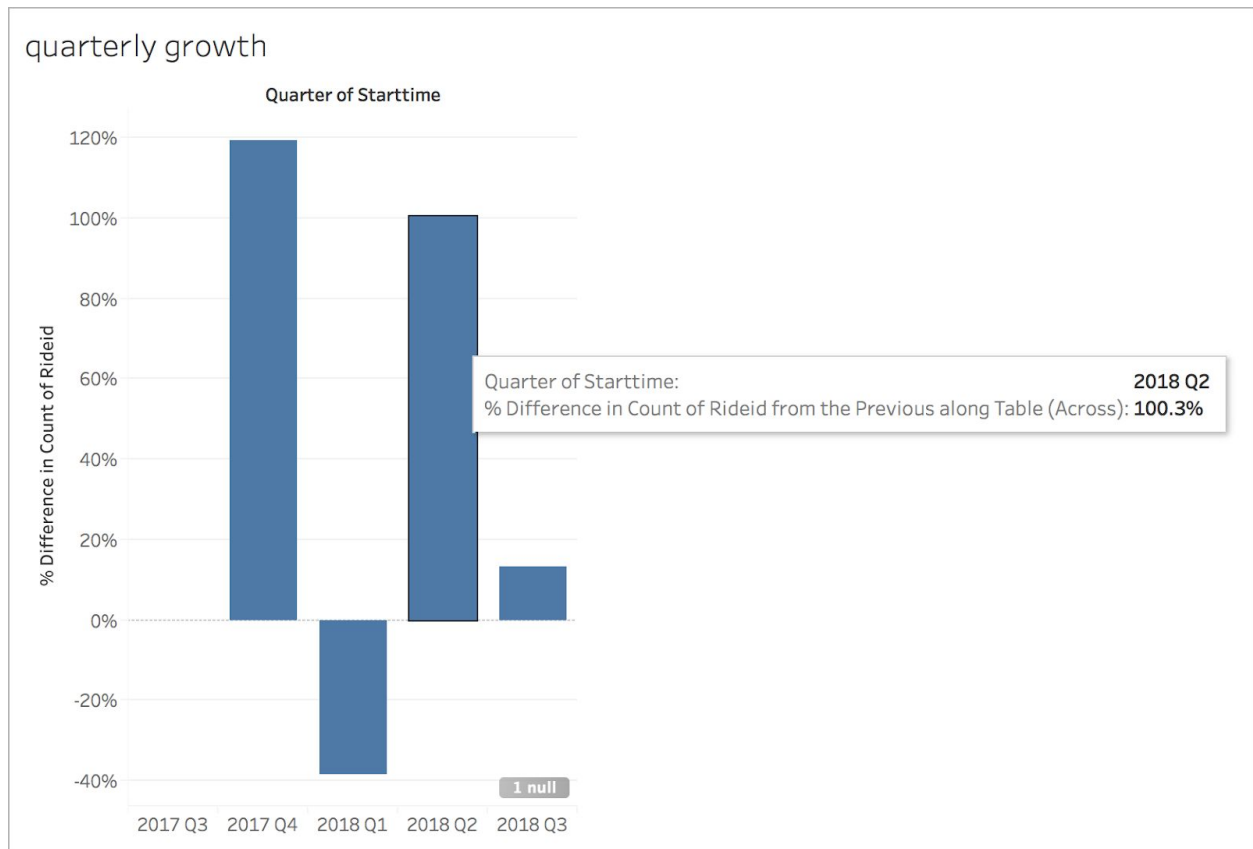
1. Quarterly growth
2. User demographics
3. Citi bike data trends

Along with two maps:

1. A static map that plots all bike stations with a visual indication of the most popular locations to start and end a journey with zip code data overlaid on top.
2. A dynamic map that shows how each station's popularity changes over time (by month and year)

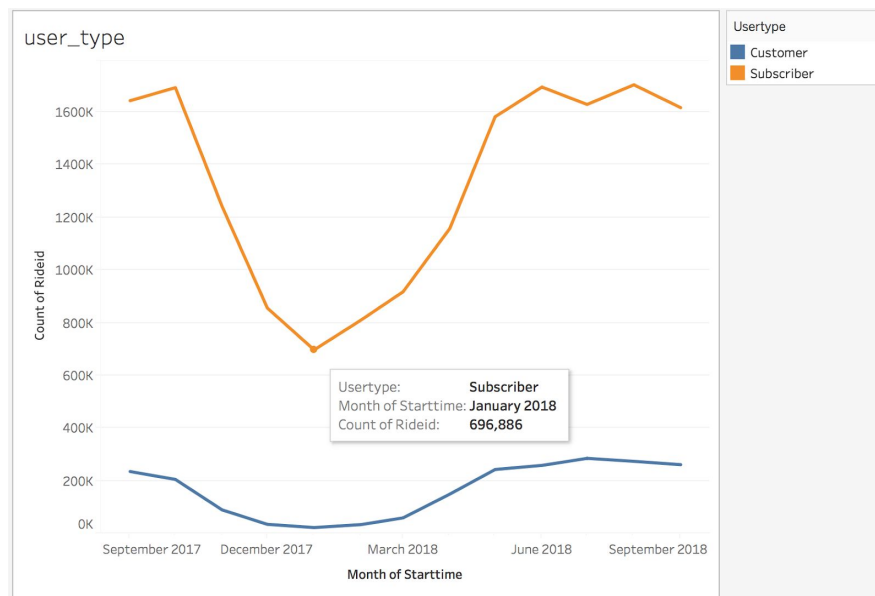
**Limitations:** the data was too large to upload to Tableau Public. As a result, I was unable to create a story or interactive dashboard. Instead, I have included screenshots, below.

## 1. Quarterly Growth



## 2. User Demographics

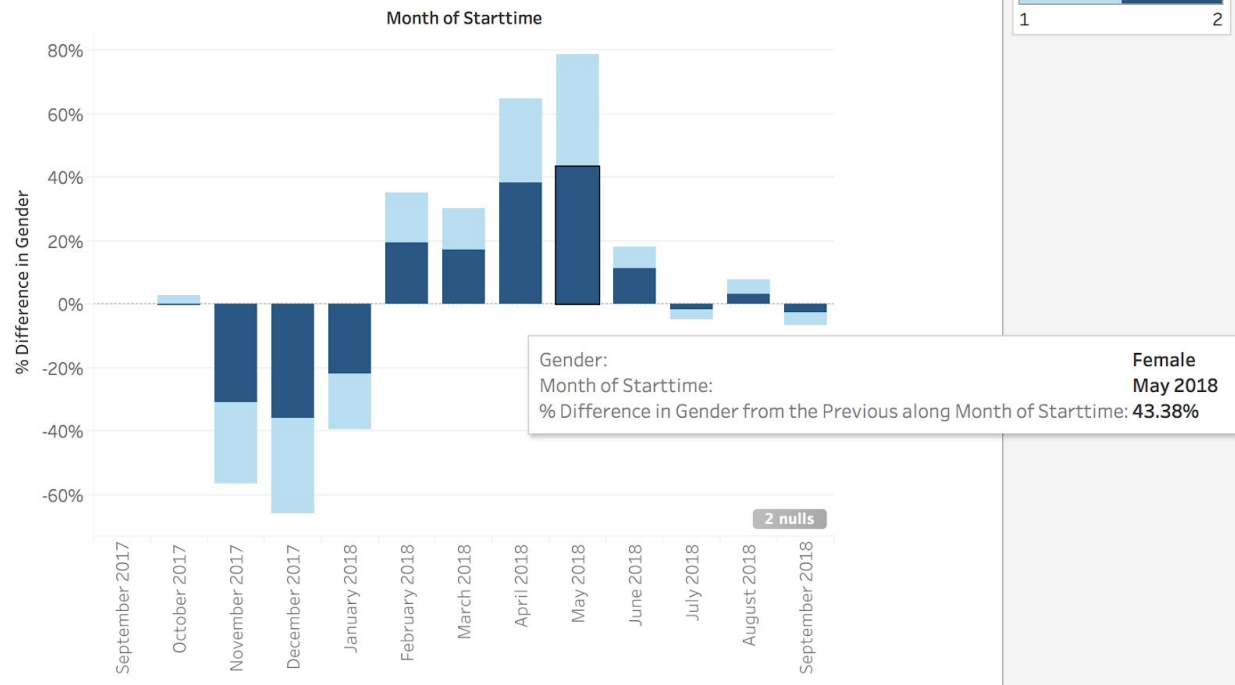
# of subscribers vs. # of 1-time customers



89% of Citi bike riders are Citi subscribers.

## Gender Growth

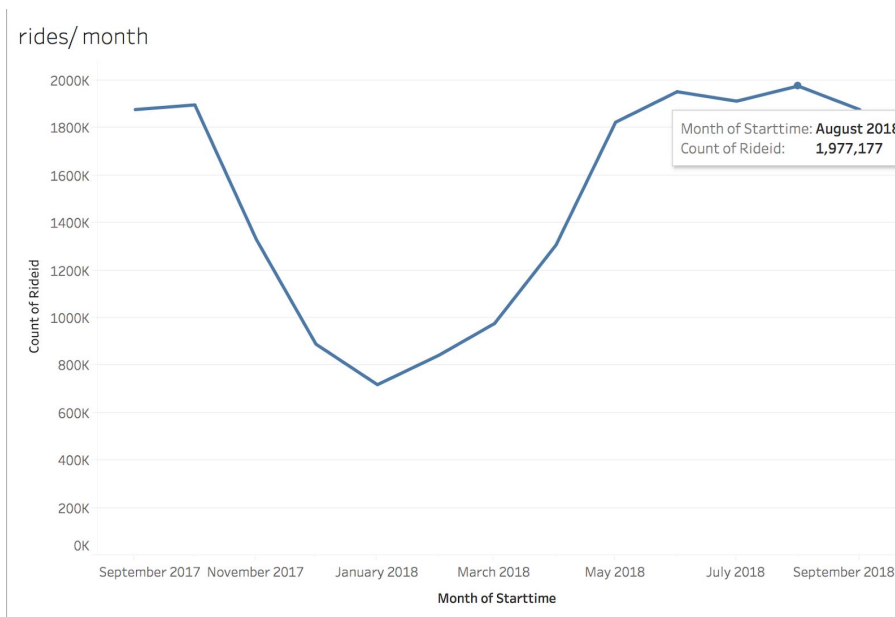
m/f growth



While the number of male user greatly outnumbers the amount of female user, the growth rates for each gender are relatively well-balanced. This means Citi could do a better job marketing towards females to help grow the business.

## 3. Citi Bike Data Trends

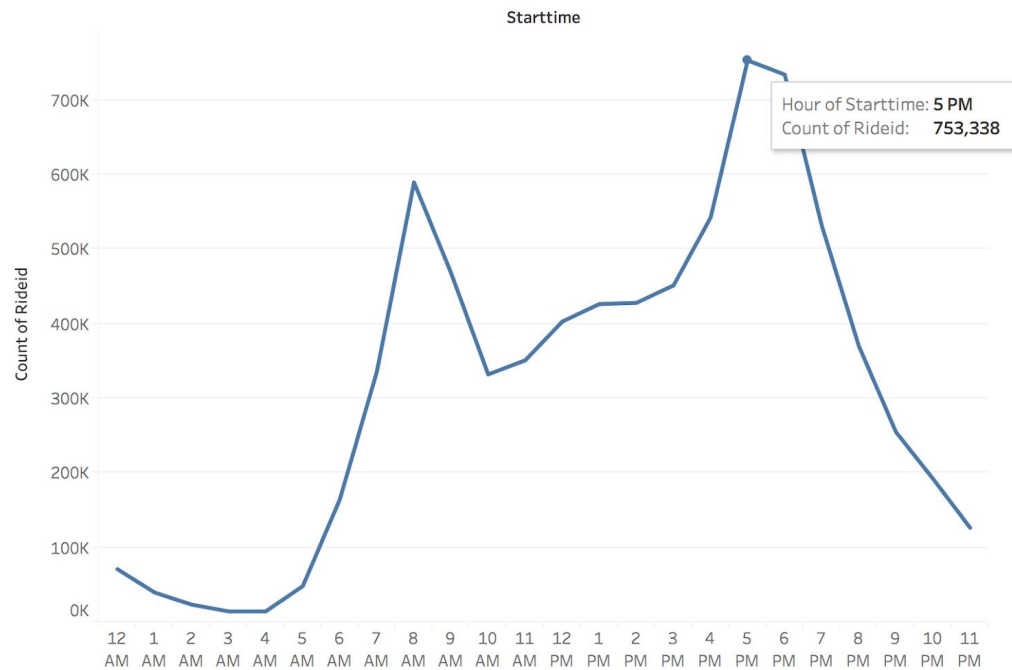
# of Rides per Month



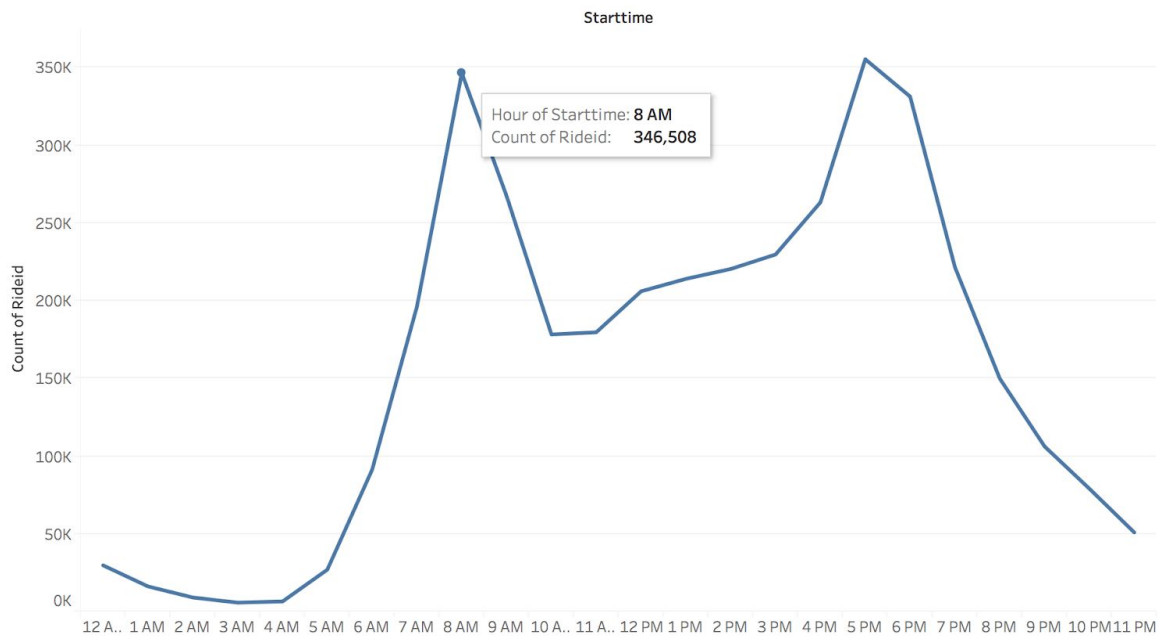
Due to cold weather, number of rides steadily decreases during winter months.

## Seasonality Trends (peak summer hours vs. peak winter hours):

summer hours

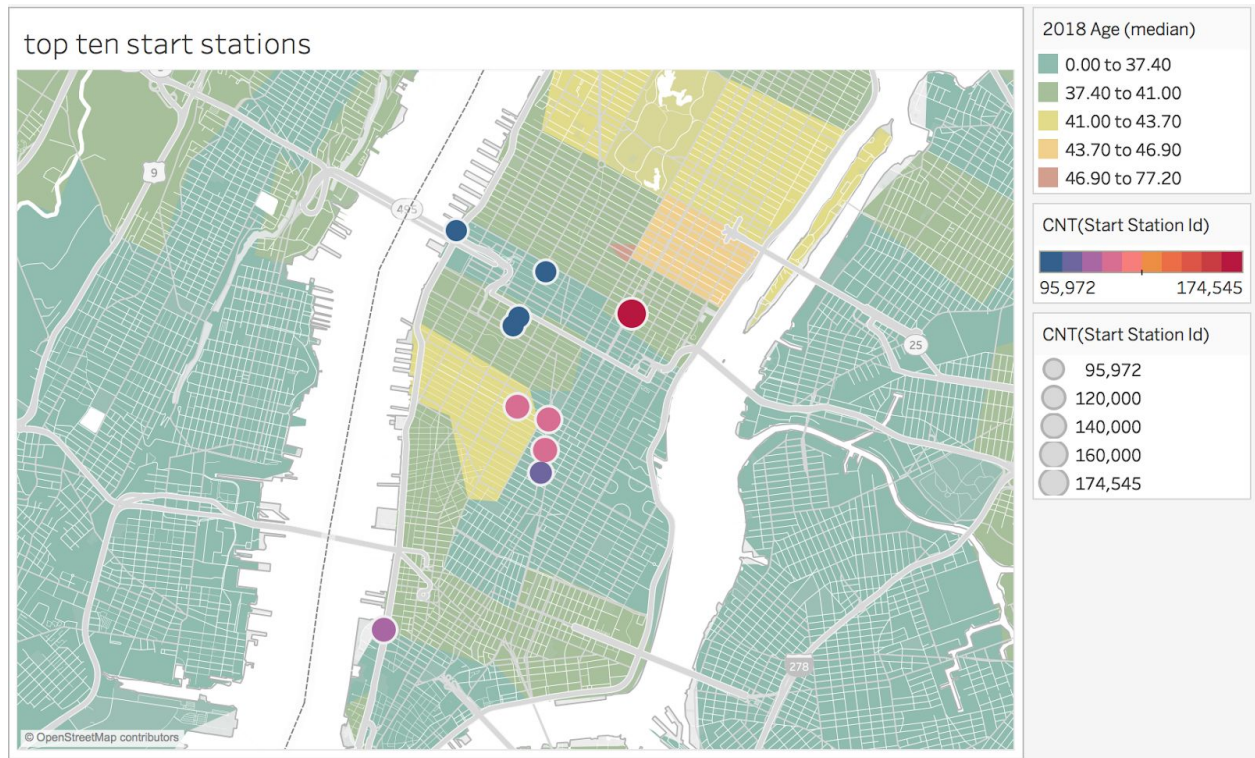


winter hours

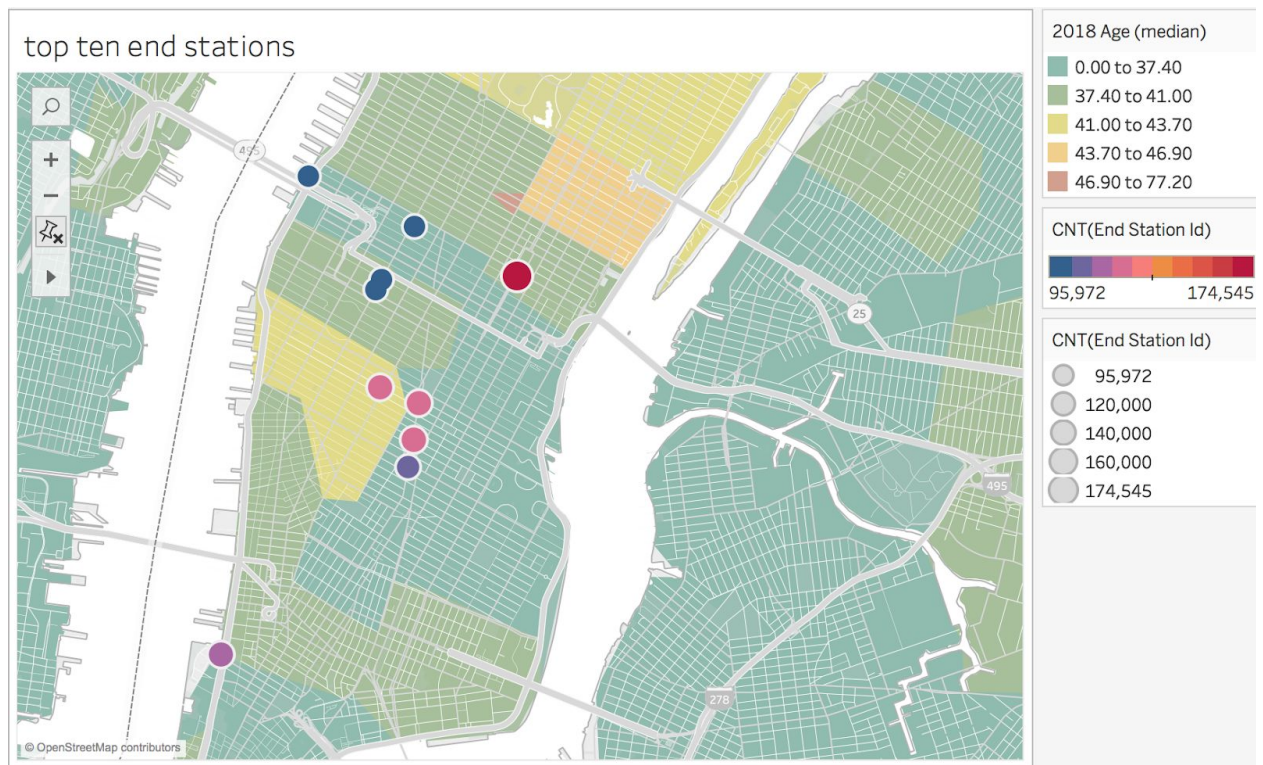


While the number of rides is significantly less during the winter months, the overall trend is the same. The number of rides peak between 7-8 am and then again between 4-6 pm.

## Most Popular Stations to Start a Ride



## Most Popular Stations to End a Ride



Regardless of whether a user is going to start/ end a ride, these are the most popular stations.



# Time Lapse

