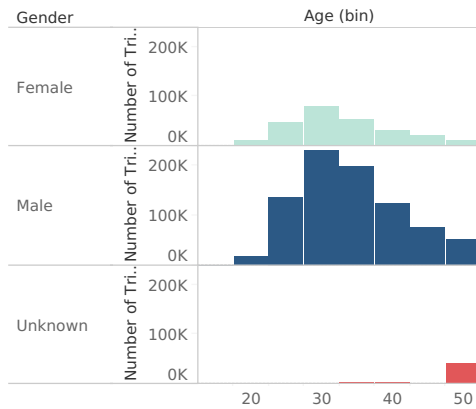


City Bike Story

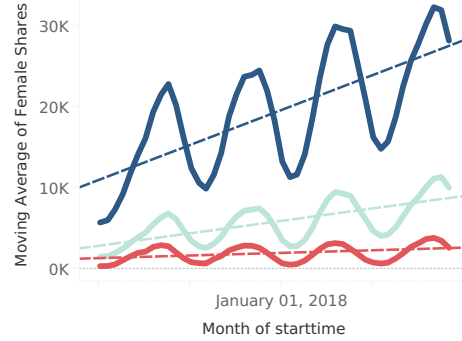
| Rider Information (Gender) | Rider Information (UserTypes) | Trip Information (Ridership Trips) | Trip Information (Peak Hours) | Trip Information (Duration) | Start Stations | End Stations | Bike Stats |
|-------------------------------|----------------------------------|--|----------------------------------|--------------------------------|----------------|--------------|---------------|
|-------------------------------|----------------------------------|--|----------------------------------|--------------------------------|----------------|--------------|---------------|

Trip Distribution With Gender & Age

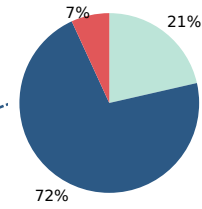


Gender
All

Ridership over the timespan



Gender



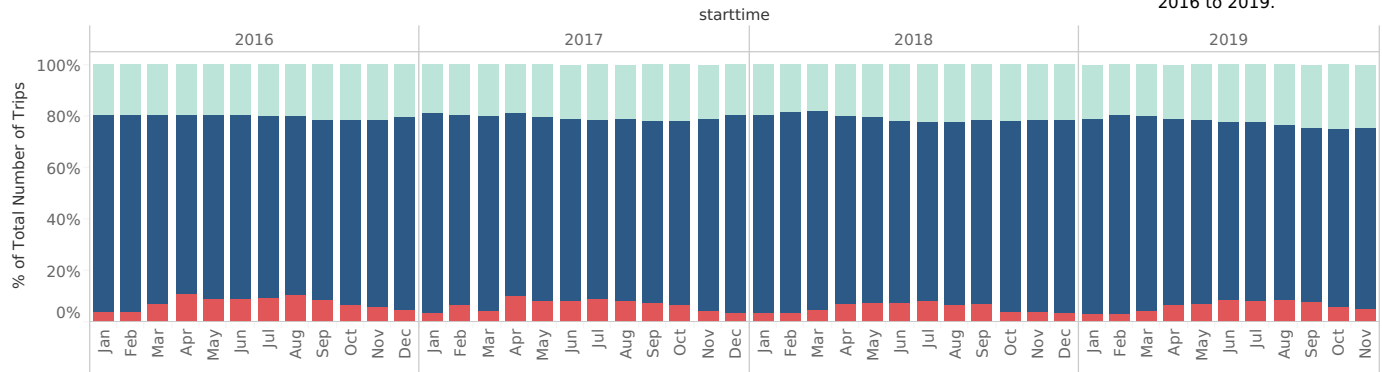
City Bike Riders tends to be more of Male (72%). Most of the City Bike Riders Male are from Age group 25-40.

The female riders (21%) are less compared to male riders. There are few riders (7%) with unknown category. (Might be a Data issue)

How effective has gender outreach been in increasing female ridership over the course of the past three years?

The Female ridership over the course of the past three years has been increasing over the timespan from 2016 to 2019.

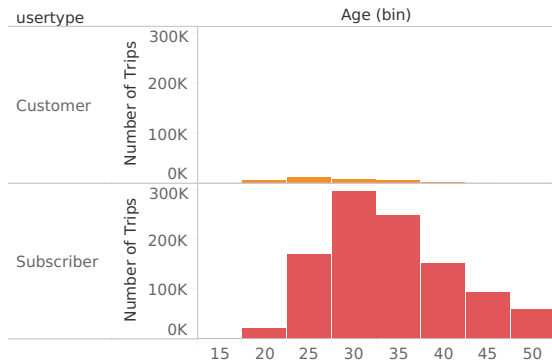
Gender Shares - Monthly Changes



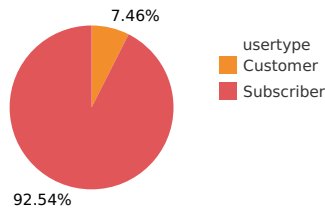
City Bike Story

| Rider Information (Gender) | Rider Information (UserTypes) | Trip Information (Ridership Trips) | Trip Information (Peak Hours) | Trip Information (Duration) | Start Stations | End Stations | Bike Stats |
|-------------------------------|----------------------------------|--|----------------------------------|--------------------------------|----------------|--------------|---------------|
|-------------------------------|----------------------------------|--|----------------------------------|--------------------------------|----------------|--------------|---------------|

Trip Distribution With UserTypes & Age



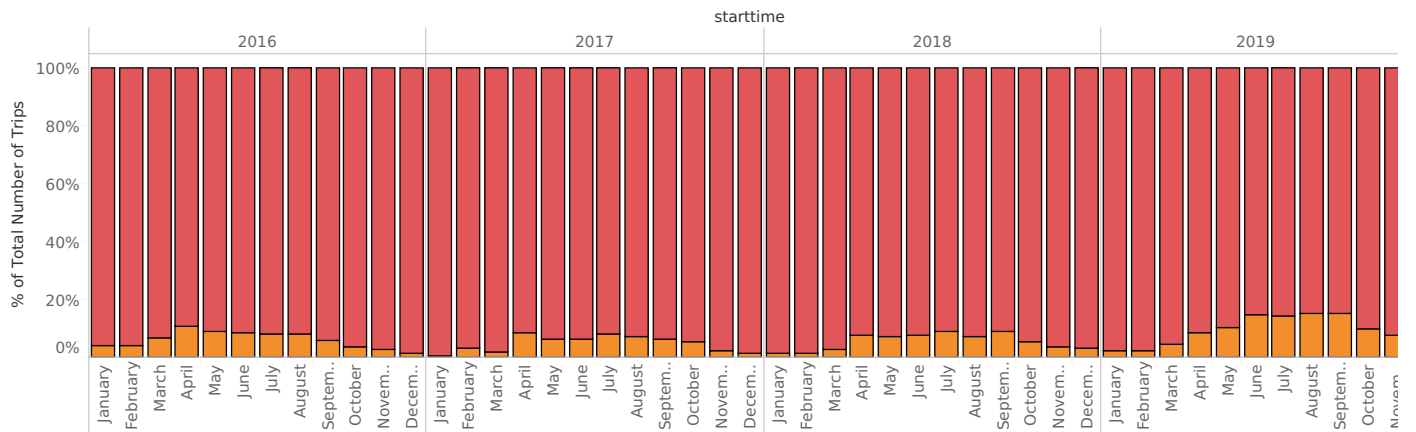
User Types



How has the proportion of short-term customers and annual subscribers changed?

City Biker riders tends to be Long Term (Annual Subscribers).
 The Percentage of Short Term (Customers) is very seasonal, peaking at summer & fall seasons.
 The Percentage of Short term customers is high on 2019.
 Age Group from 25 to 40 has the highest annual city bike subscribers.

Proportion Change in Short Term Customers Vs Annual Subscribers



City Bike Story

| Rider Information (Gender) | Rider Information (UserTypes) | Trip Information (Ridership Trips) | Trip Information (Peak Hours) | Trip Information (Duration) | Start Stations | End Stations | Bike Stats |
|-------------------------------|----------------------------------|--|----------------------------------|--------------------------------|----------------|--------------|---------------|
|-------------------------------|----------------------------------|--|----------------------------------|--------------------------------|----------------|--------------|---------------|

| Number of Trips | Distance (miles) | Trip Duration (hrs) |
|-----------------|------------------|---------------------|
| 1,281,623 | 5,030,480 | 83,260 |

All

Select the Year

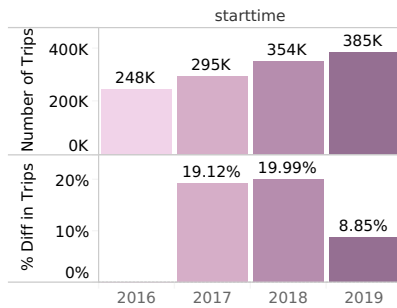
How many trips have been recorded total during the chosen period?

There are totally 1 millions rides from 2016 to 2019. (Lighter Version Data)
Number of Trips is gradually increasing from 2016 to 2019.

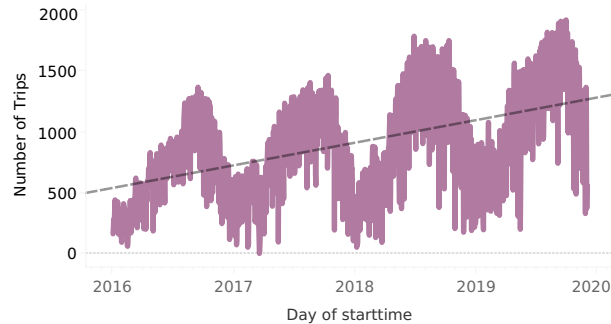
By what percentage has total ridership grown?

The Biggest yearly growth happened on 2017, but dropped in 2019.
Number of Trips is Peak During Summer Season.
Biggest monthly over last year change happened on Feb of 2017.

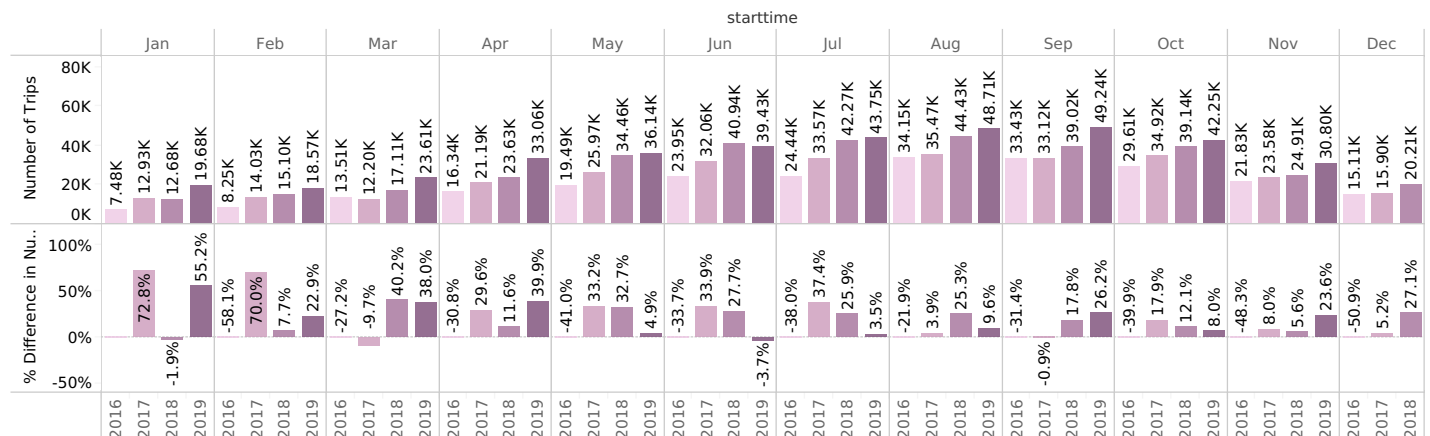
Trips Record & % Change - Year Wise



Daily RiderShip Changes from 2016 to 2019



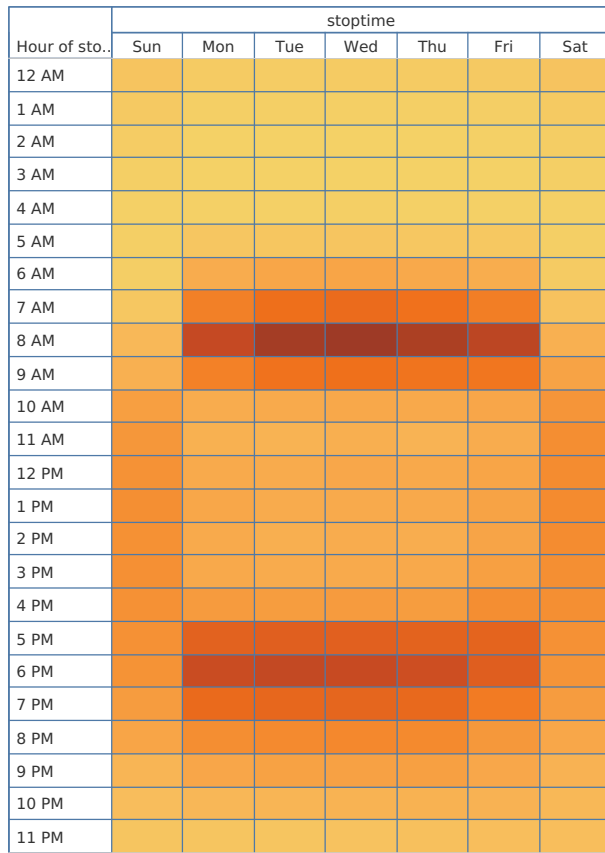
Trips Record & % Change - Month Wise



City Bike Story

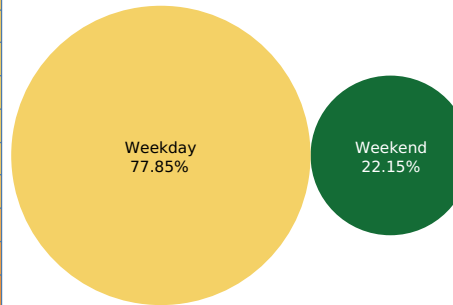
| | | | | | | | |
|-------------------------------|----------------------------------|--|----------------------------------|--------------------------------|----------------|--------------|---------------|
| Rider Information (Gender) | Rider Information (UserTypes) | Trip Information (Ridership Trips) | Trip Information (Peak Hours) | Trip Information (Duration) | Start Stations | End Stations | Bike Stats |
|-------------------------------|----------------------------------|--|----------------------------------|--------------------------------|----------------|--------------|---------------|

Peak Hours



All Year All Month

Weekday Vs Weekend



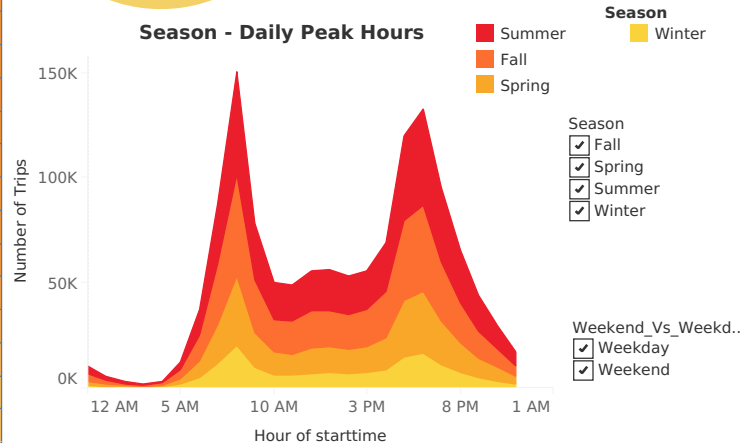
During Weekdays, City Bike Stations are busy from 7AM to 9AM in the morning and 5PM to 7PM in the evening. (Peak Hours). This means that lots of people in New York use City Bike for their commute to work.

During Weekends, City Bike Stations are little busy from 11 AM to 3PM.

Most of the People Use City Bikes during Weekdays(78%) than Weekends (22%).

Most of the People Use City Bikes During Summer & Fall Seasons. (More Number of Trips)

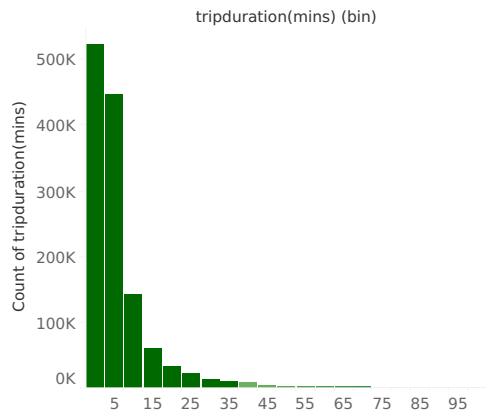
Season - Daily Peak Hours



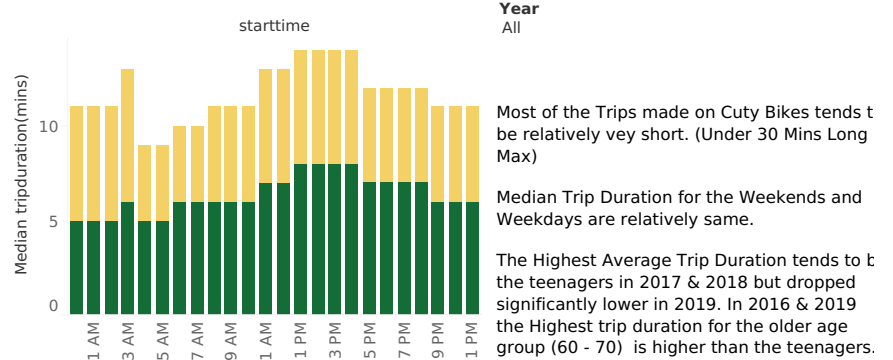
City Bike Story

| Rider Information (UserTypes) | Trip Information (Ridership Trips) | Trip Information (Peak Hours) | Trip Information (Duration) | Start Stations | End Stations | Bike Stats | Un ex p.. |
|----------------------------------|--|----------------------------------|--------------------------------|----------------|--------------|------------|-----------------|
|----------------------------------|--|----------------------------------|--------------------------------|----------------|--------------|------------|-----------------|

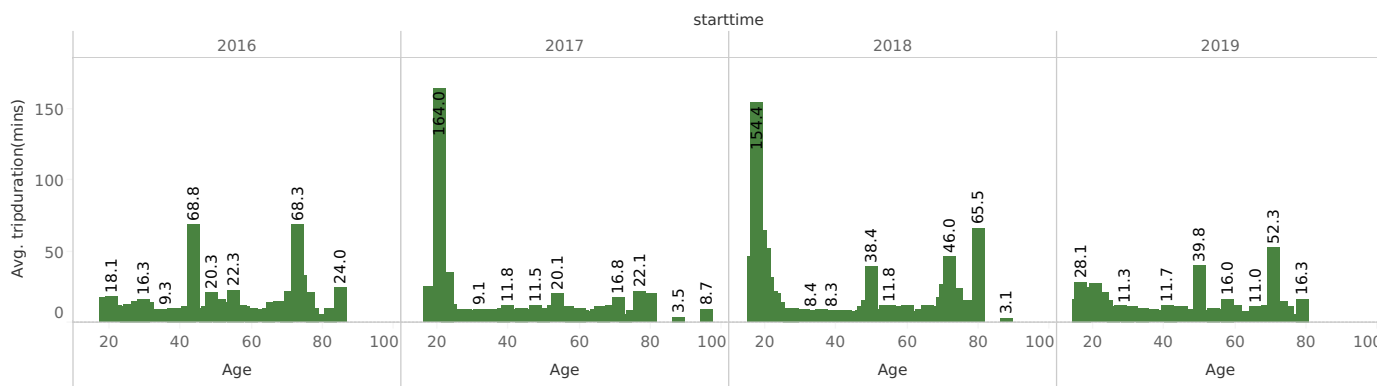
Trip Duration



Weekday Vs Weekend Median Trip Duration



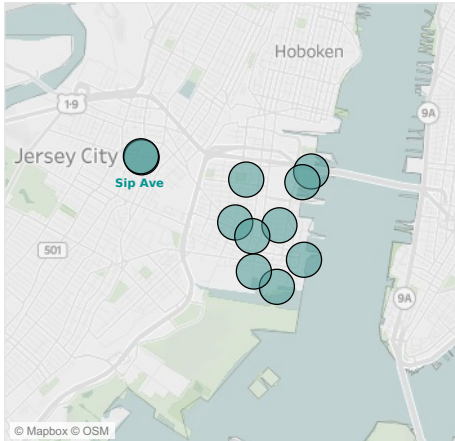
Trip Duration by Age



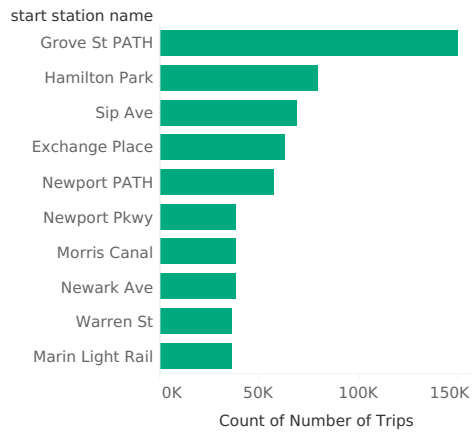
City Bike Story

| Rider Infor mat.. | Trip Information (Ridership Trips) | Trip Information (Peak Hours) | Trip Information (Duration) | Start Stations | End Stations | Bike Stats | Unexpected Phenomenons |
|-------------------|-------------------------------------|-------------------------------|-----------------------------|----------------|--------------|------------|------------------------|
|-------------------|-------------------------------------|-------------------------------|-----------------------------|----------------|--------------|------------|------------------------|

Top 10 Start Station Map



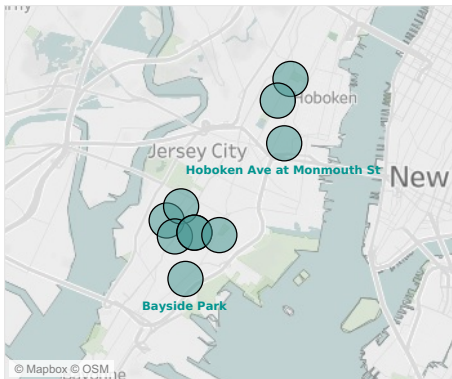
Top 10 Start Station



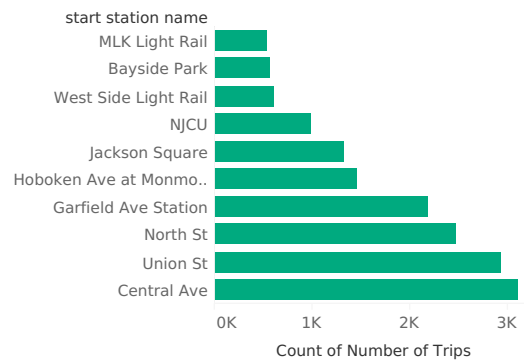
The most popular Citibike Starting points tend to be in around the City.
Grove St PATH followed by Hamilton Park - Most No. of Trips

The least popular Citibike Starting points tend to be little away from the City.
MLK Light Rain followed by Bayside Park - Less No. of Trips

Bottom 10 Start Station Map



Bottom 10 Start Station



Input the Top/Bottom N

Month of starttime

- ☒ January
- ☒ February
- ☒ March
- ☒ April
- ☒ May
- ☒ June
- ☒ July
- ☒ August
- ☒ September
- ☒ October
- ☒ November
- ☒ December

Year of starttime

- ☒ 2016
- ☒ 2017
- ☒ 2018
- ☒ 2019

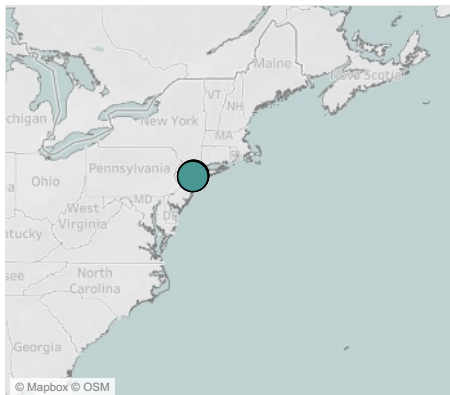
City Bike Story

| Rider Infor mat.. | Trip Information (Ridership Trips) | Trip Information (Peak Hours) | Trip Information (Duration) | Start Stations | End Stations | Bike Stats | Unexpected Phenomenons |
|-------------------|-------------------------------------|-------------------------------|-----------------------------|----------------|--------------|------------|------------------------|
|-------------------|-------------------------------------|-------------------------------|-----------------------------|----------------|--------------|------------|------------------------|

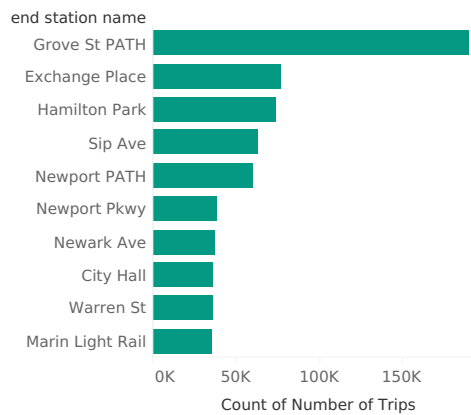
Top 10 End Station Map



Bottom 10 End Station Map



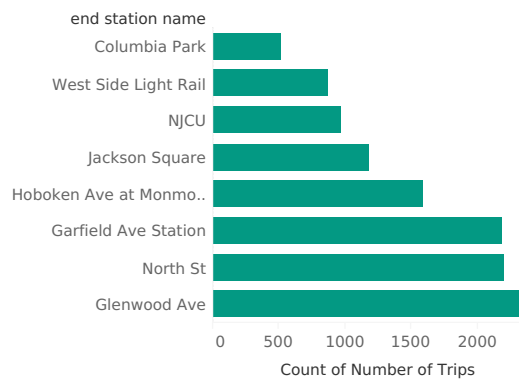
Top 10 End Station



The most popular Citibike Ending points tend to be in around the City and have significant overlaps.
Grove St PATH followed by Exchange Place - Most No. of Trips

The least popular Citibike Ending points tend to be little away from the City and most likely all the Ending points tends to be near by stations.
Columbia Park followed by West Side Light Rail - Less No. of Trips

Bottom 10 End Station



Input the Top/Bottom N
 10

Year of stoptime

- ☒ 2016
- ☒ 2017
- ☒ 2018
- ☒ 2019

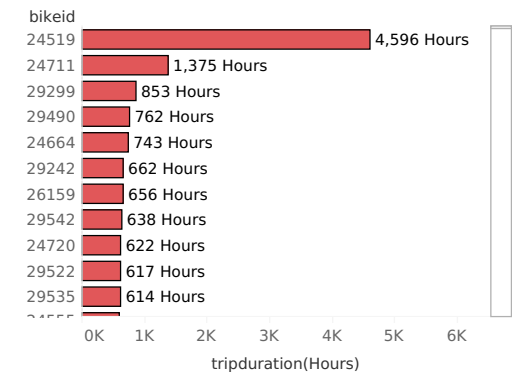
Month of stoptime

- ☒ January
- ☒ February
- ☒ March
- ☒ April
- ☒ May
- ☒ June
- ☒ July
- ☒ August
- ☒ September
- ☒ October
- ☒ November
- ☒ December

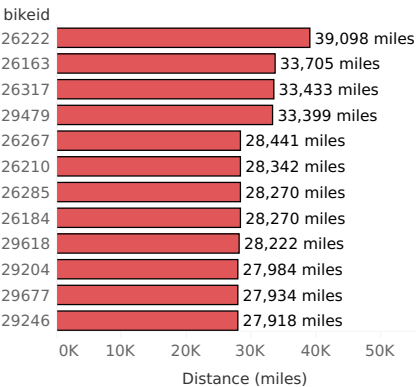
City Bike Story

| Rider Infor mat.. | Trip Information (Ridership Trips) | Trip Information (Peak Hours) | Trip Information (Duration) | Start Stations | End Stations | Bike Stats | Unexpected Phenomenons |
|-------------------|-------------------------------------|-------------------------------|-----------------------------|----------------|--------------|------------|------------------------|
|-------------------|-------------------------------------|-------------------------------|-----------------------------|----------------|--------------|------------|------------------------|

Bike Vs Long Duration



Bike Vs Long Distance

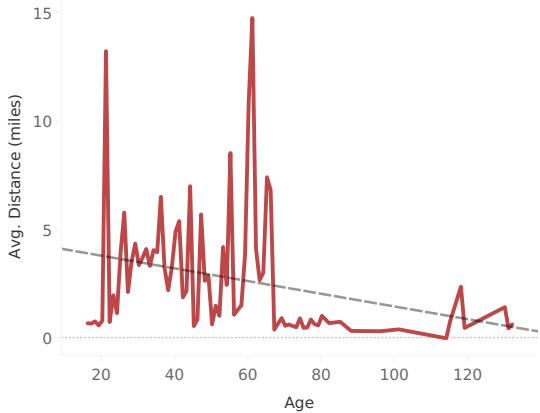


Which Bikes (by ID) are most likely due for repair or inspection this year?

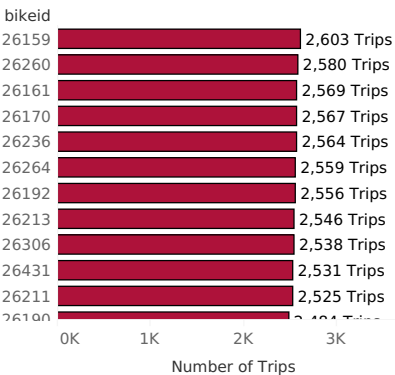
The bikes with Longest distance might have locking issues where the bike chains will get dirty and crunchy. Bike id 26222 being the top in Long distance followed by 26163, 26317 most likely due for repair or inspection.

The bikes with Longest Duration might have problem in mileage efficiency for the various factors like Traffic, Aggressive driving, etc; thus reducing fuel economy which can be lead for inspection. Bike id 24519 being the top in Longest Duration might fall into this category.

Average Distance By Age



Bike Vs Trips



The Bikes with Many trips (i.e Been ride most of the trips) are more likely to fall into the service/repair/inspection category.

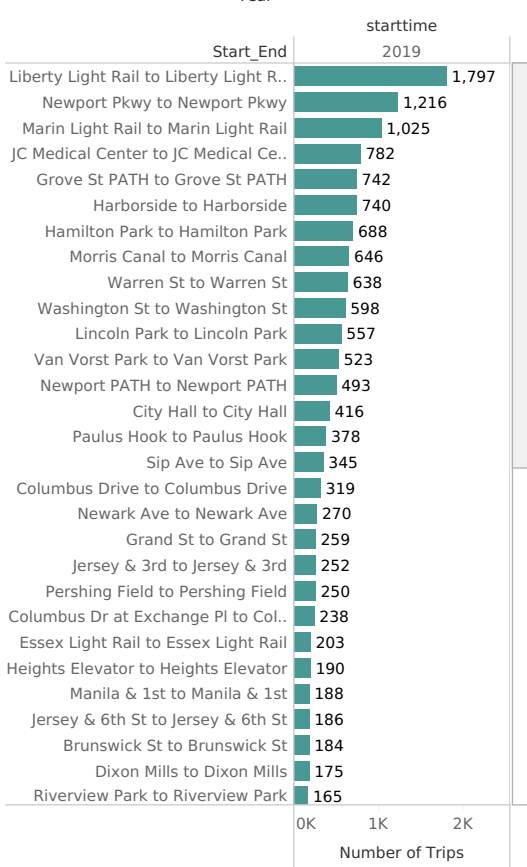
Average Distance By Age Factor

The Age Group in 60's and 20's travel the more average distance around 14 miles. They get to use the most out of these motorbikes rides.

City Bike Story

| Rider Infor mat.. | Trip Information (Ridership Trips) | Trip Information (Peak Hours) | Trip Information (Duration) | Start Stations | End Stations | Bike Stats | Unexpected Phenomenons |
|-------------------|-------------------------------------|-------------------------------|-----------------------------|----------------|--------------|------------|------------------------|
|-------------------|-------------------------------------|-------------------------------|-----------------------------|----------------|--------------|------------|------------------------|

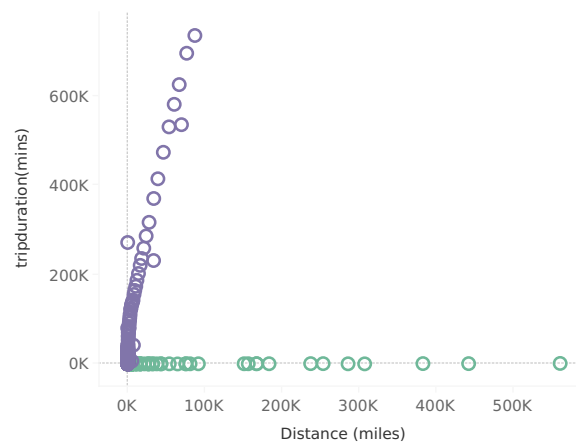
Start & End Station Same



Odd Station Pairs

| Start_End | Distance (miles) | Trip Duration (hrs) |
|----------------------------------|------------------|---------------------|
| Newport PATH to WS Don't Use | 307,082 | 0 |
| Newport Pkwy to WS Don't Use | 285,529 | 0 |
| Exchange Place to WS Don't U.. | 274,750 | 0 |
| Leonard Gordon Park to JSQ D.. | 258,665 | 15 |
| Oakland Ave to JSQ Don't Use | 247,871 | 0 |
| Essex Light Rail to WS Don't U.. | 193,945 | 0 |
| Grove St PATH to WS Don't Use | 161,634 | 1 |
| Columbus Drive to WS Don't U.. | 161,627 | 0 |
| Newark Ave to WS Don't Use | 145,476 | 0 |
| Dey St to JSQ Don't Use | 129,342 | 2 |
| Marin Light Rail to WS Don't Use | 123,917 | 0 |
| Paulus Hook to WS Don't Use | 123,906 | 4 |
| Oakland Ave to WS Don't Use | 107,770 | 0 |
| Pershing Field to JSQ Don't Use | 96,994 | 0 |

Distance Vs Trip Duration Odd Behaviour



Starting and Ending Station are same for most of the trips?

First Plot

The bike rider has returned the bike to the same stations for most of the trips. The Travel distance will be challenge for the trips that end at the same station. Liberty Light Rail, Newport Pkwy and Marin Light Rail being the Top 3 Station Pair (Start & End)

Few Trips Having Zero Tri Duration but Distance travelled is Non-Zero values?

Second & Third Plot

The End Station has odd names with "Don't Use" . (Looks like a Data Issue)
The Distance travelled is mor compared to the trip duration because the latitude and longitude for the "Dont Use" end stations are wrong(zero values --> Hover the Distanc to get the values).
For the Distance Visualizations, trips to these stations should be treated as outliers and ignored in our analysis.