

CitiBike_Analysis_FINAL

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Story 1

Introduction: Citi Bike Analytics

Citi Bike Map Start Station: April-Sept 2020/ Monthly

Citi Bike Map End Station: April-Sept 2020/Monthly

Citi Bike Map Start Station: April-Sept 2021/Monthly

Citi Bike Map End Station: April-Sept 2021/Monthly

Citi Bike Map Start & End Station Table Summary:April-Sept ..

Citi Bike Map Start & End Station Tabl..



Citi Bike Analytics Case Report

By Rebecca Melo

ABOUT:

Citi Bike is a privately owned public bicycle sharing system serving the New York City boroughs of the Bronx, Brooklyn, Manhattan, and Queens, as well as Jersey City, New Jersey.

Number of Stations: 1,000 +

Total # of Bike Riders in 2020 (April-Sept): 10,976,472

Total # of Bike Riders in 2021(April-Sept): 17,406,587

% of riders increase: 45%

Website: <http://citibikenyc.com/>

SYSTEM DATA:

This data is provided according to the NYCBS Data Use Policy. Selected Dataset time frame is from January 2020 to June 2020.

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

Data Used: Peak Months (April to September) of Citi Bike Trip Data, 2020-2021

April to September months were used in this data since weather in New York around those months are typically nice riding weather. Therefore, this would be the most output of riders using Citi Bikes.



Story 1

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Citi Bike Map Start
Station: April-Sept
2020/Monthly

Citi Bike Map End
Station: April-Sept
2020/Monthly

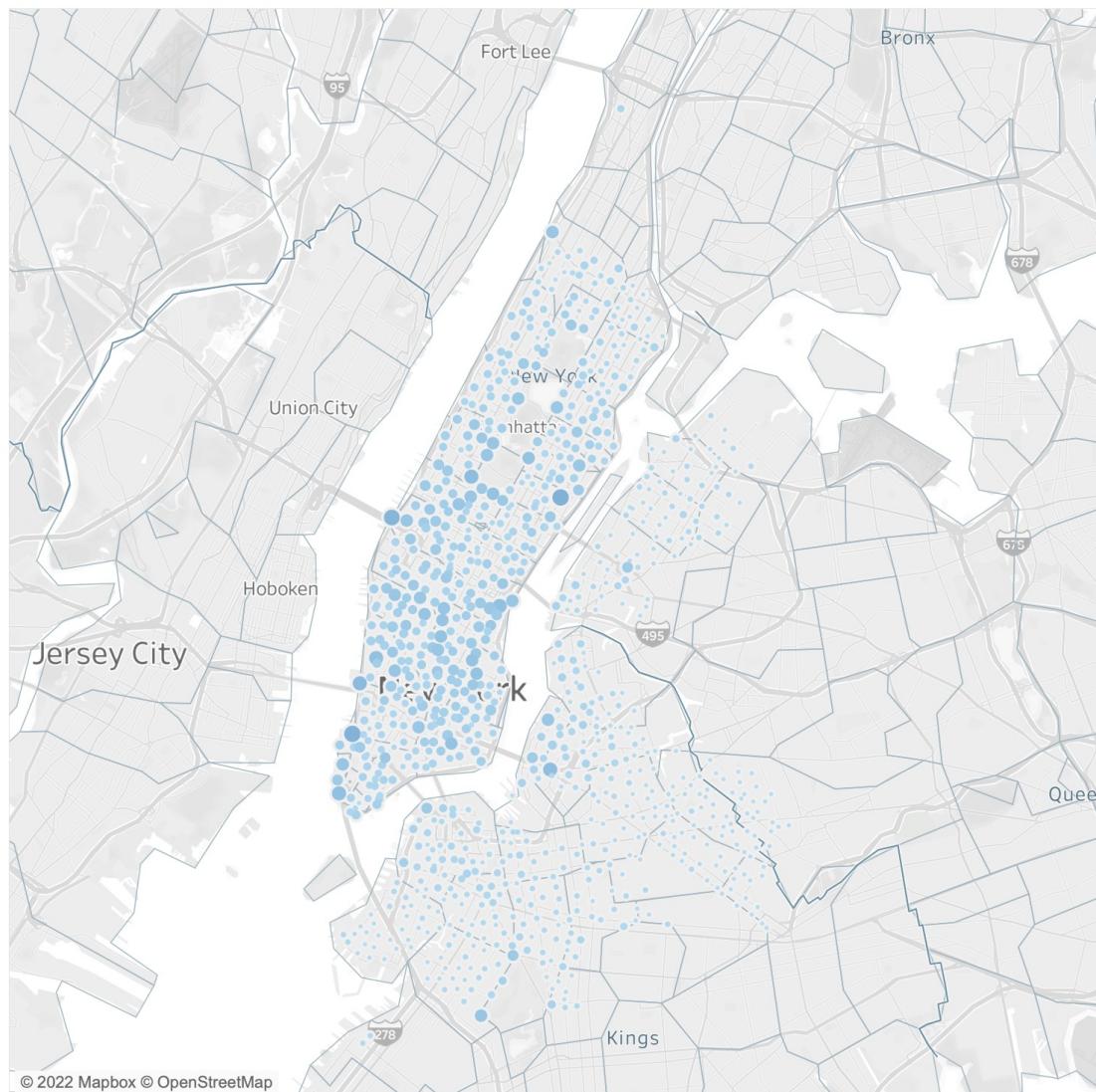
Citi Bike Map Start
Station: April-Sept
2021/Monthly

Citi Bike Map End
Station: April-Sept
2021/Monthly

Citi Bike Map Start &
End Station Table
Summary:April-Sept ..

Citi Bike Map
Start & End
Station Tabl..

Map Start/Month Dashboard - 2020



Count - Starting Trips 2020

1 14,368

Count - Starting Trips 2020

- 1
- 5,000
- 10,000
- 14,368

Month of Start Time

April

Show history

Top 10 Stations to Start At Peak 2020

Start Station Name

1 Ave & E 68 St	59,045
12 Ave & W 40 St	66,301
Broadway & W 60 St	53,019
Christopher St & Gree..	50,044
E 13 St & Avenue A	45,786
E 17 St & Broadway	45,648
Pier 40 - Hudson River ..	54,013
W 21 St & 6 Ave	50,991
West St & Chambers St	63,541
West St & Liberty St	44,230

Story 1

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Citi Bike Map Start Station: April-Sept 2020/ Monthly

Citi Bike Map End Station: April-Sept 2020/Monthly

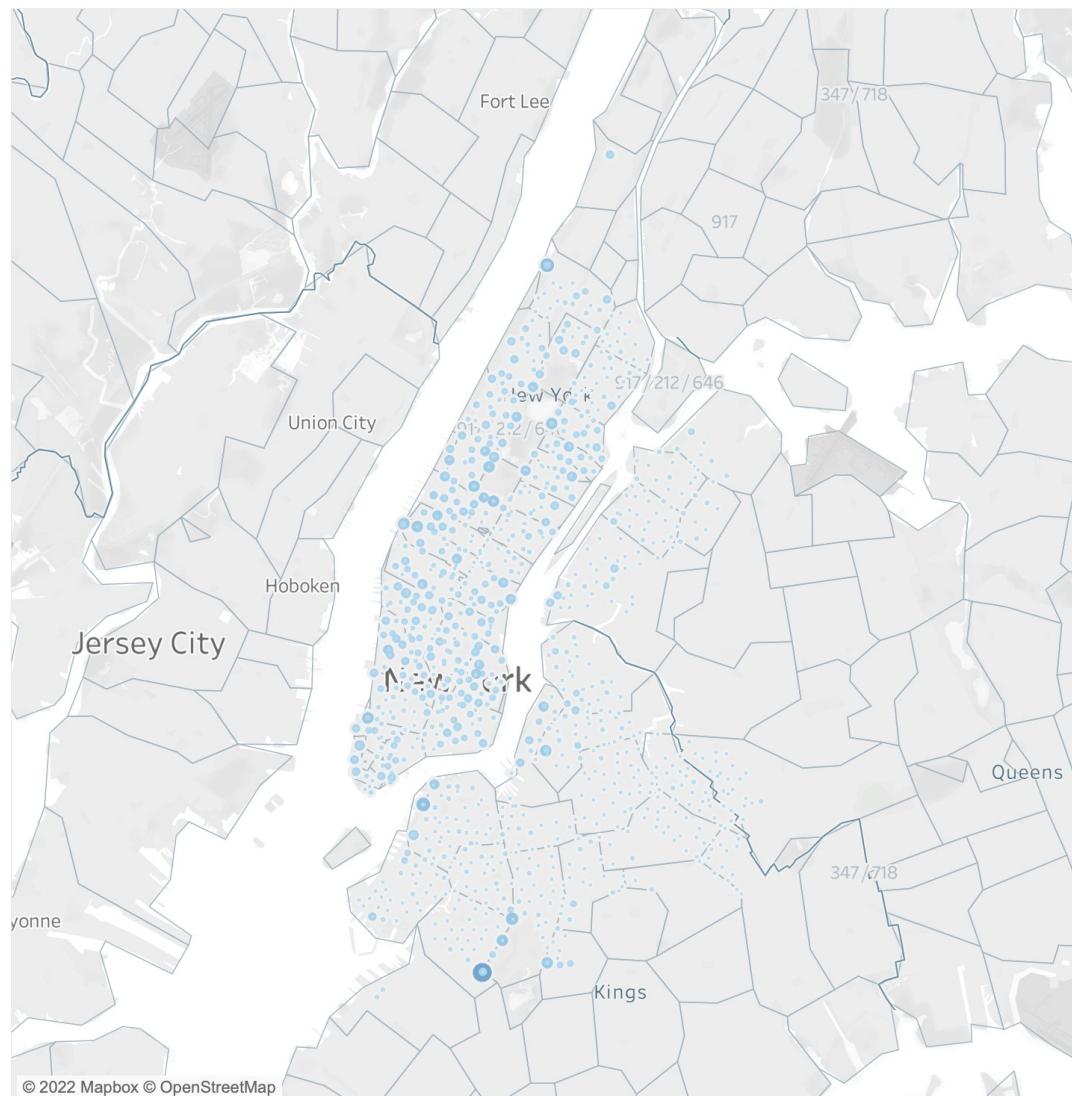
Citi Bike Map Start Station: April-Sept 2021/Monthly

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Citi Bike Map Start & End Station Table Summary:April-Sept ..

Citi Bike Map Start & End Station Tabl..

Map End/Month Dashboard 2020



Count - Starting Trips 2020

1 2,091

Count - Starting Trips 2020

- 1
- 500
- 1,000
- 1,500
- 2,091

Month of Start Time

April

Show history

Bottom 10 Stations to End at 2020

End Station Name

1 Ave & E 68 St	58,837
12 Ave & W 40 St	67,070
Broadway & W 60 St	52,877
Christopher St & Greenwi..	52,736
E 13 St & Avenue A	46,020
E 17 St & Broadway	46,932
Pier 40 - Hudson River Park	54,150
W 21 St & 6 Ave	51,583
West St & Chambers St	65,075
West St & Liberty St	44,467

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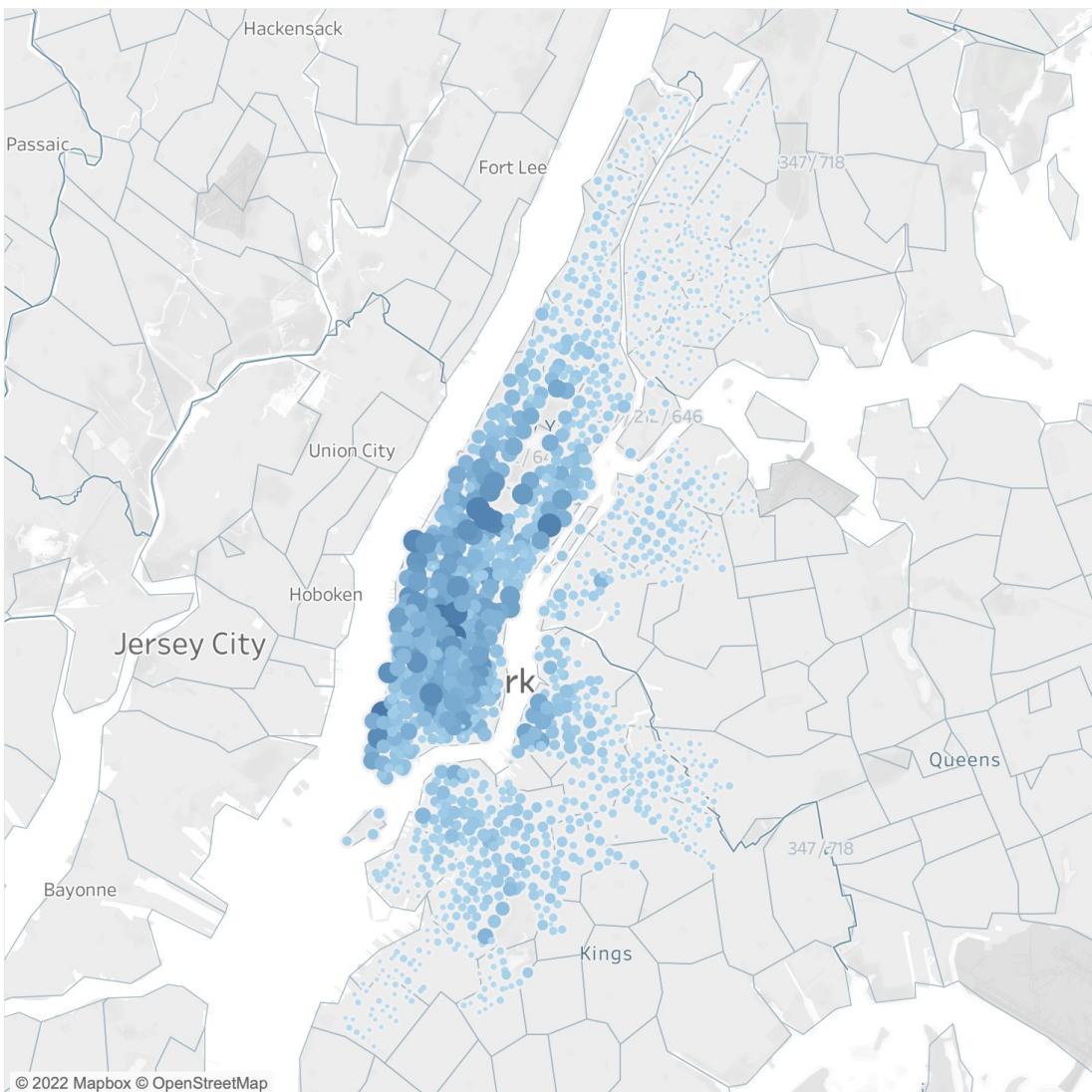
Citi Bike Map Start Station: April-Sept 2021/Monthly

Citi Bike Map End Station: April-Sept 2021/Monthly

Citi Bike Map Start & End Station Table Summary:April-Sep..

Citi Bike Map Start & End Station Table Summary:April-Sep..

Map Start/Month Dashboard 2021



Count - Starting Trips 2021
0 16,810

Count - Starting Trips 2021
• 0
● 5,000
○ 10,000
○ 16,810

Month of Started At
May
 Show history

Top 10 Stations to Start at Peak 2021

Start Station Name (2..

1 Ave & E 68 St	66,479
7 Ave & Central Park S..	67,065
12 Ave & W 40 St	62,383
Broadway & W 25 St	68,344
Central Park S & 6 Ave	61,732
Cleveland Pl & Spring St	65,332
E 17 St & Broadway	78,770
W 21 St & 6 Ave	77,248
West St & Chambers St	74,086
West St & Liberty St	64,683

Story 1

Citi Bike Map
Start Station:
April-Sept 2020/..

Citi Bike Map End
Station: April-Sept
2020/Monthly

Citi Bike Map Start
Station: April-Sept
2021/Monthly

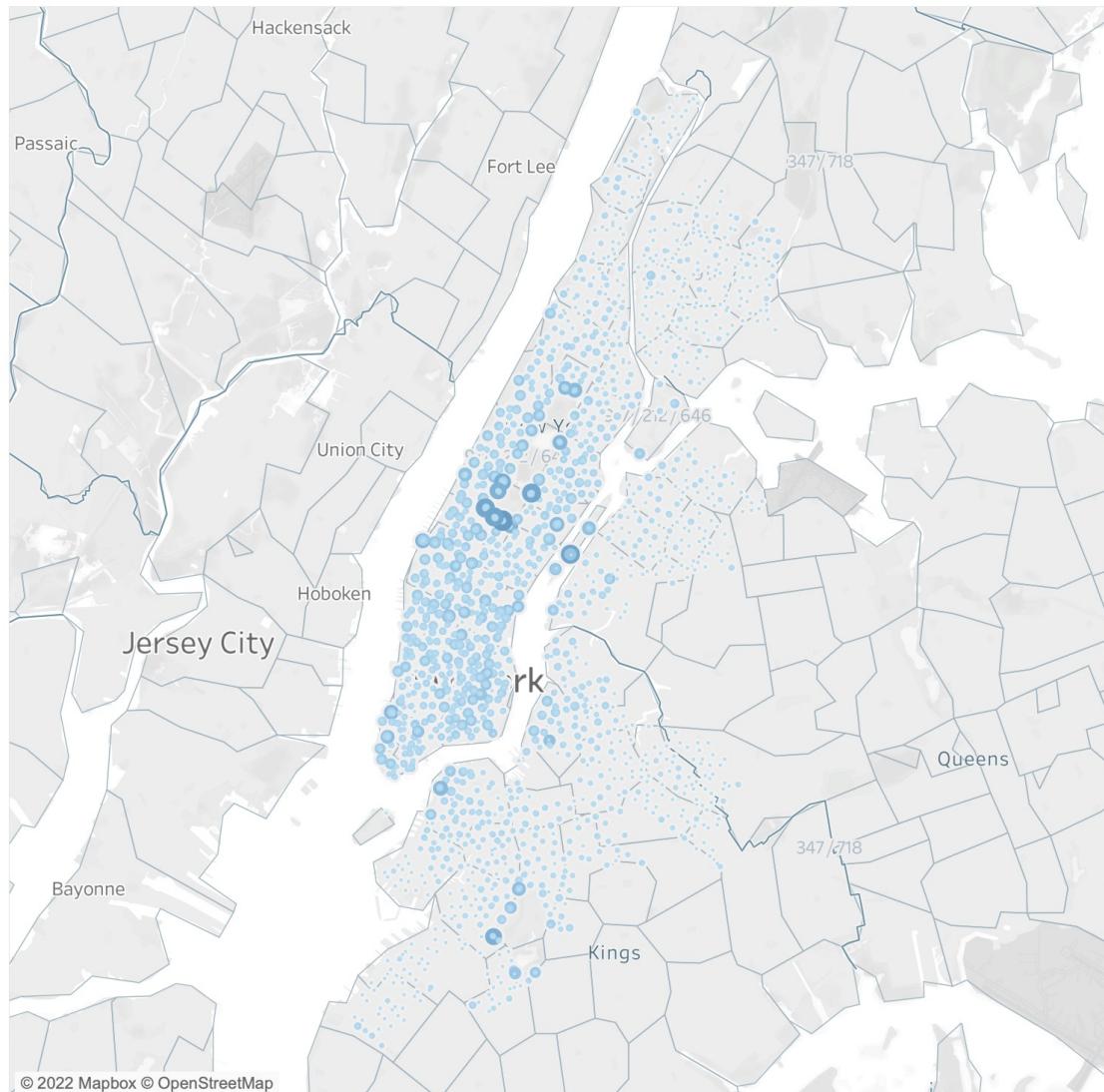
Citi Bike Map End
Station: April-Sept
2021/Monthly

Citi Bike Map Start &
End Station Table
Summary:April-Sept ..

Citi Bike Map Start &
End Station Table
Summary:April-Sept ..

Citi Bike Monthly
Trip & Gender User
Count Comparison

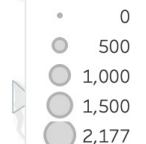
Map End/Month Dashboard 2021



Count - Ending Trips 2021

0 2,177

Count - Ending Trips 2021



Month of Started At
April

Show history

Top 10 Stations to Start at Peak 2021

Start Station Name (2..

1 Ave & E 68 St	66,479
7 Ave & Central Park S..	67,065
12 Ave & W 40 St	62,383
Broadway & W 25 St	68,344
Central Park S & 6 Ave	61,732
Cleveland Pl & Spring St	65,332
E 17 St & Broadway	78,770
W 21 St & 6 Ave	77,248
West St & Chambers St	74,086

Story 1

Citi Bike Map End Station: April-Sept 2020/..

Citi Bike Map Start Station: April-Sept 2021/Monthly

Citi Bike Map End Station: April-Sept 2021/Monthly

Citi Bike Map Start & End Station Table Summary:April-Sept ..

Citi Bike Map Start & End Station Table Summary:April-Sept ..

Citi Bike Monthly Trip & Gender User Count Comparison

Citi Bike User/Member Type Comparison: April-..

Top Stations to Start At Peak Months 2020

Start Station Name	
12 Ave & W 40 St	66,301
West St & Chambers St	63,541
1 Ave & E 68 St	59,045
Pier 40 - Hudson River Park	54,013
Broadway & W 60 St	53,019
W 21 St & 6 Ave	50,991
Christopher St & Greenwi..	50,044
E 13 St & Avenue A	45,786
E 17 St & Broadway	45,648
West St & Liberty St	44,230
FDR Drive & E 35 St	43,355
Central Park S & 6 Ave	43,082
Carmine St & 6 Ave	42,476
S 5 Pl & S 5 St	40,918
5 Ave & E 73 St	40,872
E 33 St & 1 Ave	40,840
Broadway & E 22 St	40,796
Little West St & 1 Pl	40,577
Broadway & W 25 St	40,065
Broadway & E 14 St	39,286
Grand St & Elizabeth St	38,638
Central Park West & W 72 ..	37,816
Kent Ave & N 7 St	36,897
Broadway & W 56 St	36,561
Central Park North & Ada..	36,398
9 Ave & W 22 St	36,262
Cleveland Pl & Spring St	35,813
University Pl & E 14 St	35,753
11 Ave & W 41 St	35,724
W 4 St & 7 Ave S	35,647
Central Park West & W 68 ..	35,380

Top Stations to End At Peak Months 2020

End Station Name	
12 Ave & W 40 St	67,070
West St & Chambers St	65,075
1 Ave & E 68 St	58,837
Pier 40 - Hudson River Park	54,150
Broadway & W 60 St	52,877
Christopher St & Greenwi..	52,736
W 21 St & 6 Ave	51,583
E 17 St & Broadway	46,932
E 13 St & Avenue A	46,020
West St & Liberty St	44,467
Carmine St & 6 Ave	44,020
Central Park S & 6 Ave	42,965
FDR Drive & E 35 St	42,942
E 33 St & 1 Ave	41,647
S 5 Pl & S 5 St	41,420
Little West St & 1 Pl	41,083
5 Ave & E 73 St	40,943
Broadway & E 22 St	40,928
Broadway & W 25 St	40,409
Grand St & Elizabeth St	39,625
Broadway & E 14 St	39,042
Kent Ave & N 7 St	38,776
Central Park West & W 72 ..	37,403
Central Park North & Ada..	37,265
University Pl & E 14 St	36,864
9 Ave & W 22 St	36,705
Cleveland Pl & Spring St	36,399
W 4 St & 7 Ave S	36,174
E 10 St & Avenue A	36,116
11 Ave & W 41 St	35,849
Broadway & W 56 St	34,942

TOP 10 STATIONS:

From April 2020 to September 2020, the top 10 Starting & Ending Stations were as follows:

**12 AVE & W 40 ST
WEST ST & CHAMBERS ST
1 AVE & E 68 ST
PIER 40 - HUDSON RIVER PARK
BROADWAY & W 60 ST
W 21 ST & 6 AVE
CHRISTOPHER ST & GREENWINCH ST
E 13 ST & AVENUE A
E 17 ST & BROADWAY
WEST ST & LIBERTY ST**

ANALYSIS:

It would be highly recommended for the Citi Bike Program to install more resources and customer service representatives near these locations. I believe it will greatly help to retain our current subscribers/members and encourage new customers by having Citi Bike personnel in these "high traffic" stations.

Story 1

Citi Bike Map
Start Station:
April-Sept 2021..

Citi Bike Map End
Station: April-Sept
2021/Monthly

Citi Bike Map Start &
End Station Table
Summary:April-Sept ..

Citi Bike Map Start &
End Station Table
Summary:April-Sept ..

Citi Bike Monthly Trip
& Gender User Count
Comparison

Citi Bike User/Member
Type Comparison:
April-Sept 2020 - 2021

Citi Bike Total
Ridership Growth of
User/Member Type ..

Top Stations to Start at Peak 2021

Start Station Name (2021..

E 17 St & Broadway	78,770
W 21 St & 6 Ave	77,248
West St & Chambers St	74,086
Broadway & W 25 St	68,344
7 Ave & Central Park South	67,065
1 Ave & E 68 St	66,479
Cleveland Pl & Spring St	65,332
West St & Liberty St	64,683
12 Ave & W 40 St	62,383
Central Park S & 6 Ave	61,732
Broadway & E 14 St	61,100
Carmine St & 6 Ave	61,071
6 Ave & W 33 St	59,321
E 13 St & Avenue A	57,836
Pier 40 - Hudson River Park	57,061
Grand St & Elizabeth St	55,871
9 Ave & W 22 St	55,814
11 Ave & W 41 St	54,701
Pershing Square North	54,438
E 33 St & 1 Ave	54,004
University Pl & E 14 St	53,857
E 10 St & Avenue A	53,233
W 30 St & 10 Ave	51,570
W 34 St & 11 Ave	51,486
10 Ave & W 14 St	51,417
W 24 St & 7 Ave	51,046
W 4 St & 7 Ave S	51,045
8 Ave & W 52 St	50,892
Greenwich Ave & 8 Ave	50,273
E 7 St & Avenue A	48,834
Lafayette St & E 8 St	48,522
Central Park West & W 68 ..	48,443
5 Ave & E 72 St	48,419

Top Stations to End at Peak Months 2021

End Station Name (2021-c..

W 21 St & 6 Ave	77,572
West St & Chambers St	74,216
Broadway & W 25 St	68,257
7 Ave & Central Park South	67,091
1 Ave & E 68 St	66,690
Cleveland Pl & Spring St	65,588
West St & Liberty St	64,974
12 Ave & W 40 St	62,361
Carmine St & 6 Ave	61,289
Central Park S & 6 Ave	61,245
Broadway & E 14 St	60,446
6 Ave & W 33 St	59,169
E 13 St & Avenue A	57,787
Pier 40 - Hudson River Park	57,519
Grand St & Elizabeth St	56,465
9 Ave & W 22 St	55,884
11 Ave & W 41 St	54,610
Pershing Square North	54,458
E 33 St & 1 Ave	54,029
University Pl & E 14 St	53,910
E 10 St & Avenue A	53,909
10 Ave & W 14 St	52,903
W 34 St & 11 Ave	51,991
W 30 St & 10 Ave	51,655
W 4 St & 7 Ave S	51,151
Greenwich Ave & 8 Ave	50,657
8 Ave & W 52 St	50,541
E 7 St & Avenue A	48,773
5 Ave & E 72 St	48,427
W 24 St & 7 Ave	48,286
Lafayette St & E 8 St	47,858

TOP 10 STATIONS:

From April 2020 to September 2020, the top 10 Starting & Ending Stations were as follows:

E 17 ST & BROADWAY

W 21 ST & 6 AVE

WEST ST & CHAMBERS ST

BROADWAY & W 60 ST

7 AVE & CENTRAL PARK SOUTH

1 AVE & E 68 ST

CLEVELAND PI & SPRING ST

WEST ST & LIBERTY ST

12 AVE & W 40 ST

CENTRAL PARK 5 & 6 AVE

ANALYSIS:

It would be highly recommended for the Citi Bike Program to install more resources and customer service representatives near these locations. I believe it will greatly help to retain our current subscribers/members and encourage new customers by having Citi Bike personnel in these "high traffic" stations.

From 2020 to 2021, these TOP 10 Stations did not change a bit. The same stations on both lists include:

E 17 ST & BROADWAY

W 21 ST & 6 AVE

WEST ST & CHAMBERS ST

BROADWAY & W 60 ST

7 AVE & CENTRAL PARK SOUTH

1 AVE & E 68 ST

WEST ST & LIBERTY ST

12 AVE & W 40 ST

Story 1

Citi Bike Map End Station:
April-Sept 2021/..

Citi Bike Map Start & End Station Table Summary:April-Sept ..

Citi Bike Map Start & End Station Table Summary:April-Sept ..

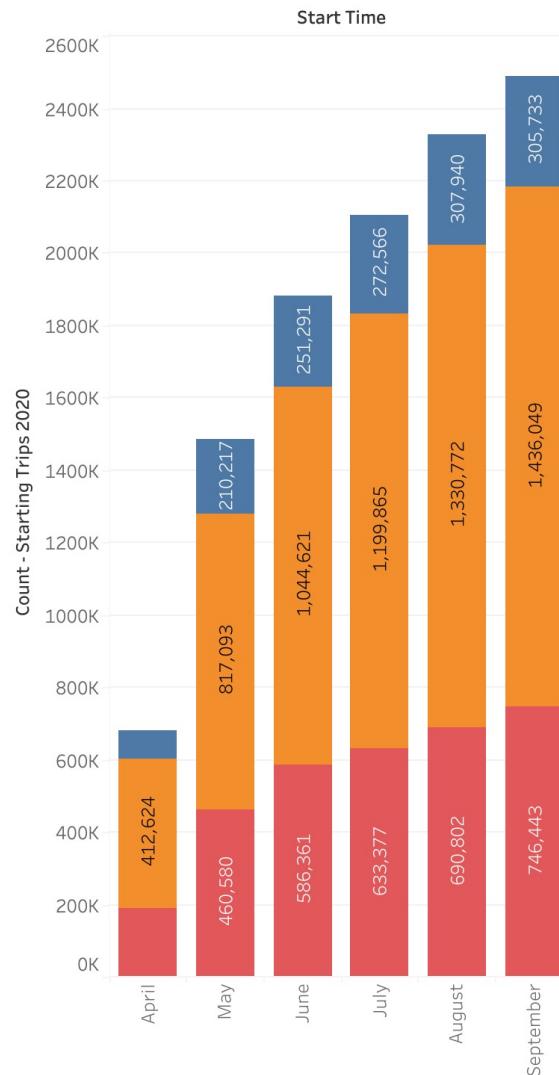
Citi Bike Monthly Trip & Gender User Count Comparison

Citi Bike User/Member Type Comparison:
April-Sept 2020 - 2021

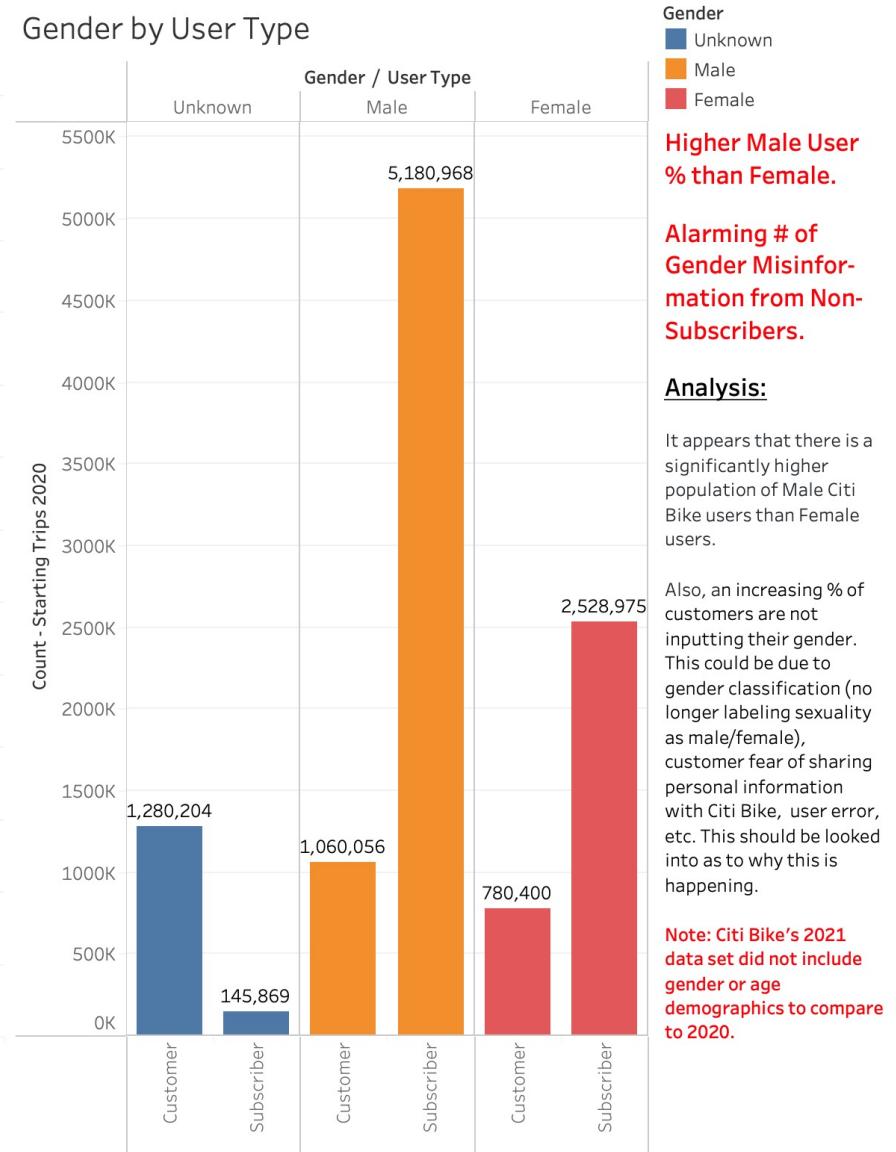
Citi Bike Total Ridership Growth of User/Member Type B..

Citi Bike User Type Utilization By Month Date: April - Sept 2..

Gender Count April-Sept



Gender by User Type



Story 1

Citi Bike Map
Start & End
Station Table Su..

Citi Bike Map Start &
End Station Table
Summary:April-Sept ..

Citi Bike Monthly Trip
& Gender User Count
Comparison

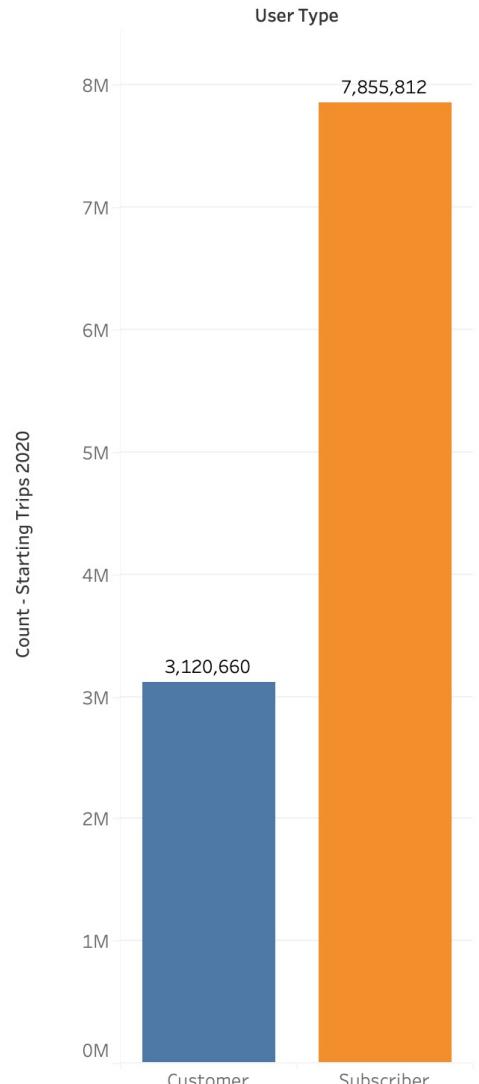
Citi Bike User/Member
Type Comparison:
April-Sept 2020 - 2021

Citi Bike Total
Ridership Growth of
User/Member Type B..

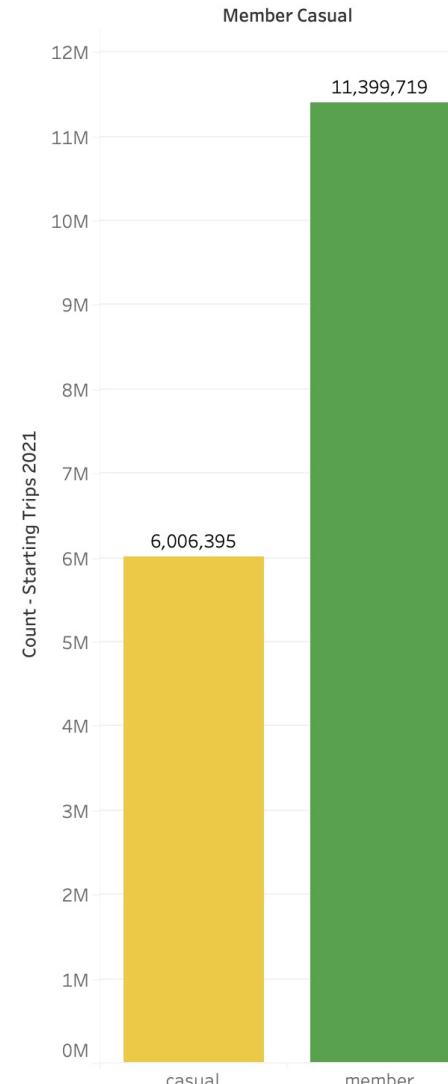
Citi Bike User Type
Utilization By Month
Date: April - Sept 2020

Citi Bike Member
Type Utilization By
Month Date: April - ..

User Type April-Sept 2020



Member Type April-Sept 2021



User Type

Customer
Subscriber

Member Casual

casual
member

Increase in Customers (Casual): ~ 63 %

Increase in Subscribers(Members): ~ 37 %

Analysis:

Although there has been an increase of ridership from the Citi Bike, there is still a significant gap between female/male riders. It would be beneficial to have additional outreach programs to create to get more subscribers, especially programs to promote female riders? Unfortunately, Citi Bike's 2021 data set does not include Gender and Age Demographics anymore. I am only inferring this through the 2020 data.

Story 1

Citi Bike Map
Start & End
Station Table Su..

Citi Bike Monthly Trip
& Gender User Count
Comparison

Citi Bike User/Member
Type Comparison:
April-Sept 2020 - 2021

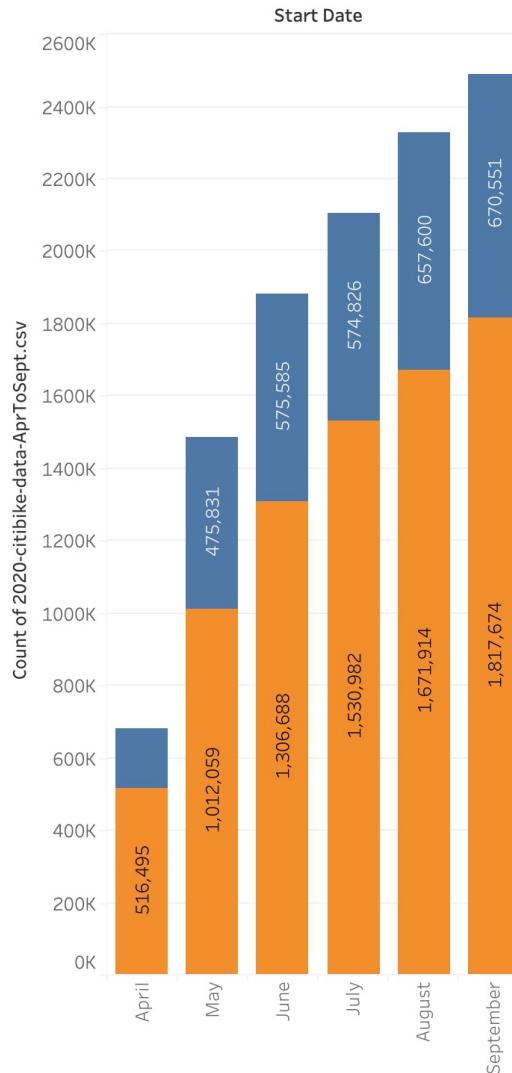
Citi Bike Total
Ridership Growth of
User/Member Type B..

Citi Bike User Type
Utilization By Month
Date: April - Sept 2020

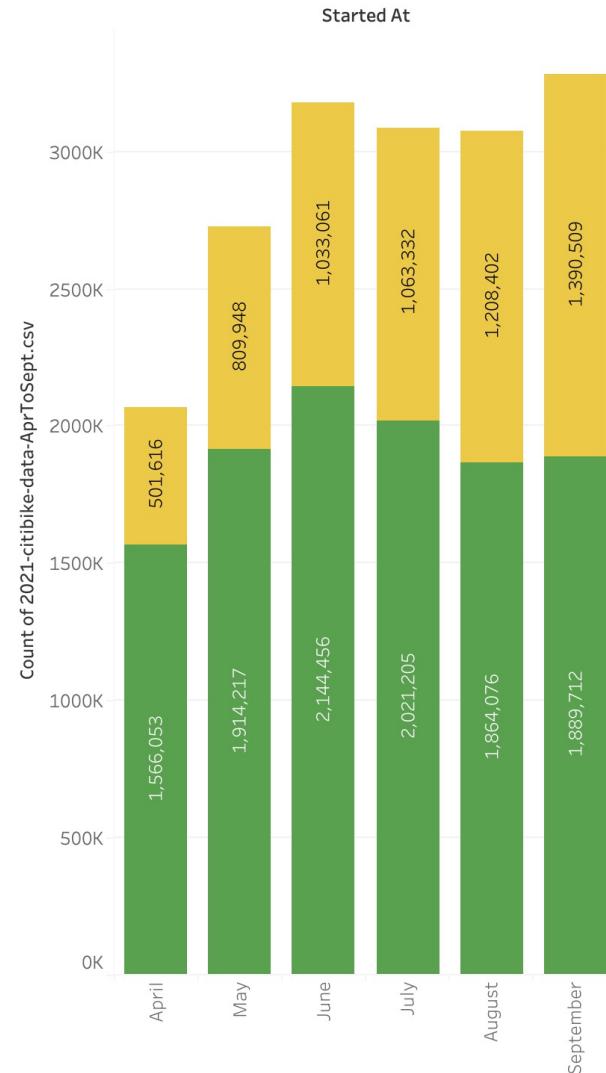
Citi Bike Member Type
Utilization By Month
Date: April - Sept 2021

Citi Bike Monthly
Trip Count 2020 -
2021

Total Ridership Growth: 2020



Total Ridership Growth: 2021



User Type
Customer
Subscriber

Member Casual
casual
member

2020: Both Customer & Subscriber Growth Increased Every Month

2021: Both Customer (Casual) & Subscriber (Member) Increased, but not exponentially.

Analysis:

In 2020, both customer and subscriber growth went up exponentially. This could be due to the fact that Covid was ramped during this year. When the weather was nice, I am sure a lot of riders, whether casual customers or subscribers, rode bikes more just to get out of the house and do something.

In 2021, there is growth from April to September, and definitely higher than number count than 2020. However, there is a dip in member count from June to July. I believe the numbers are not increasing as fast as in 2020 due to the Covid spread slowing down around these months, along with people likely going away on vacation in the Summer months that members are not in the city using the bikes. In addition, you see the spike in September for both causal and member likely due to the School Season starting again for Fall semester.

Story 1

Citi Bike Monthly Trip & Gender User Count Com..

Citi Bike User/Member Type Comparison: April-Sept 2020 - 2021

Citi Bike Total Ridership Growth of User/Member Type B..

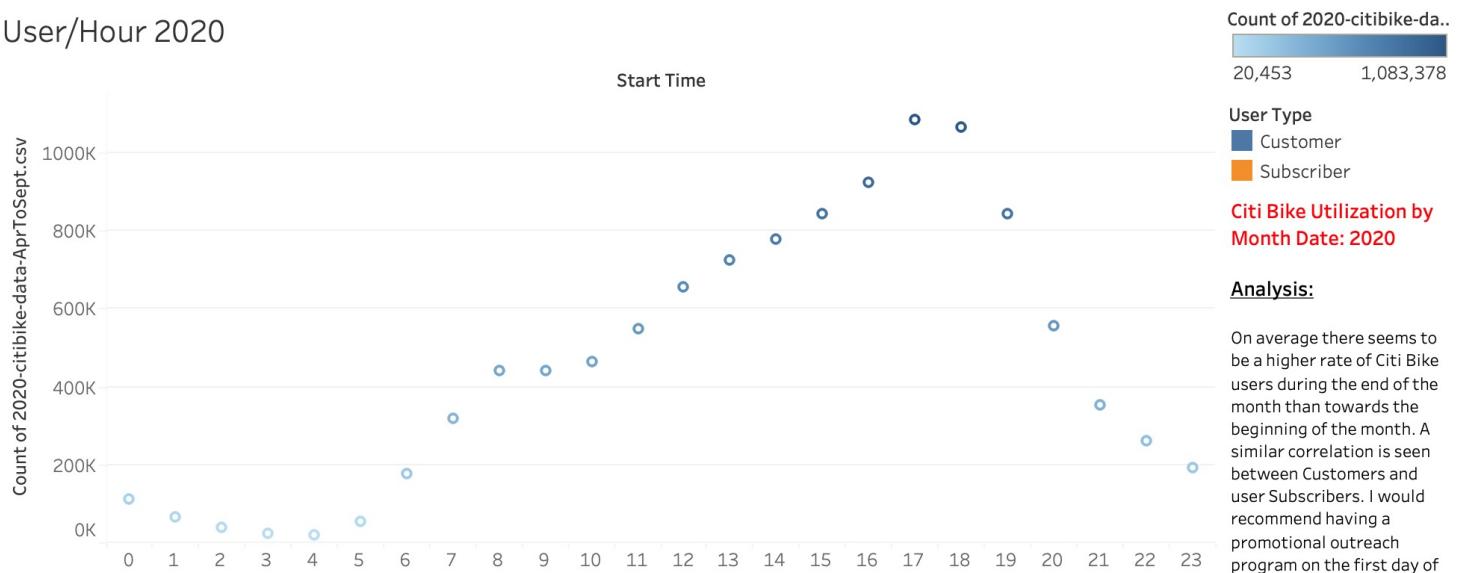
Citi Bike User Type Utilization By Month Date: April - Sept 2020

Citi Bike Member Type Utilization By Month Date: April - Sept 2021

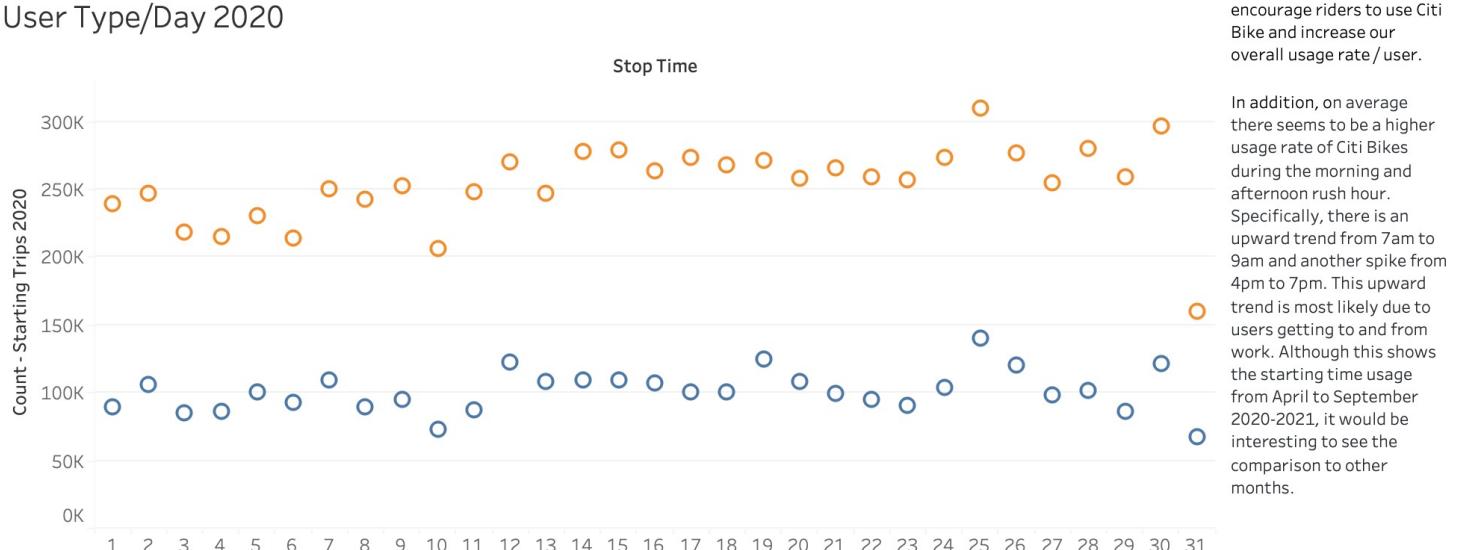
Citi Bike Monthly Trip Count 2020 - 2021

Citi Bike Monthly Bike Demands by Month:April - Sept ..

User/Hour 2020



User Type/Day 2020



Story 1

Citi Bike User/Member Type Comparison

Citi Bike Total Ridership Growth of User/Member Type B..

Citi Bike User Type Utilization By Month Date: April - Sept 2020

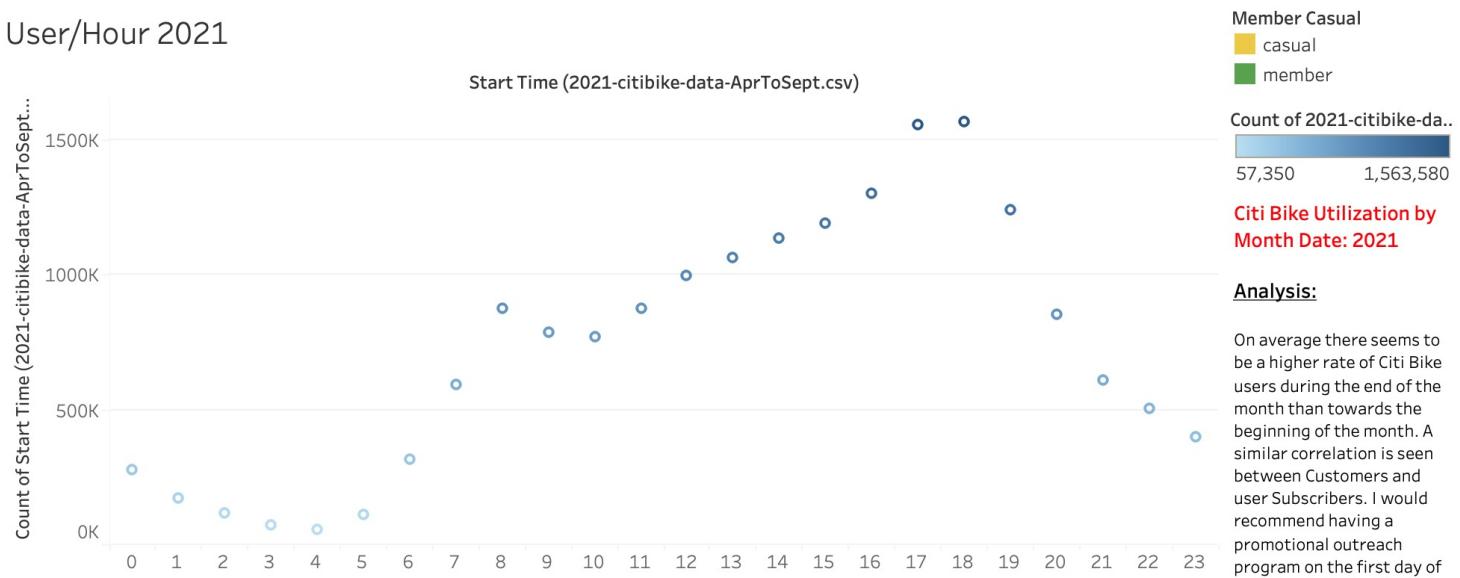
Citi Bike Member Type Utilization By Month Date: April - Sept 2021

Citi Bike Monthly Trip Count 2020 - 2021

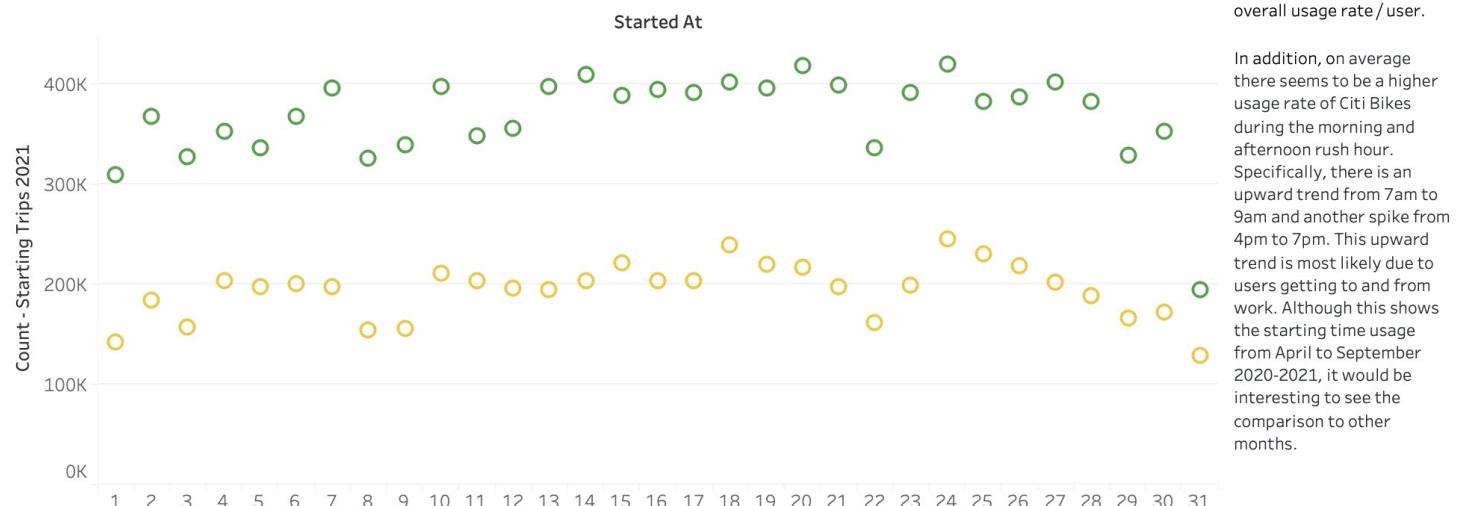
Citi Bike Monthly Bike Demands by Month: April - Sept 20..

Citi Bike Age Demographics: April - Sept 2020

User/Hour 2021



Member Type/Day 2021



Story 1

Citi Bike Total
Ridership Growth
of User/Member ..

Citi Bike User Type
Utilization By Month
Date: April - Sept 2020

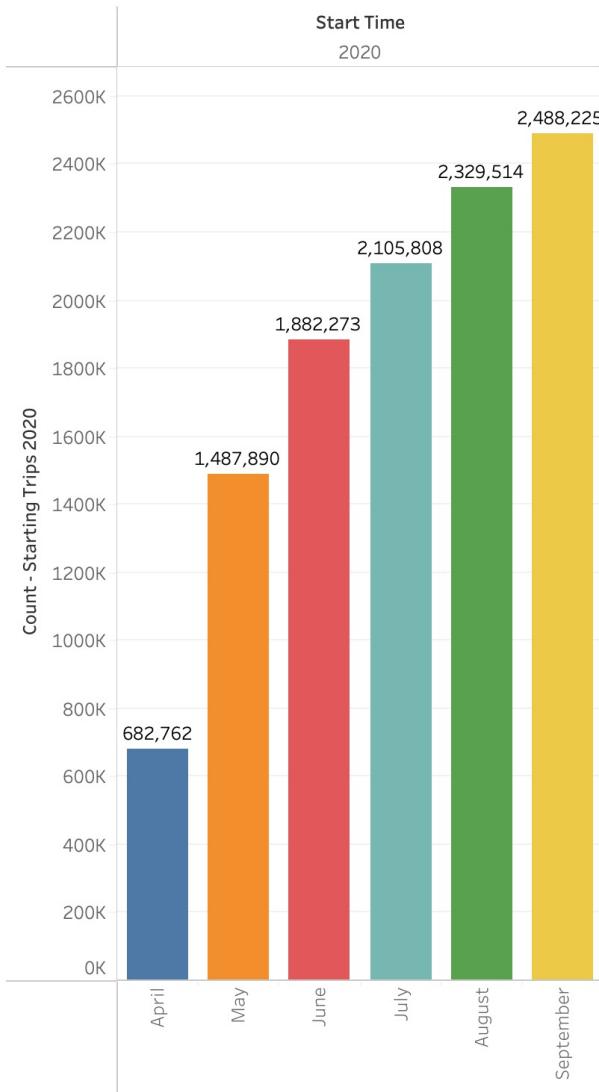
Citi Bike Member Type
Utilization By Month
Date: April - Sept 2021

Citi Bike Monthly Trip
Count 2020 - 2021

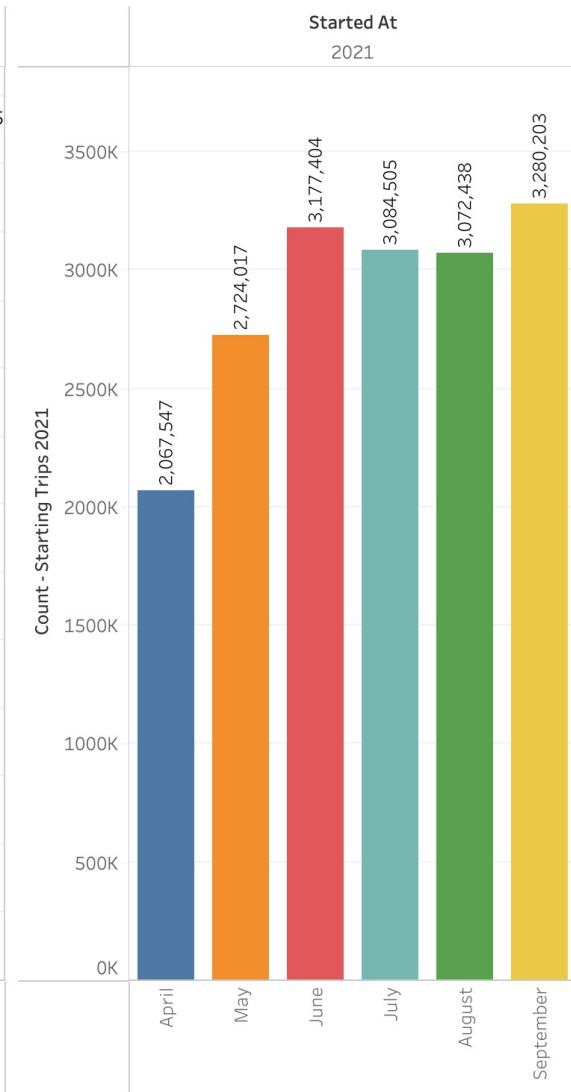
Citi Bike Monthly Bike
Demands by
Month:April - Sept 20..

Citi Bike Age
Demographics: April -
Sept 2020

Monthly Trip Count 2020



Monthly Trip Count 2021



Month of Start Time

- April
- May
- June
- July
- August
- September

**2020: Monthly Trips
Increased Up Every Month.**

**2021: Monthly Trips
Increased, but not
exponentially.**

Analysis:

In 2020, monthly trip growth went up exponentially. This could be due to the fact that Covid was ramped during this year. When the weather was nice, I am sure a lot of riders, whether casual customers or subscribers, rode bikes more just to get out of the house and do something.

In 2021, there is growth from April to September, and definitely higher than number count than 2020. However, there is a dip in member count from June to July, and July to August. I believe the numbers are not increasing as fast as in 2020 due to the Covid spread slowing down around these months, along with people likely going away on vacation in the Summer months that members are not in the city using the bikes. In addition, you see the spike in September for both causal and member likely due to the School Season starting again for Fall semester.

Story 1

Citi Bike Total
Ridership
Growth of U..

Citi Bike User Type
Utilization By Month
Date: April - Sept 2020

Citi Bike Member Type
Utilization By Month
Date: April - Sept 2021

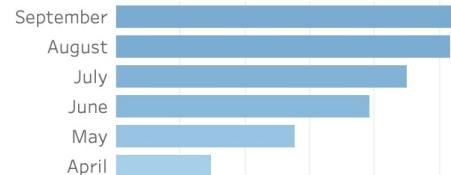
Citi Bike Monthly Trip
Count 2020 - 2021

Citi Bike Monthly Bike
Demands by
Month:April - Sept 20..

Citi Bike Age
Demographics: April -
Sept 2020

Monthly Bike Demands through Peak:2020 - 1 Ave & E 5 St

Month of St..



Count of Start Station ID

Total # of Bike Demands

April - September in 2020 and
2021 by Station Name

Count of Start Station ID

1 14,368

Start Station Name

1 Ave & E 5 St

Show history

Start Station Id

6,948 116,190,888

Start Station Name (2021-citibike-data-..)

1 Ave & E 16 St

Show history

Monthly Bike Demands through Peak: 2021 - 1 Ave & E 16 St

Month of St..



Count of Start Station Id

**Total Number of
Bike Trips: 2020
vs 2021
April to
September**

Bike Trips-2020 10,976,472

Bike Trips-2021 17,406,587

Story 1

Citi Bike Total
Ridership
Growth of U..

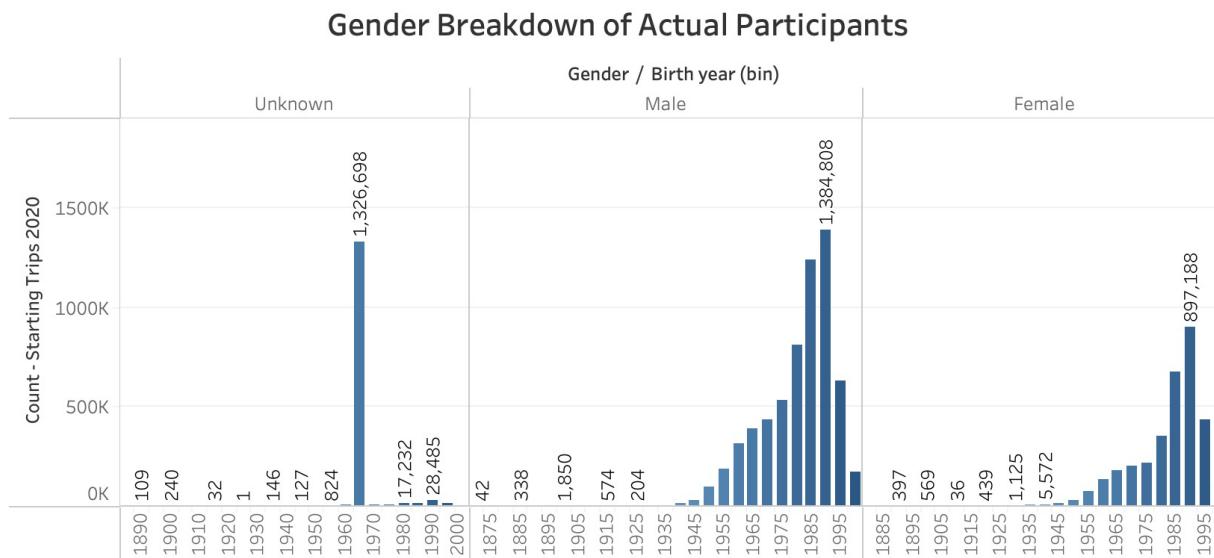
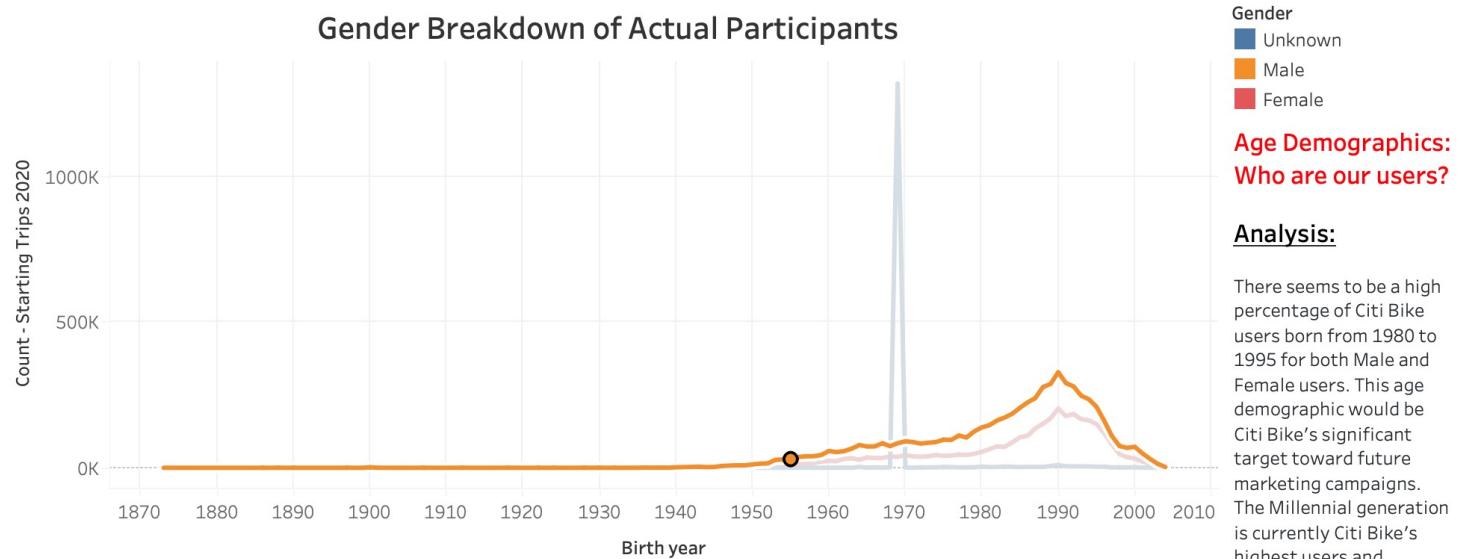
Citi Bike User Type
Utilization By Month
Date: April - Sept 2020

Citi Bike Member Type
Utilization By Month
Date: April - Sept 2021

Citi Bike Monthly Trip
Count 2020 - 2021

Citi Bike Monthly Bike
Demands by
Month:April - Sept 20..

Citi Bike Age
Demographics: April -
Sept 2020



Story 1

Citi Bike Total
Ridership
Growth of U..

Citi Bike User Type
Utilization By Month
Date: April - Sept 2020

Citi Bike Member Type
Utilization By Month
Date: April - Sept 2021

Citi Bike Monthly Trip
Count 2020 - 2021

Citi Bike Monthly Bike
Demands by
Month:April - Sept 20..

Citi Bike Age
Demographics: April -
Sept 2020

End of Citi Bike Analytics Case Report