

## Citi Bike Analytics(Using Tableau)

By Zhongping Yang

Data Range : From January to June, 2018

Data Source : <https://www.citibikenyc.com/system-data>

Background:

Since 2013, the Citi Bike Program has implemented a robust infrastructure for collecting data on the program's utilization. Each month bike data is collected, organized, and made public on the Citi Bike Data webpage.

Goad: Implementing dashboards to oversee the largest bike sharing program in the United States.

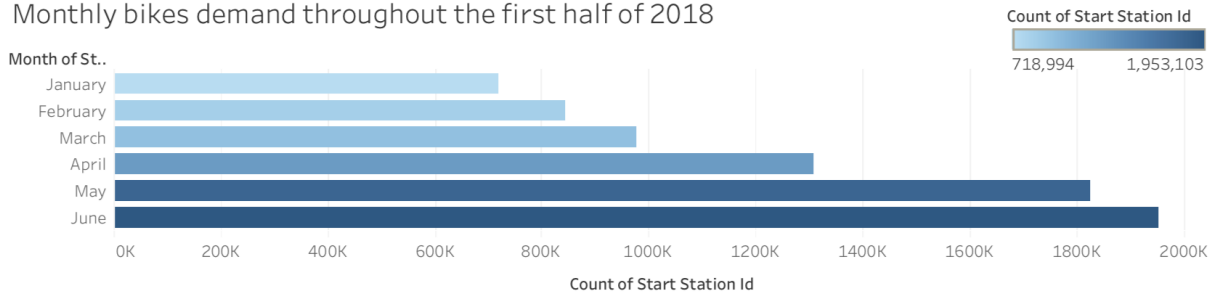


# User Analysis

Total Recorded Trips (first 6 months of 2018)

7,624,136

Monthly bikes demand throughout the first half of 2018

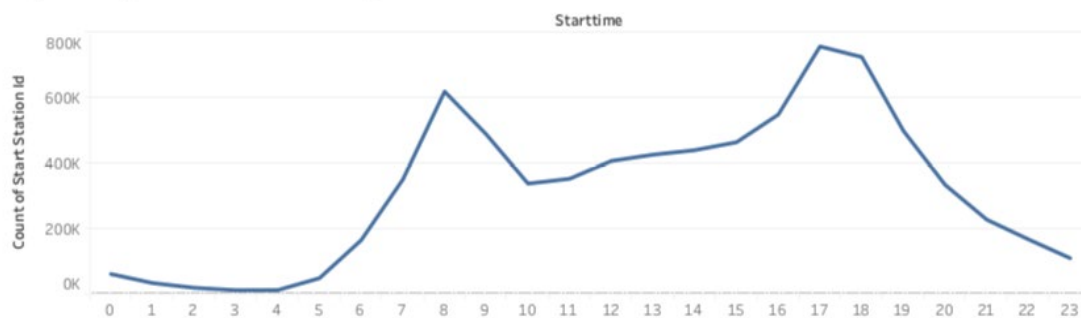


Percent changes in Total Ridership

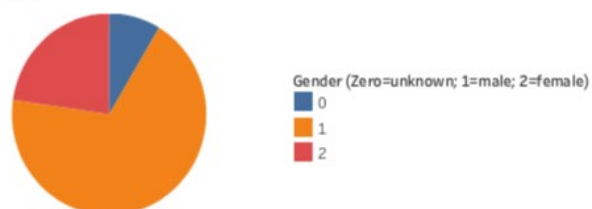
Starttime					
January	February	March	April	May	June
	17.26%	15.84%	33.88%	39.55%	7.04%

- In the first six months of 2018, 7,624,136 New York Citi Bike trips were made.
- Bikes demand had been raising every month, specifically a significant increase of 39.55% from April to May. (A quick assumption would be change in weather, from cold Winter to warmer Spring, although we will need more data to backup this claim.)

Avg. Hourly bikes demand throughout the first half of 2018

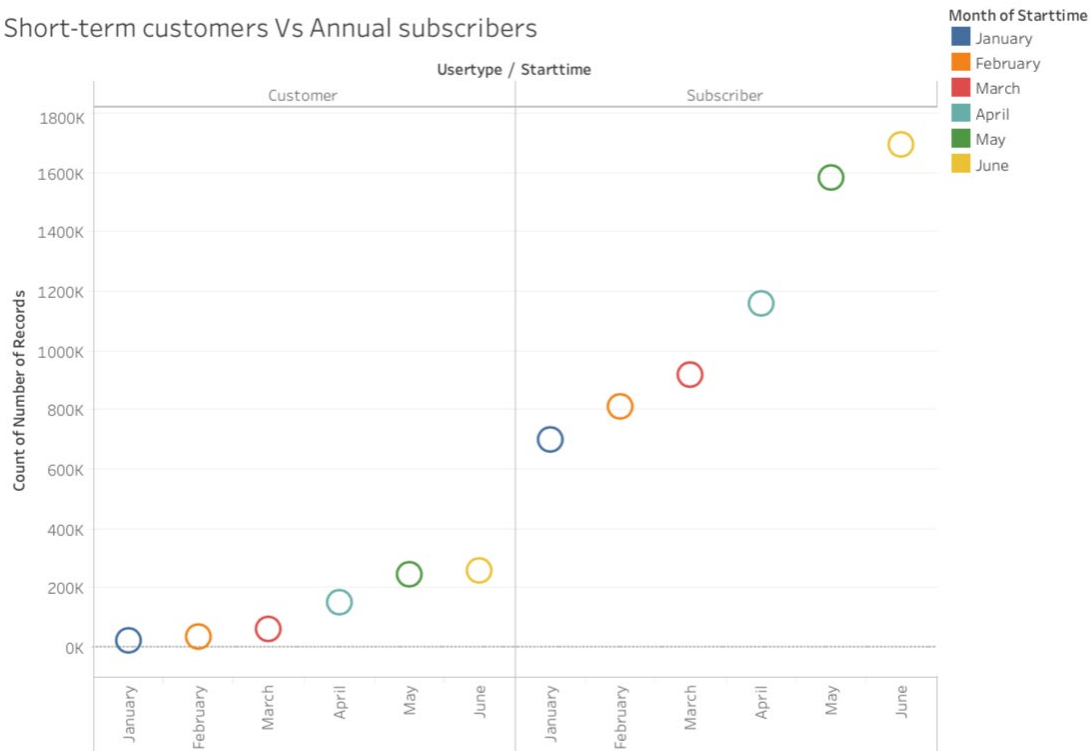


Gender breakdown of active participants



- An overall plot of hourly bikes demand throughout the first half of 2018. Obviously, the highest demand were during commute hours, roughly around 8 in the morning and 5 to 6 in the evening. Demand reached close to zero from 2 to 4 am as people rarely use bike in late night/ early morning hours.
- Citi Bike users are mainly male.

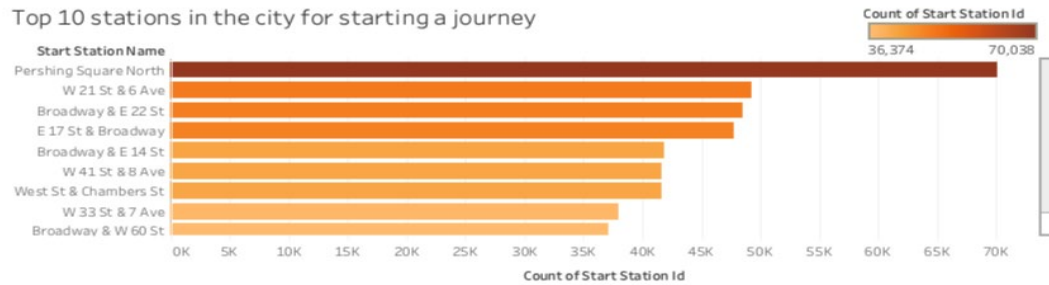
Short-term customers Vs Annual subscribers



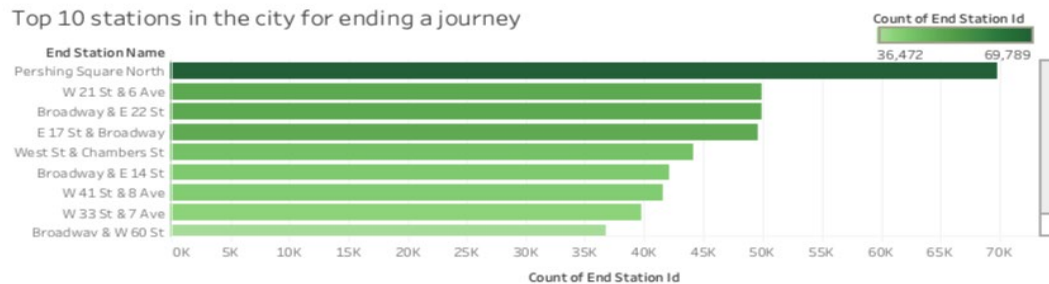
- Subscribed users (on the right) contributed a lot more to the total number of Citi Bike trips than short-term customers (on the left).

# Location Breakdown

Top 10 stations in the city for starting a journey

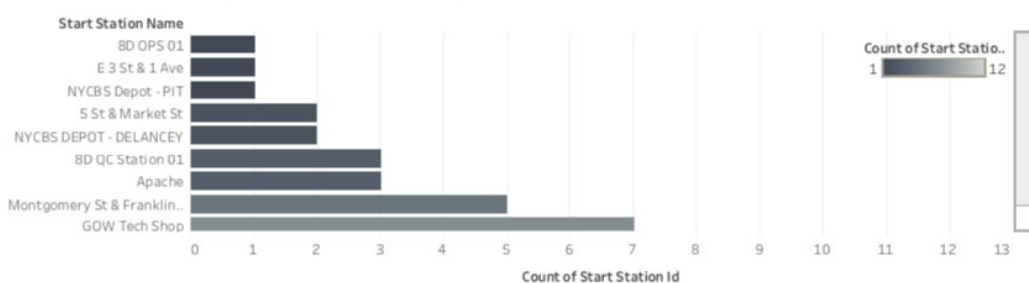


Top 10 stations in the city for ending a journey

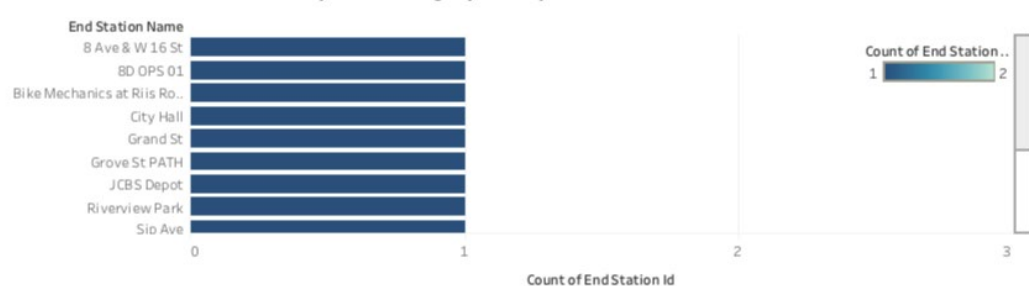


- Pershing Square North was the most popular station for starting and ending a journey, followed by W 21 St & 6 Ave.

Bottom 10 stations in the city for starting a journey

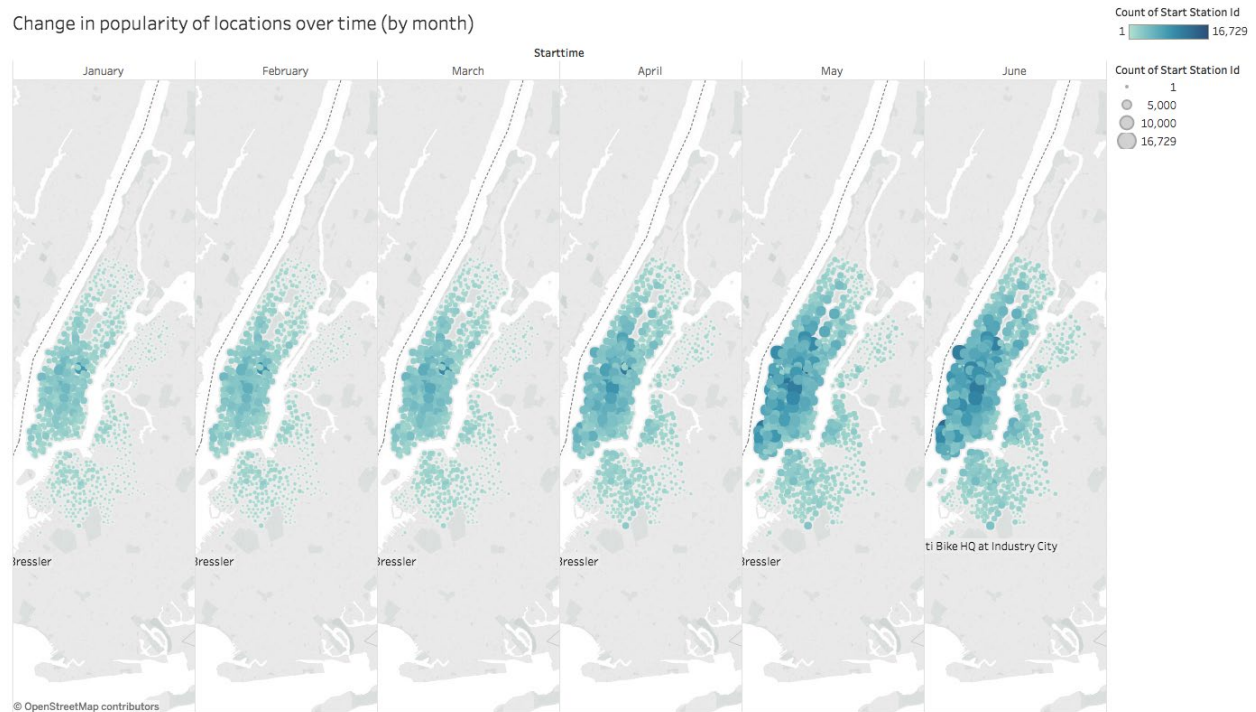


Bottom 15 stations in the city for ending a journey

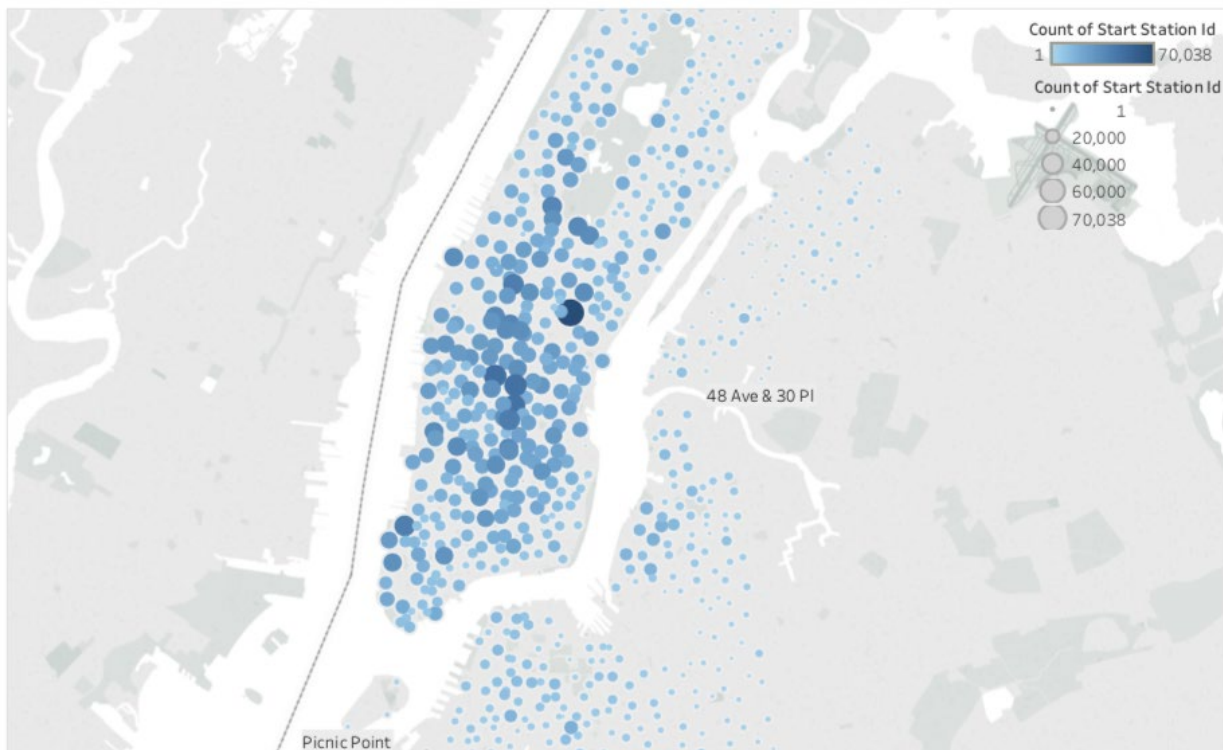


- Lists of stations which were the least popular locations for starting and ending a journey.

Change in popularity of locations over time (by month)

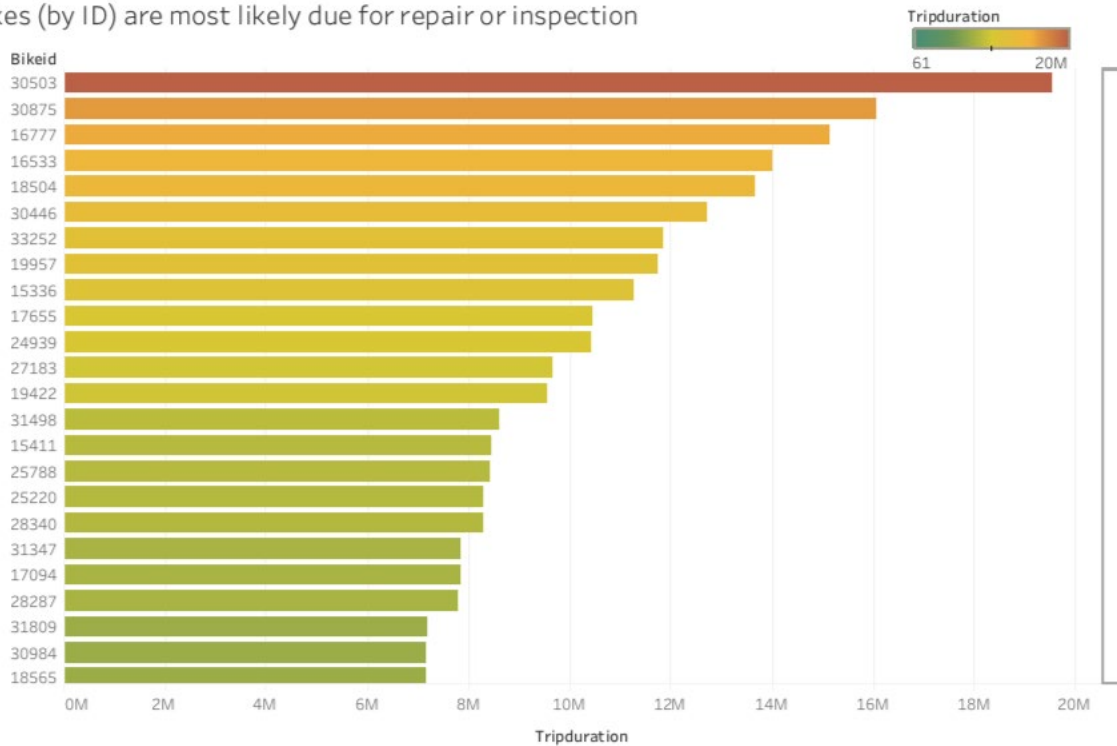


Most popular locations to start and end a journey (Static Map)



## Equipment Insights

Bikes (by ID) are most likely due for repair or inspection



From our trip data, it appears that bike 30503 has been used the most by Citi Bike users. Hence, it's most likely due for inspection and repair when needed.

Also, as we saw in previous visual, Pershing Square North was the most popular station. Frequent inspections of other equipment (vending machines, bike racks, bike lockers) at the location is also recommended for our fleet maintenance team to follow up.