

Data retrieval and cleaning process	There is 298,204 total recorded trips in 2017 tied to an important ..	Peak hours occur at 8am and 6pm when going and leaving wo..	The proportion of Short vs Long term consumers change by ..	The busiest stations are located in Jersey City where people liv..	The station popularity of broken down per month. Morris Canal, ..	Most of the trips are done by people in the early and late 30's. A ..
-------------------------------------	---	---	---	--	---	---

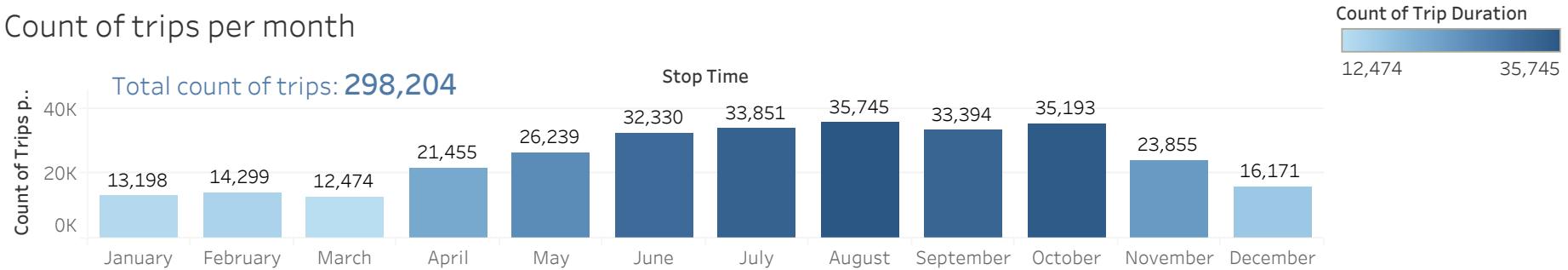
Data retrieval and cleaning process:

- 1/ The data was first accessed from: <https://www.citibikenyc.com/system-data>
- 2/ 12 consecutive months were downloaded from January 2017 to December 2017 in order to have a full recent set.
- 3/ 4 quarters of 2017 were downloaded for the same period
- 4/ Python and Panda were used to cleaned the data and concetenate the 12 and 4 .csv files respectively
- 5/ 2 set of data (annual and quarters regrouped) were joined with Tableau to explore the final set

Citi Bike Sharing |Olivier Brouard | UCB Data Analytic bootcamp

Data retrieval and cleaning process	There is 298,204 total recorded trips in 2017 tied to an important ..	Peak hours occur at 8am and 6pm when going and leaving wo..	The proportion of Short vs Long term consumers change by ..	The busiest stations are located in Jersey City where people liv..	The station popularity of broken down per month. Morris Canal, ..	Most of the trips are done by people in the early and late 30's. A ..
-------------------------------------	---	---	---	--	---	---

Count of trips per month

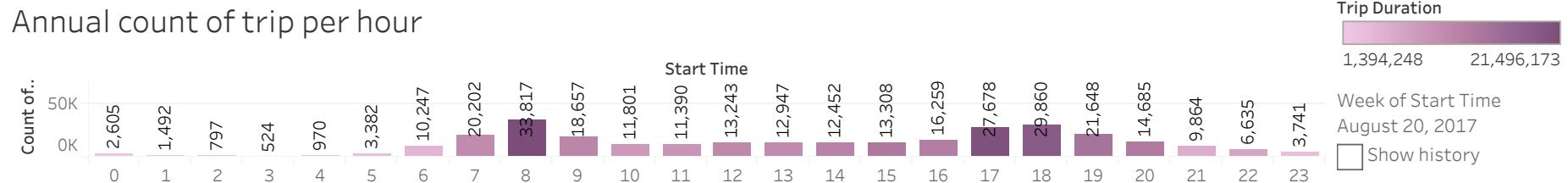


% growth of rideship per month

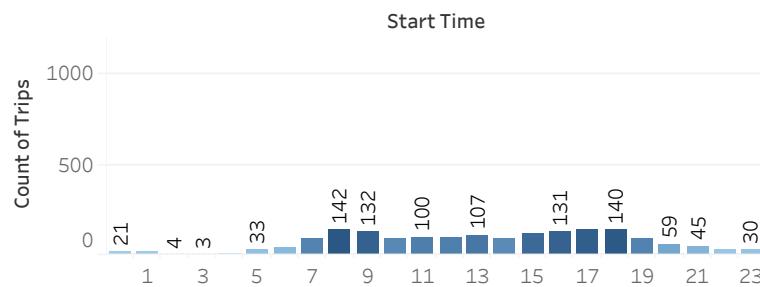


Citi Bike Sharing |Olivier Brouard | UCB Data Analytic bootcamp

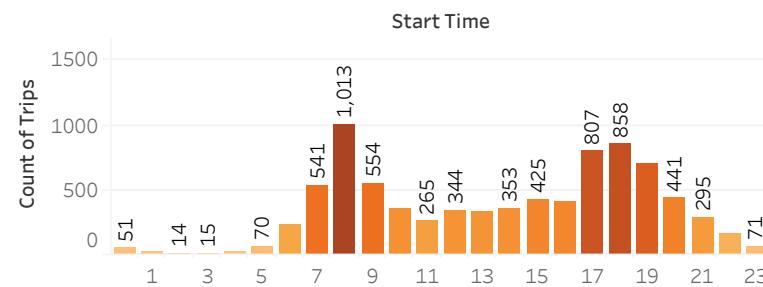
Data retrieval and cleaning process	There is 298,204 total recorded trips in 2017 tied to an important ..	Peak hours occur at 8am and 6pm when going and leaving wo..	The proportion of Short vs Long term consumers change by ..	The busiest stations are located in Jersey City where people liv..	The station popularity of broken down per month. Morris Canal, ..	Most of the trips are done by people in the early and late 30's. A ..
-------------------------------------	---	---	---	--	---	---



Count of trips Winter (start time) - December 17, 2017

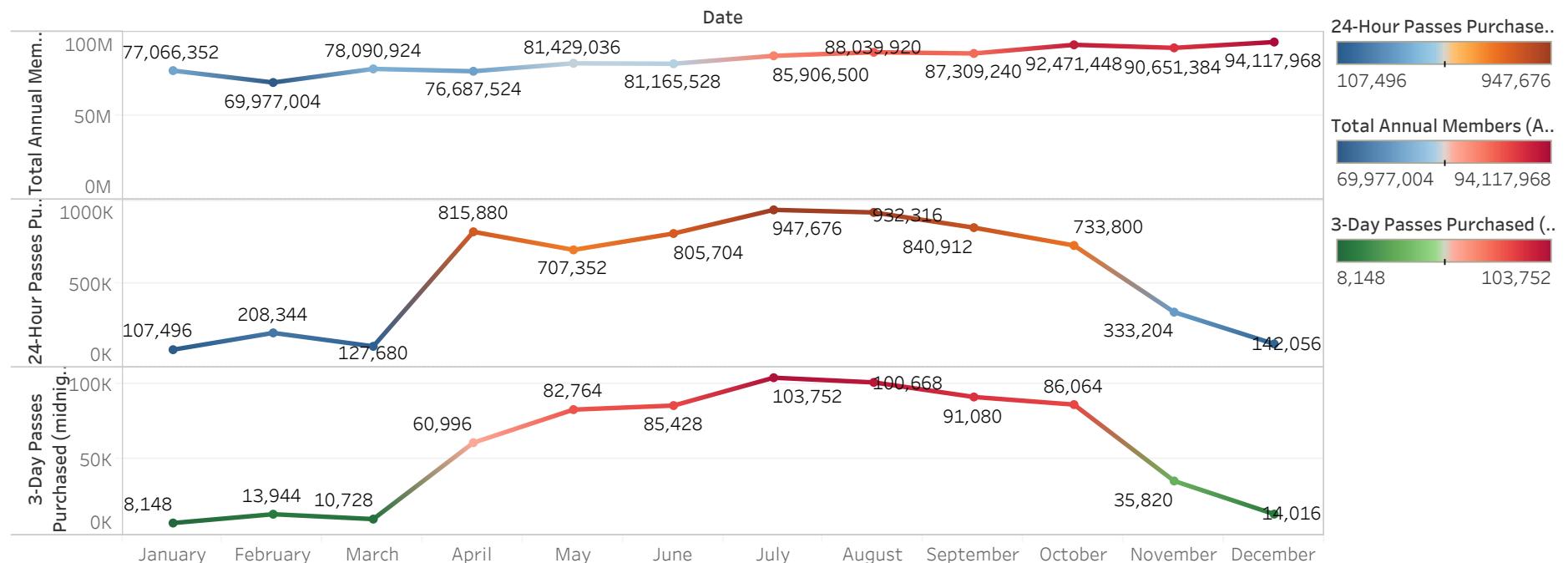


Count of trips Summer (start time) - August 20, 2017



Citi Bike Sharing |Olivier Brouard | UCB Data Analytic bootcamp

Data retrieval and cleaning process	There is 298,204 total recorded trips in 2017 tied to an important ..	Peak hours occur at 8am and 6pm when going and leaving wo..	The proportion of Short vs Long term consumers change by ..	The busiest stations are located in Jersey City where people liv..	The station popularity of broken down per month. Morris Canal, ..	Most of the trips are done by people in the early and late 30's. A ..
-------------------------------------	---	---	---	--	---	---



Citi Bike Sharing |Olivier Brouard | UCB Data Analytic bootcamp

There is 298,204 total recorded trips in 2017 tied to an important ..

Peak hours occur at 8am and 6pm when going and leaving wo..

The proportion of Short vs Long term consumers change by ..

The busiest stations are located in Jersey City where people liv..

The station popularity of broken down per month. Morris Canal, ..

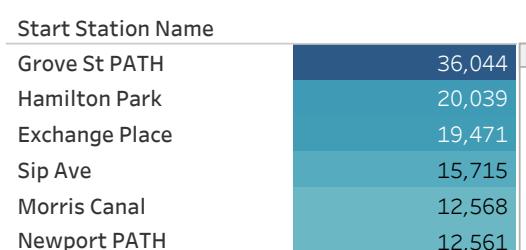
Most of the trips are done by people in the early and late 30's. A ..

The majority of the users are males. Bikes seemed to be more wi..

Map starting station



Start station: count of trips



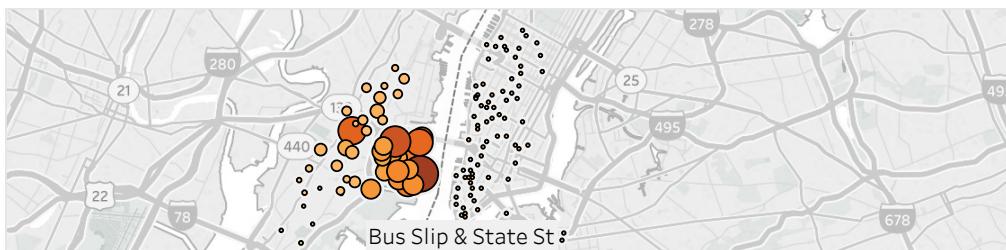
Count of Start Station ID
7 36,044

Month of Start Time
All

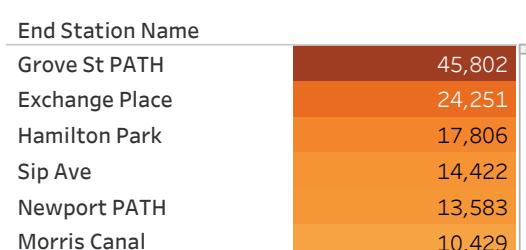
Count of Start Station ID
1 to 36,044
and Null values

Count of Start Station ID
• 7

Map End Station



End station: count of trips



Count of End Station ID
1 45,802

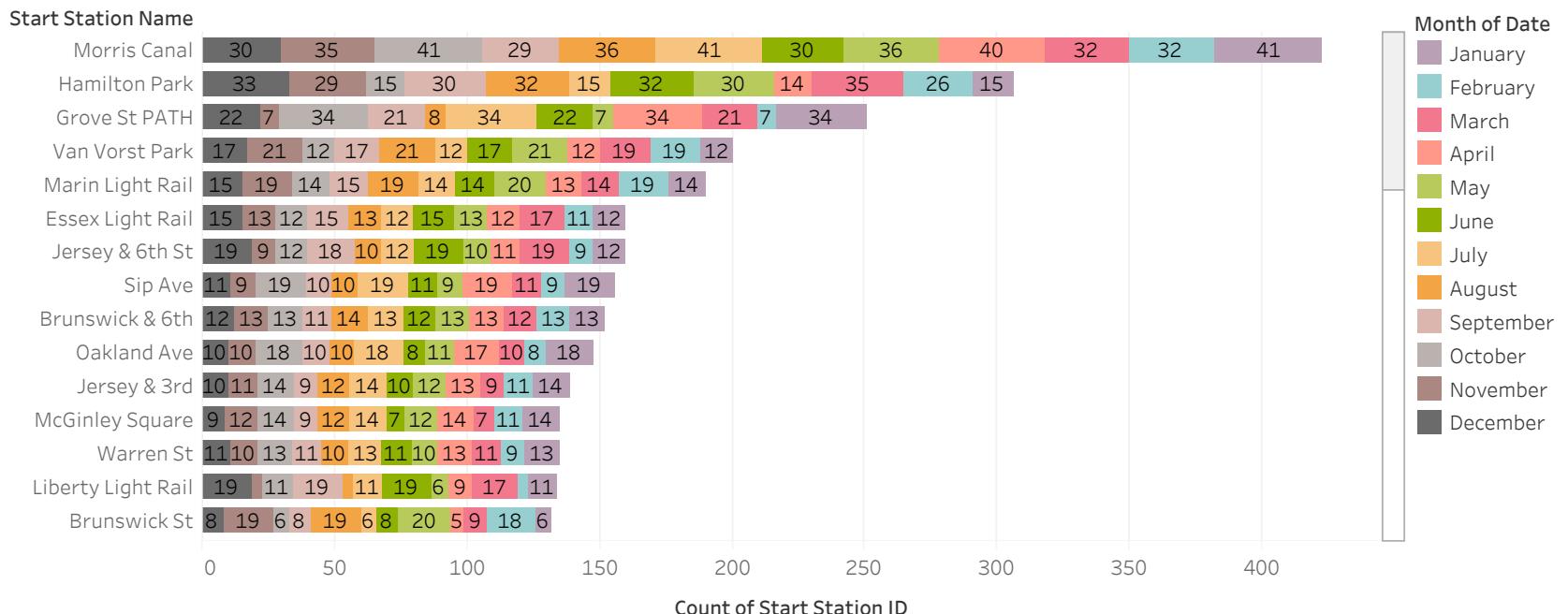
Month of Stop Time
All

Count of End Station ID
1 to 45,802
and Null values

Count of End Station ID
• 1

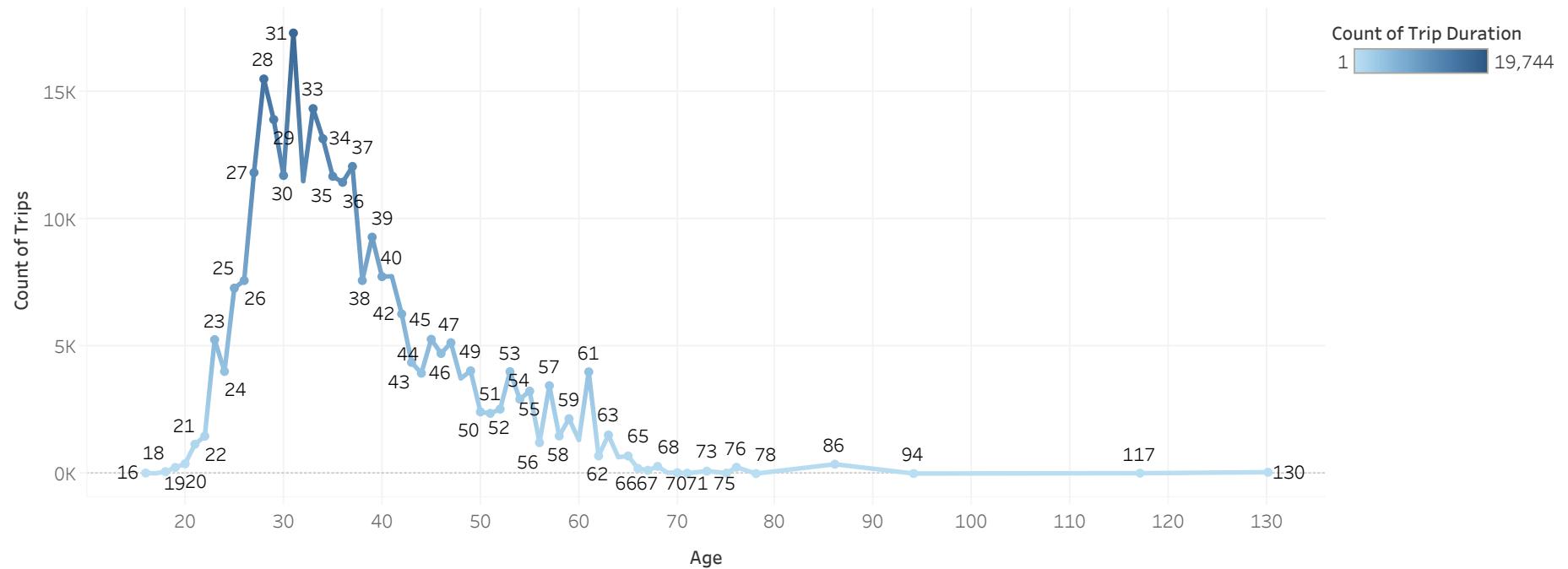
Citi Bike Sharing |Olivier Brouard | UCB Data Analytic bootcamp

Peak hours occur at 8am and 6pm when going and leaving work.	The proportion of Short vs Long term consumers change by ..	The busiest stations are located in Jersey City where people live.	The station popularity of broken down per month. Morris Canal, ..	Most of the trips are done by people in the early and late 30's. A ..	The majority of the users are males. Bikes seemed to be more wi..	Accross 2017, the female gender has continuously increase..
--	---	--	---	---	---	---



Citi Bike Sharing |Olivier Brouard | UCB Data Analytic bootcamp

The proportion of Short vs Long term consumers change b..	The busiest stations are located in Jersey City where people liv..	The station popularity of broken down per month. Morris Canal, ..	Most of the trips are done by people in the early and late 30's. A ..	The majority of the users are males. Bikes seemed to be more wi..	Accross 2017, the female gender has continuously increase..	The average miles per bike is 3.6 miles accounting for those ..
---	--	---	---	---	---	---



Citi Bike Sharing

Olivier Brouard | UCB Data Analytic bootcamp

The busiest stations are located in Jersey City where people live.

The station popularity of broken down per month. Morris Canal, ..

Most of the trips are done by people in the early and late 30's. A ..

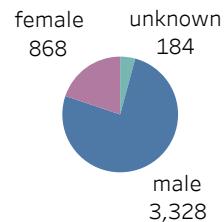
The majority of the users are males. Bikes seemed to be more wi..

Across 2017, the female gender has continuously increase..

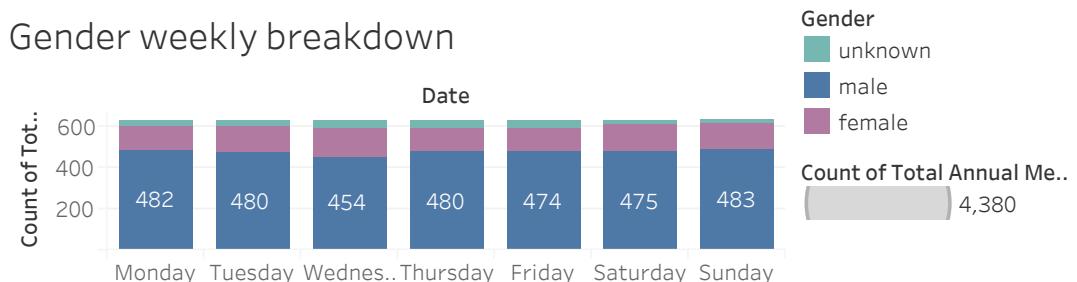
The average miles per bike is 3.6 miles accounting for those ..

The bikes ID which are most likely due for repair or inspection i..

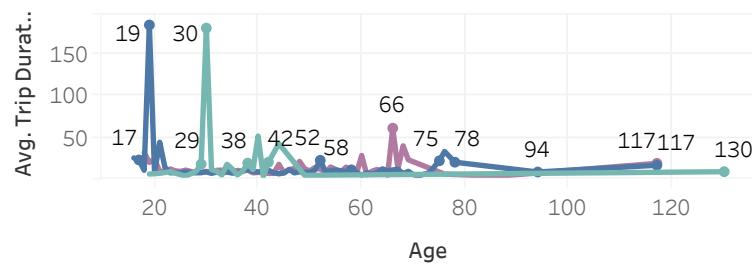
Annual member - Gender breakdown



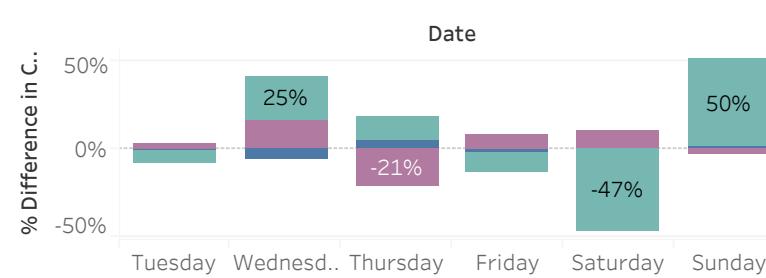
Gender weekly breakdown



Average trip duration per Age

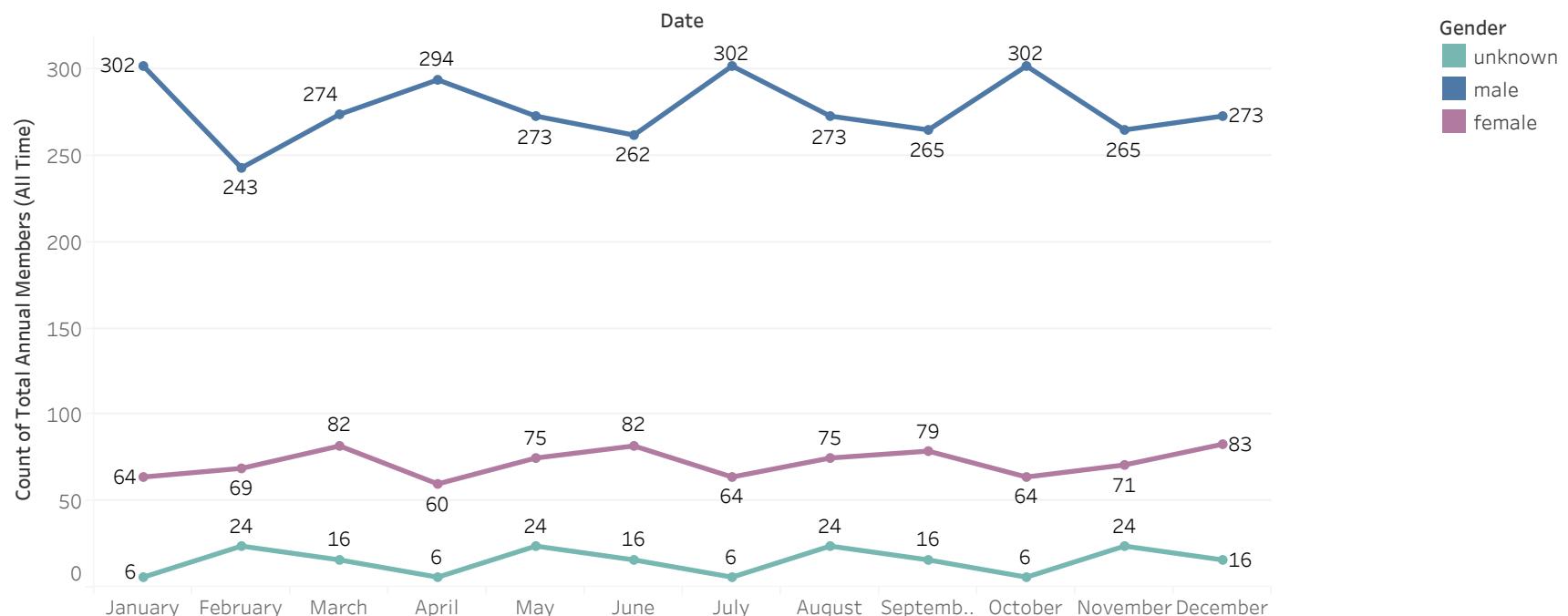


Gender % weekly usage change



Citi Bike Sharing |Olivier Brouard | UCB Data Analytic bootcamp

The station popularity of broken down per month. Morris Canal,..	Most of the trips are done by people in the early and late 30's. A ..	The majority of the users are males. Bikes seemed to be more wi..	Accross 2017, the female gender has continuously increase..	The average miles per bike is 3.6 miles accounting for those ..	The bikes ID which are most likely due for repair or inspection i..	The bike longevity and usage varies significantly due to m..
--	---	---	---	---	---	--



Citi Bike Sharing |Olivier Brouard | UCB Data Analytic bootcamp

Most of the trips are done by people in the early and late 30's. A ..

The majority of the users are males. Bikes seemed to be more wi..

Accross 2017, the female gender has continuously increase..

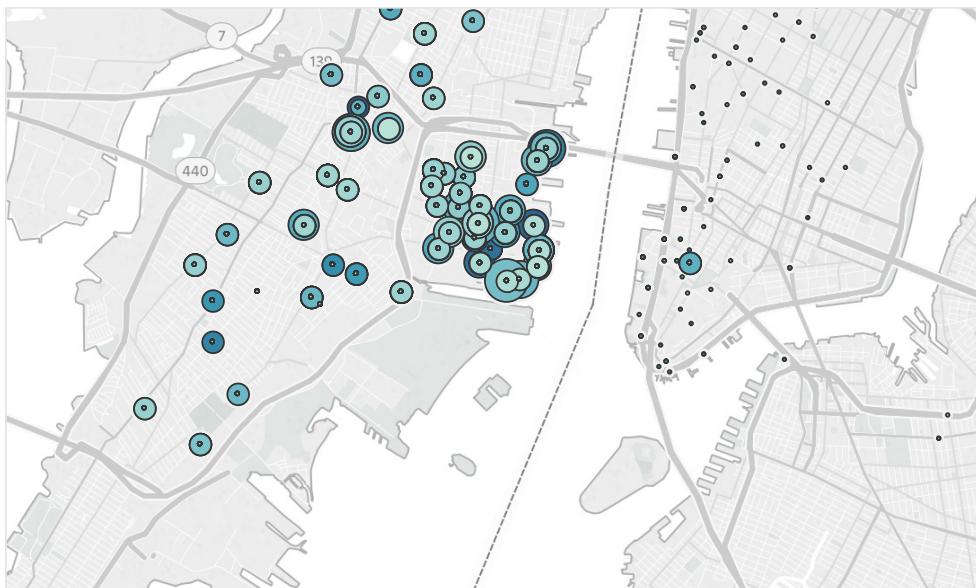
The average miles per bike is 3.6 miles accounting for those ..

The bikes ID which are most likely due for repair or inspection i..

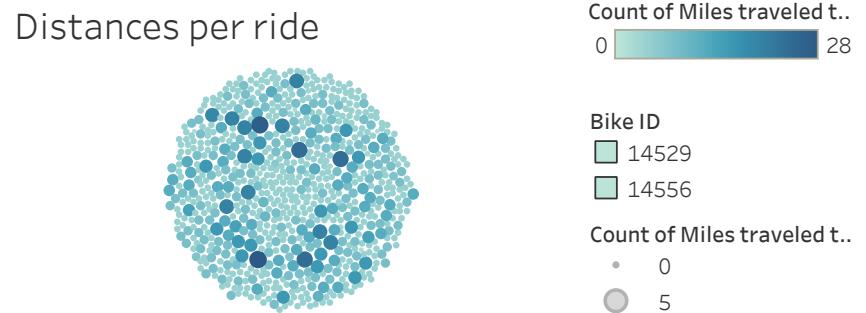
The bike longevity and usage varies significantly due to m..

Unexpected phenomena

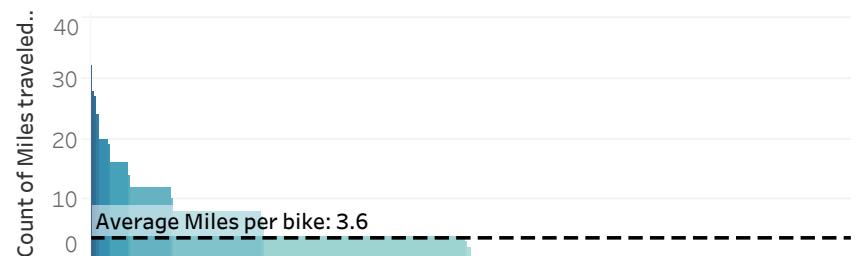
Bike mileage total



Distances per ride



Average miles traveled per bike



Citi Bike Sharing |Olivier Brouard | UCB Data Analytic bootcamp

Most of the trips are done by people in the early and late 30's. A ..

The majority of the users are males. Bikes seemed to be more wi..

Accross 2017, the female gender has continuously increase..

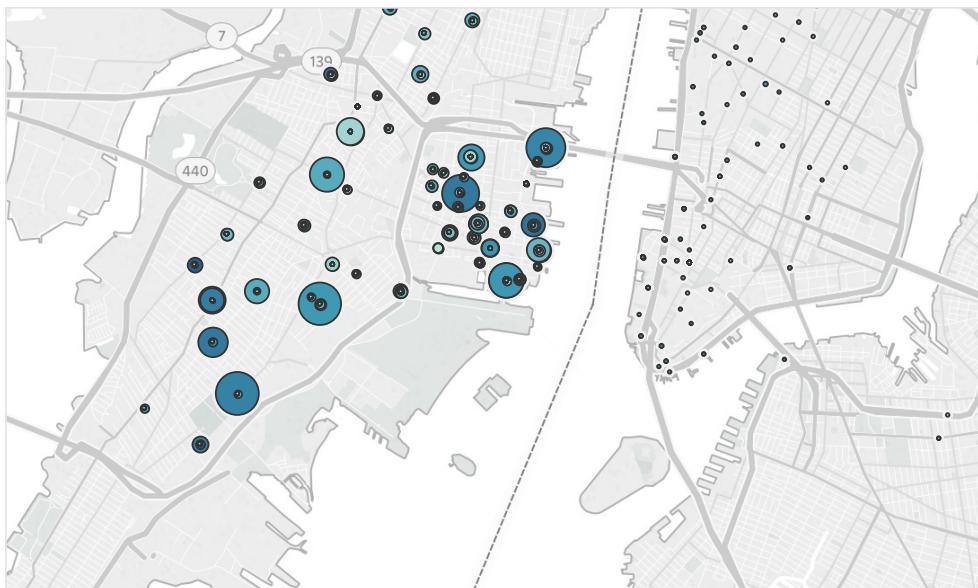
The average miles per bike is 3.6 miles accounting for those ..

The bikes ID which are most likely due for repair or inspection i..

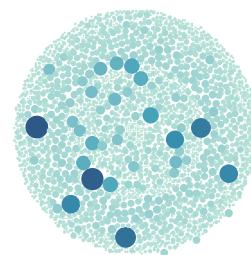
The bike longevity and usage varies significantly due to m..

Unexpected phenomena

Bike Trip duration location



Duration per bike ID



Trip Duration (hours)

- 0.0
- 200.0
- 400.0
- 606.0

Trip Duration (hours)



Bike ID trip duration (hours) classification



Citi Bike Sharing |Olivier Brouard | UCB Data Analytic bootcamp

Most of the trips are done by people in the early and late 30's. A ..

The majority of the users are males. Bikes seemed to be more wi..

Accross 2017, the female gender has continuously increase..

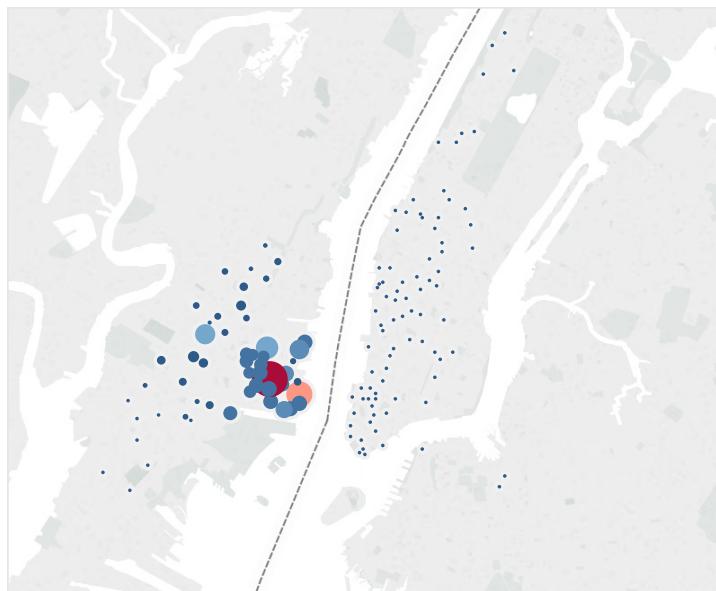
The average miles per bike is 3.6 miles accounting for those ..

The bikes ID which are most likely due for repair or inspection i..

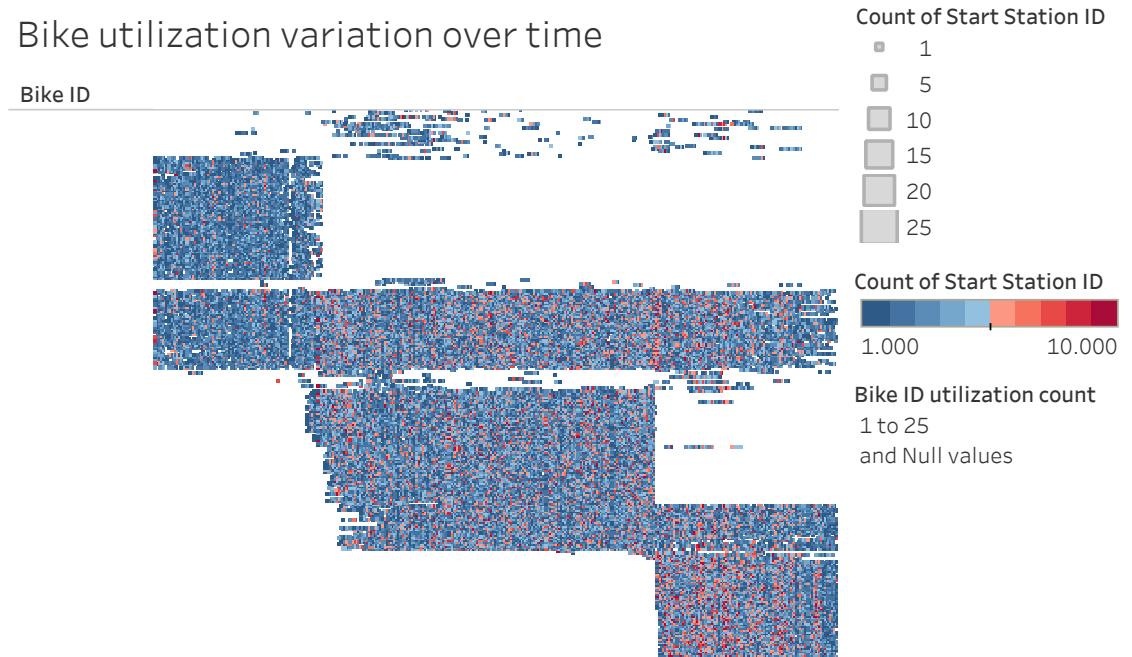
The bike longevity and usage varies significantly due to m..

Unexpected phenomena

Bike ID spatial location variation



Bike utilization variation over time



Most of the trips are done by people in the early and late 30's. A ..	The majority of the users are males. Bikes seemed to be more wi..	Accross 2017, the female gender has continuously increase..	The average miles per bike is 3.6 miles accounting for those ..	The bikes ID which are most likely due for repair or inspection i..	The bike longevity and usage varies significantly due to m..	Unexpected phenomena
---	---	---	---	---	--	----------------------

Unexpected phenomena:

1/ The distribution of Starting stations ID and End stations ID isn't balanced uniformly. There are no Starting station in Manhattan or New York island as compared to Jersey City, which could be explained by the fact that the database was rather only looking at a specific zip code area and that there are quiet a few of maintenance rides from the Citibike staff to rebalance the bike accross the stations to avoid depletion or overloaded areas.

2/The longevity and in general the usage of the bikes varies accross the overal stock. From the previous tab, many bikes are taken out of the circulation for a specific reason whereas they haven't been used too much, as compared to other which are been used over a much longer time frame. This could be explained by different factor (regular maintenance checks after a certain mileage, frequency of usage etc.)