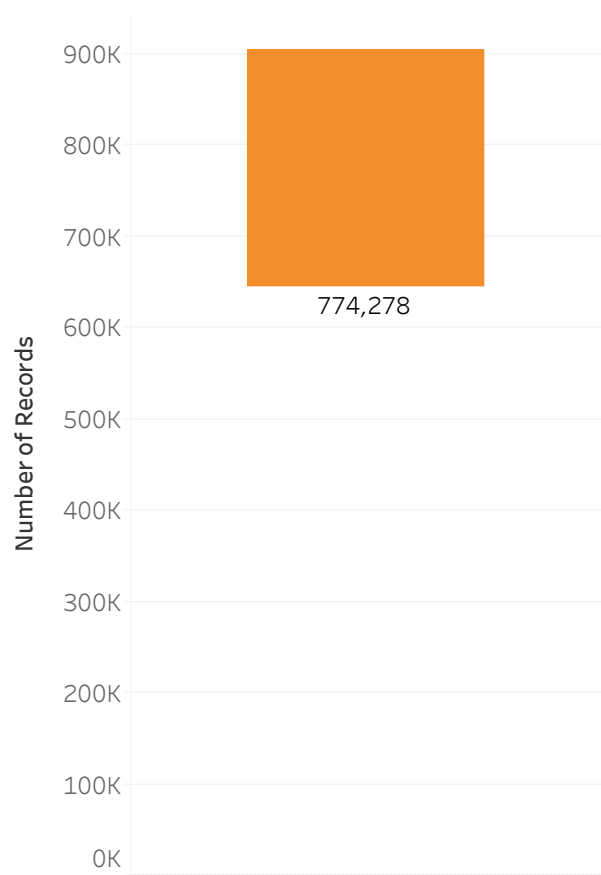
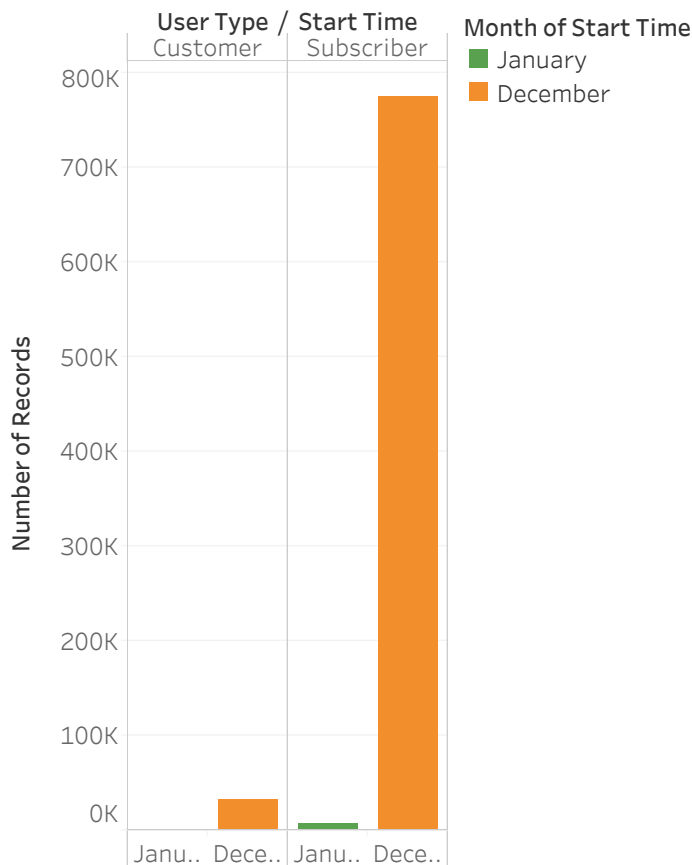


total number of trips in 2016:
1,044,662



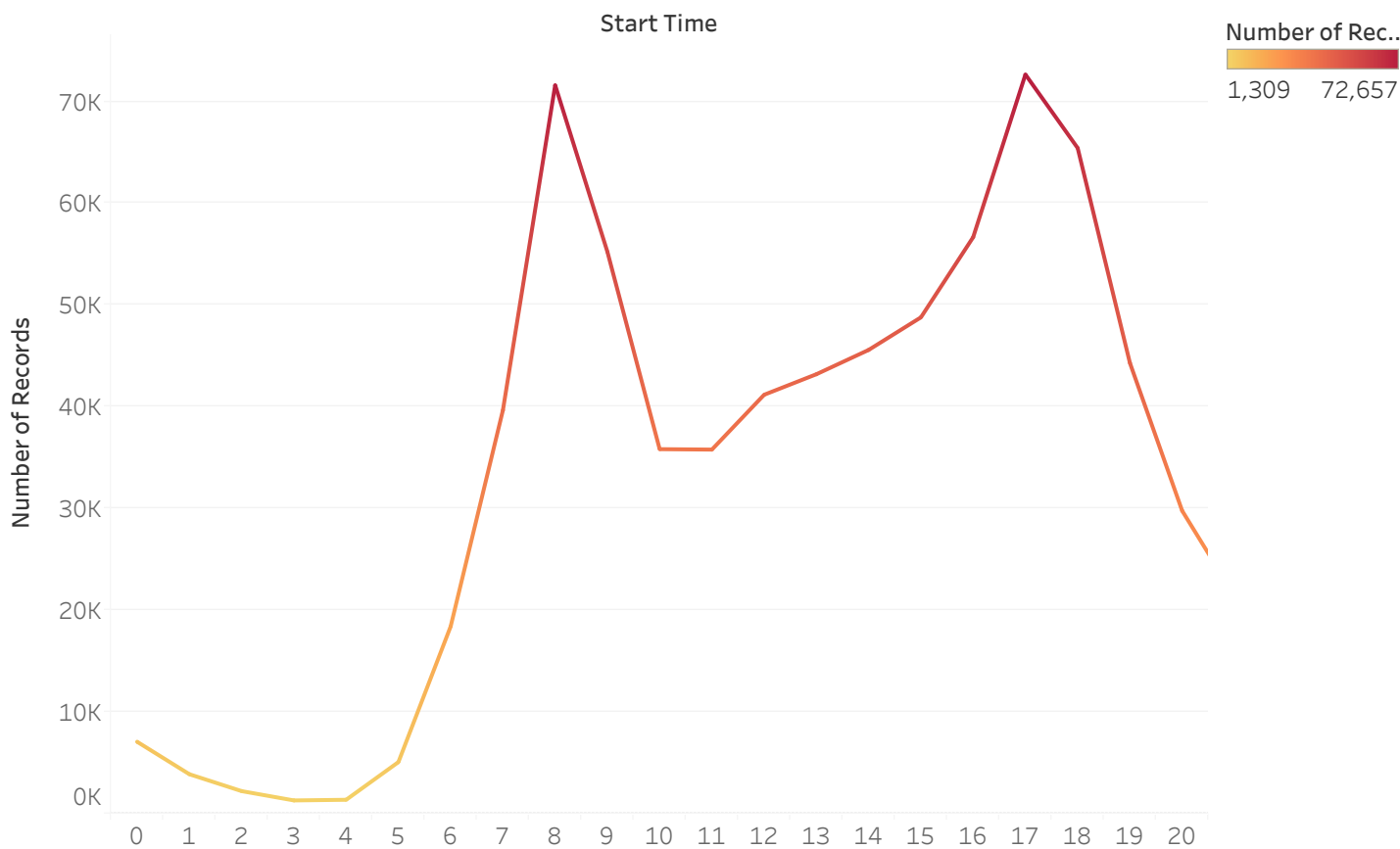
Sum of Number of Records. The marks are labeled by sum of Number of Records. The data is filtered on Action (MONTH(Start Time),User Type), which keeps 1 member.

percentage of total
ridership grown



Sum of Number of Records for each
Start Time Month broken down by User
Type. Color shows details about Start
Time Month. The view is filtered on
Start Time Month and User Type. The
Start Time Month filter keeps January
and December. The User Type filter
keeps Customer and Subscriber.

peak hour in summer season (Jun - Sep)



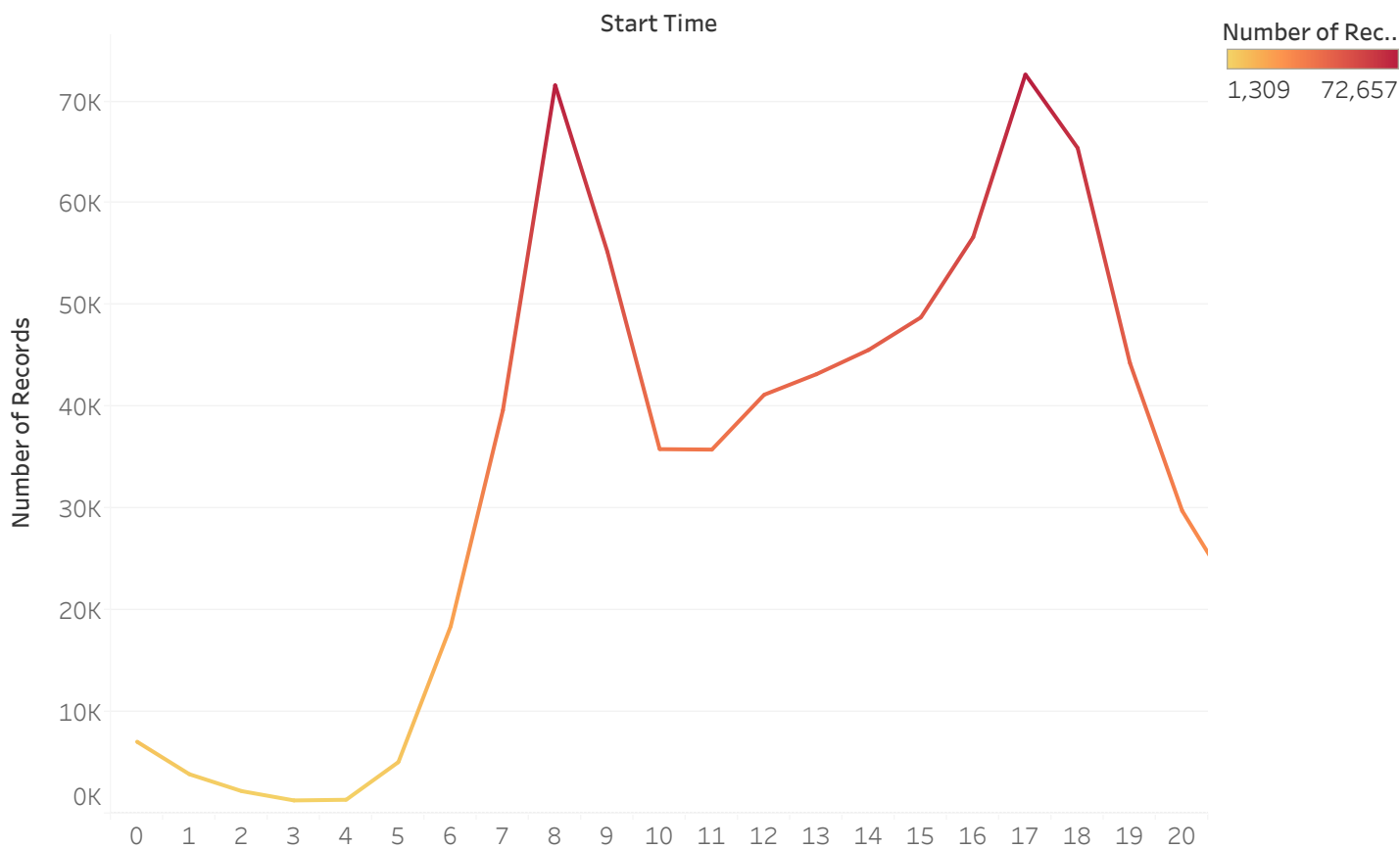
The trend of sum of Number of Records for Start Time Hour. Color shows sum of Number of Records. The data is filtered on Start Time Month and Action (MONTH(Start Time),User Type). The Start Time Month filter keeps multiple members. The Action (MONTH(Start Time),User Type) filter keeps 1 member.

peak hour in summer season (Jun - Sep)



The trend of sum of Number of Records for Start Time Hour. Color shows sum of Number of Records. The data is filtered on Start Time Month and Action (MONTH(Start Time),User Type). The Start Time Month filter keeps multiple members. The Action (MONTH(Start Time),User Type) filter keeps 1 member.

peak hour in winter season (Oct - Dec)



The trend of sum of Number of Records for Start Time Hour. Color shows sum of Number of Records. The data is filtered on Start Time Month and Action (MONTH(Start Time),User Type). The Start Time Month filter keeps multiple members. The Action (MONTH(Start Time),User Type) filter keeps 1 member.

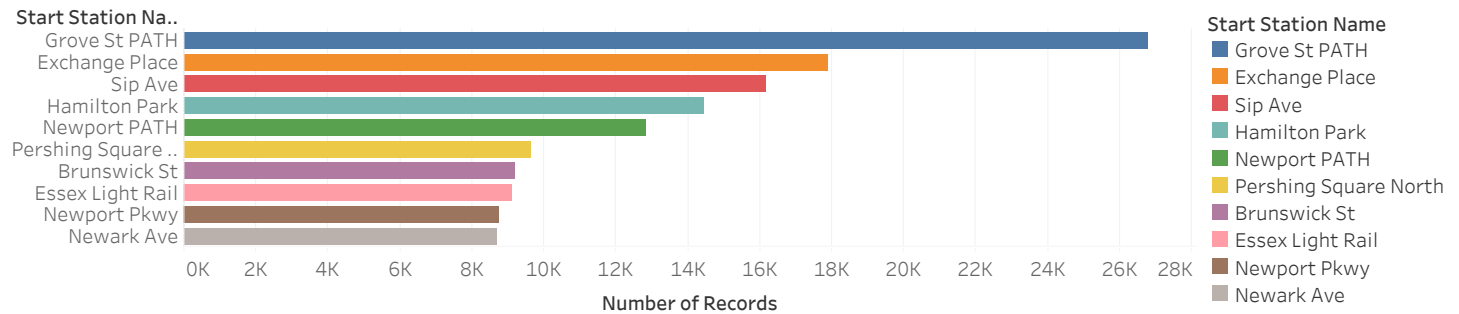
peak hour in winter season (Oct - Dec)



The trend of sum of Number of Records for Start Time Hour. Color shows sum of Number of Records. The data is filtered on Start Time Month and Action (MONTH(Start Time),User Type). The Start Time Month filter keeps multiple members. The Action (MONTH(Start Time),User Type) filter keeps 1 member.

top 10 stations in the city for starting a journey

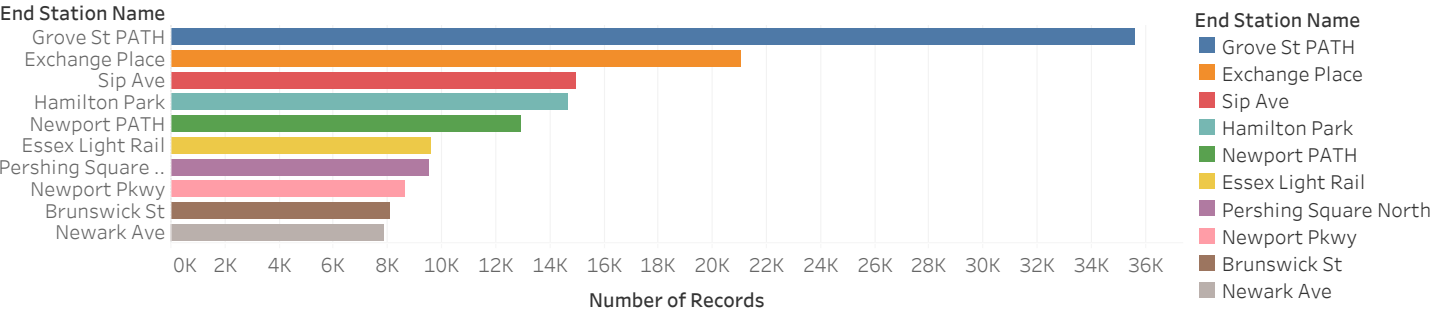
Based on data, I hypothesize these are the top locations to start a journey because they are in business or school district, or they are closed to subway station, with fewer lanes of traffic.



Sum of Number of Records for each Start Station Name. Color shows details about Start Station Name. The view is filtered on Start Station Name, which keeps 10 of 375 members.

top 10 stations in the city for ending a journey

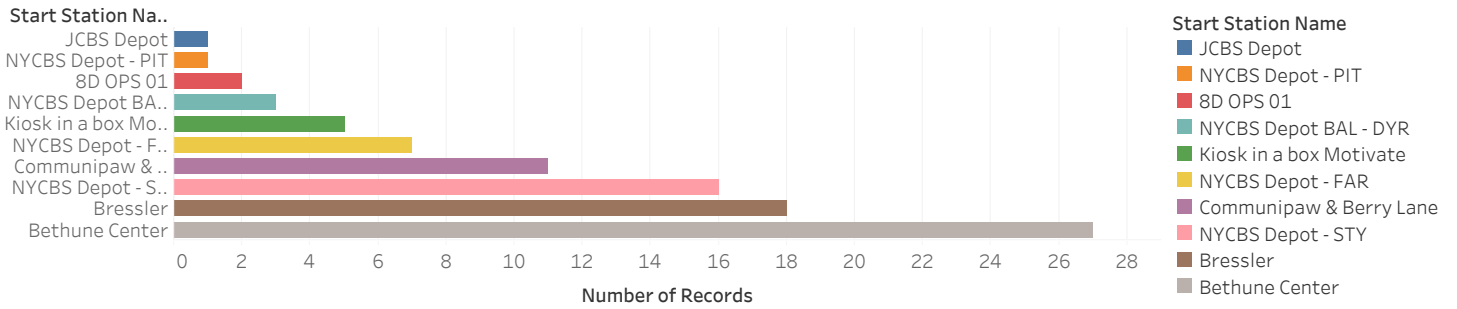
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Sum of Number of Records for each End Station Name. Color shows details about End Station Name. The view is filtered on End Station Name, which keeps 10 of 404 members.

bottom 10 stations in the city for starting a journey

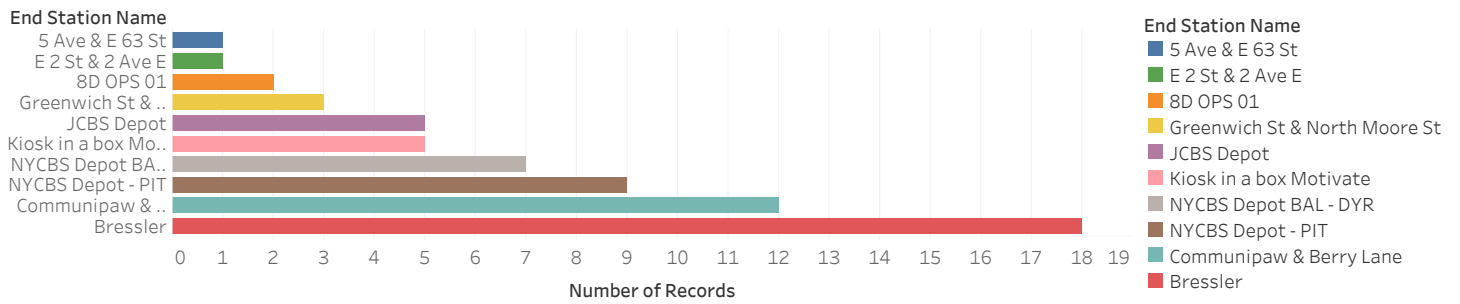
Based on data, I hypothesize these are the bottom 10 locations to start a journey because they are in less populated area, far away from public transportation stations and need long-time drive to arrive.



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bottom 10 stations in the city for ending a journey

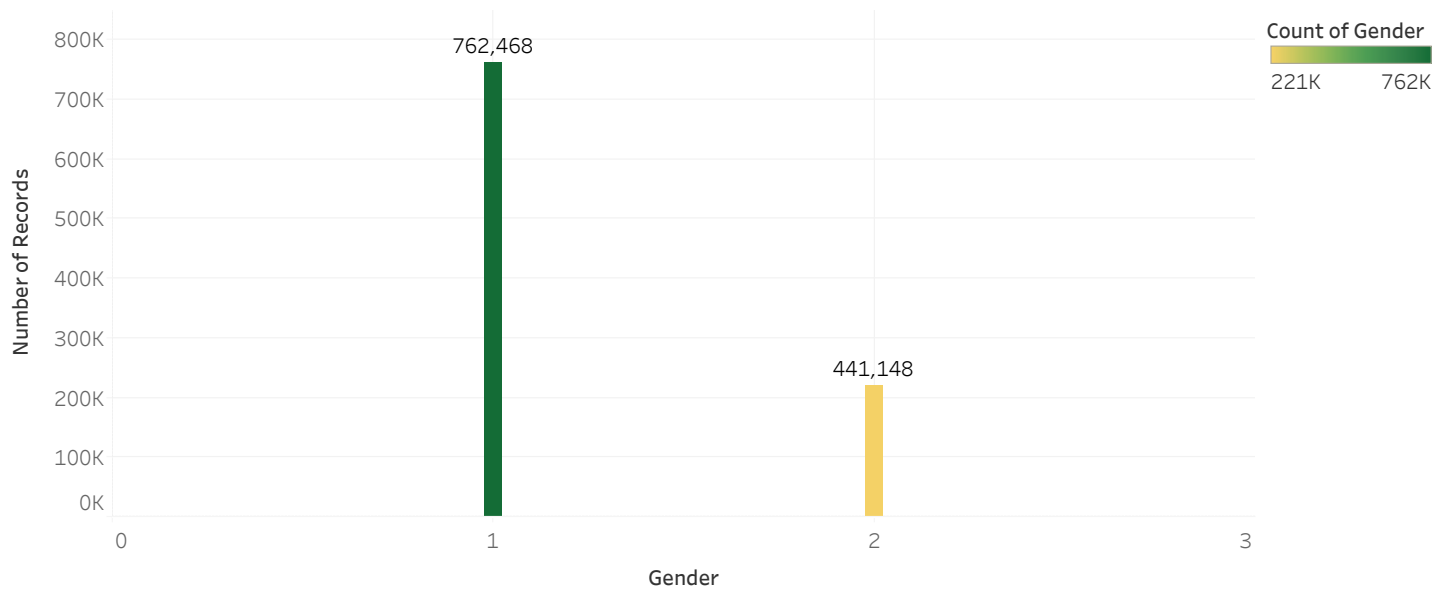
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gender breakdown of active participant

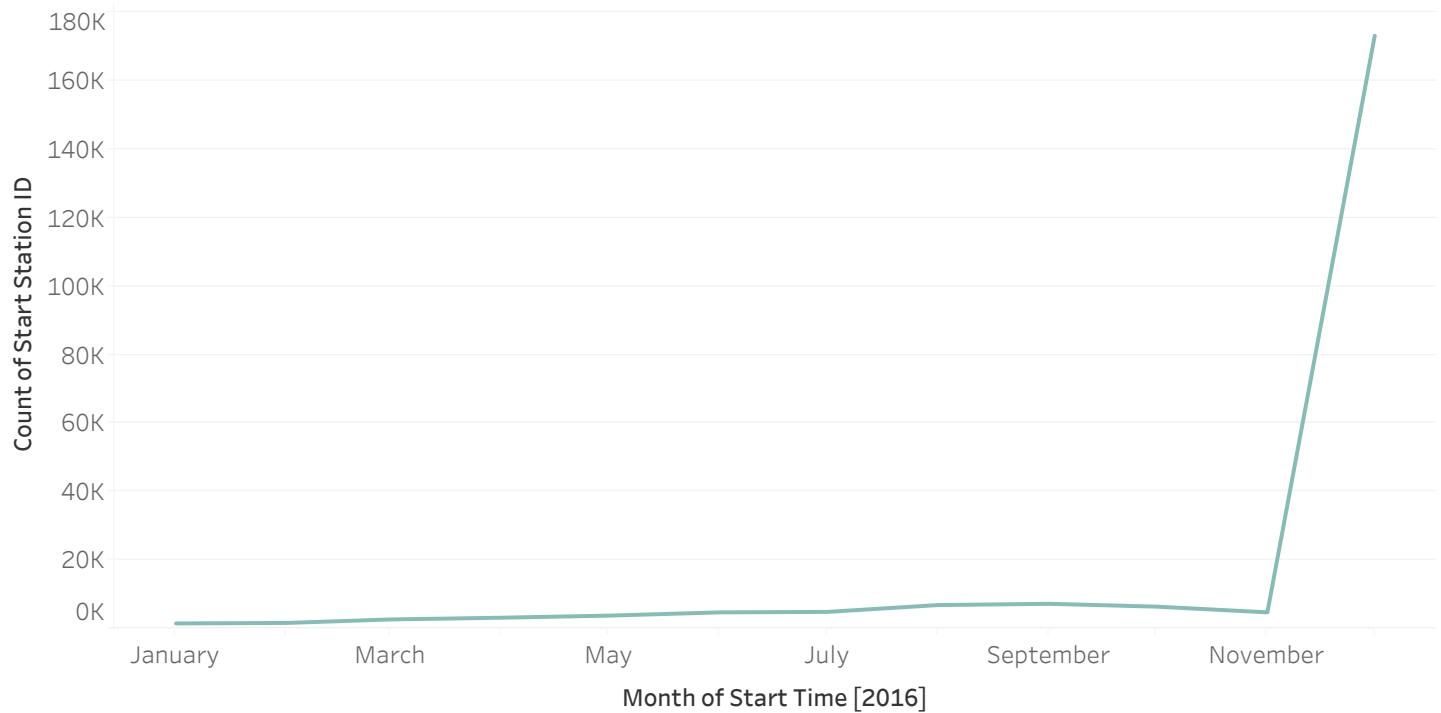
This is the first unexpected phenomena, gender gap. 1 stands for male and 2 stands for female. We can find out that males account for the majority in the active participants, almost twice than female riders. The possible reasons that limit women riding includes 1) women's clothing (e.g. dress, skirt), 2) women's aversion to risk, 3) sexual harassment.



The plot of sum of Number of Records for Gender. Color shows count of Gender. The marks are labeled by sum of Gender. The view is filtered on Gender, which ranges from 1 to 2.

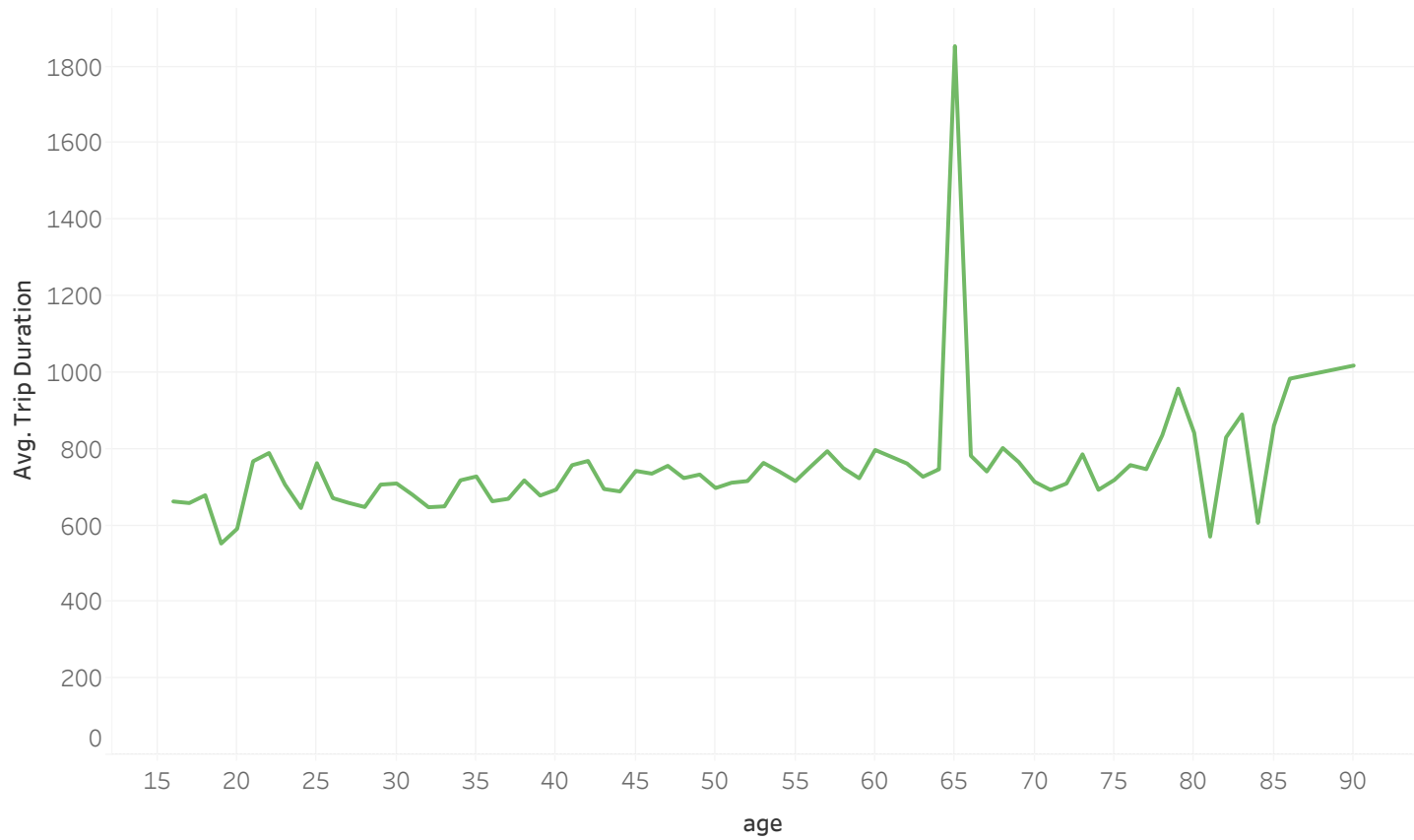
female ridership in 2016

This is the second unexpected phenomena. female ridership had dramatic growth from Nov to Dec in 2016. Winter may be a better season for women to ride bikes. The rains and snows suspend the public transit service so people have to select bicycle.



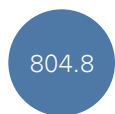
The trend of count of Start Station ID for Start Time Month. The data is filtered on Gender, which ranges from 2 to 2 and keeps Null values.

the average trip duration change by age



The trend of average of Trip Duration for age. The data is filtered on Action (MONTH(Start Time),User Type), which keeps 1 member. The view is filtered on age, which ranges from 16.00 to 90.00.

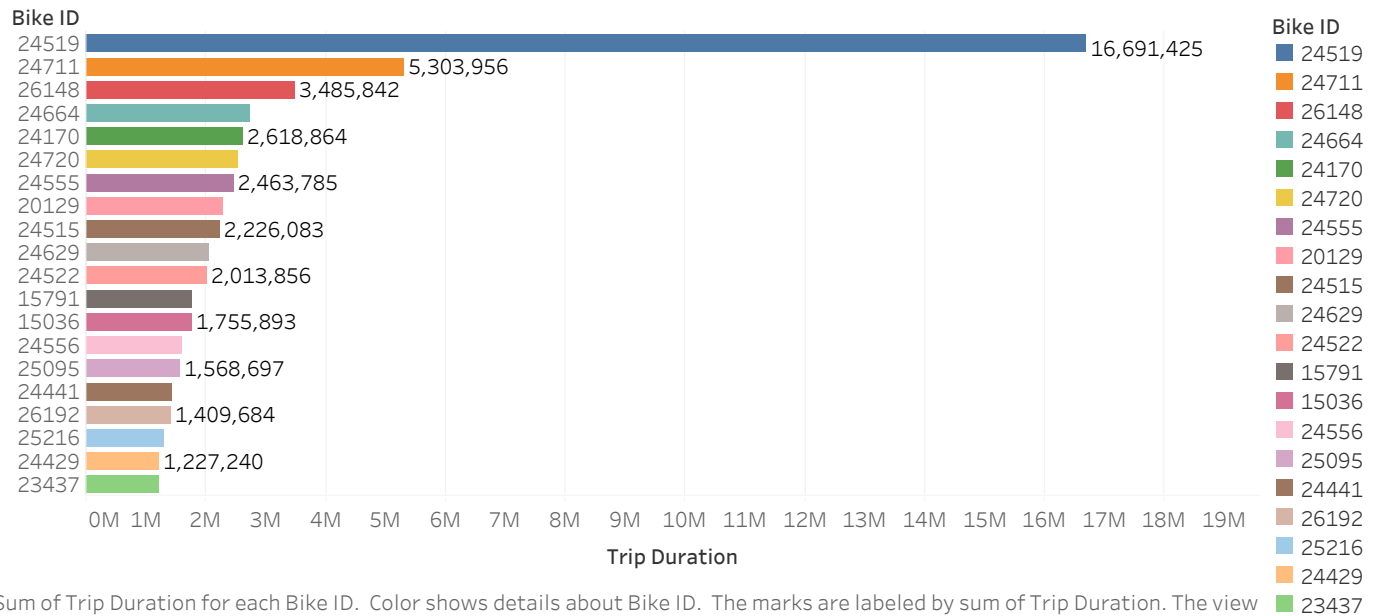
average
distance
in miles
that a bike
is ridden



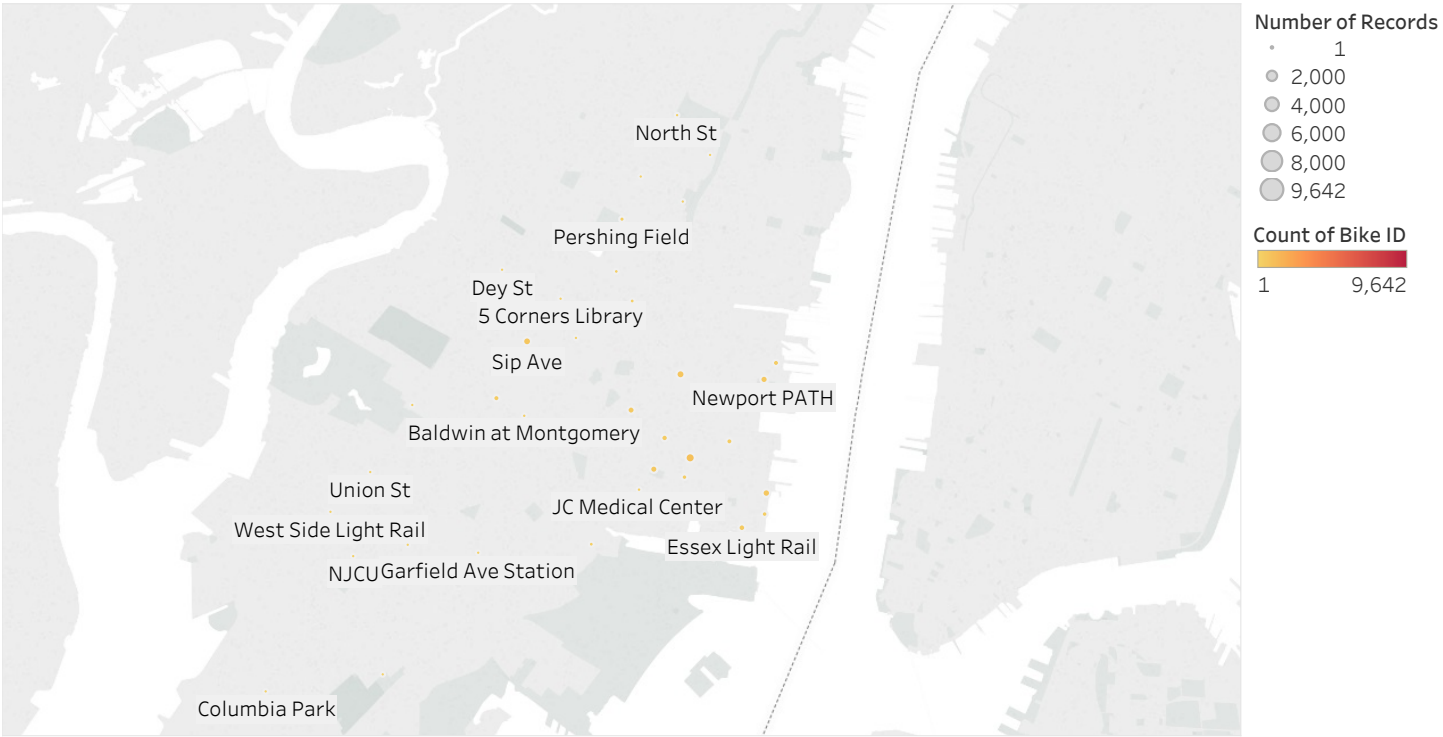
Average of Trip
Duration. The
marks are labeled
by average of Trip
Duration.

bikes due for repair or inspection(top 20)

This graph summarizes the bikes are ridden for the most trip durations in 2016. Frequent use resulted in shorter service life. Therefore, those bikes are most likely due for repair or inspection.

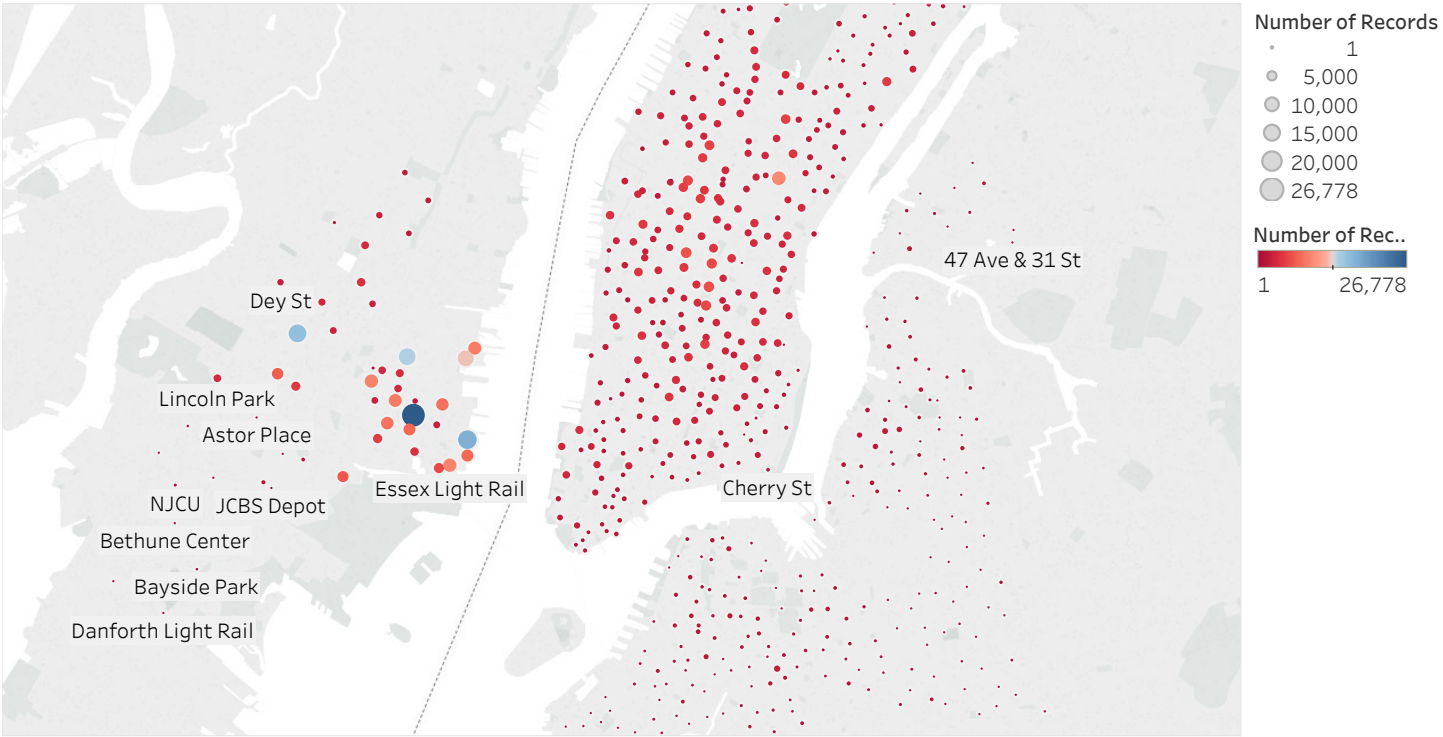


monthly dynamic map - January 2016



Map based on Start Station Longitude and Start Station Latitude. Color shows count of Bike ID. Size shows sum of Number of Records. The marks are labeled by Start Station Name as an attribute.

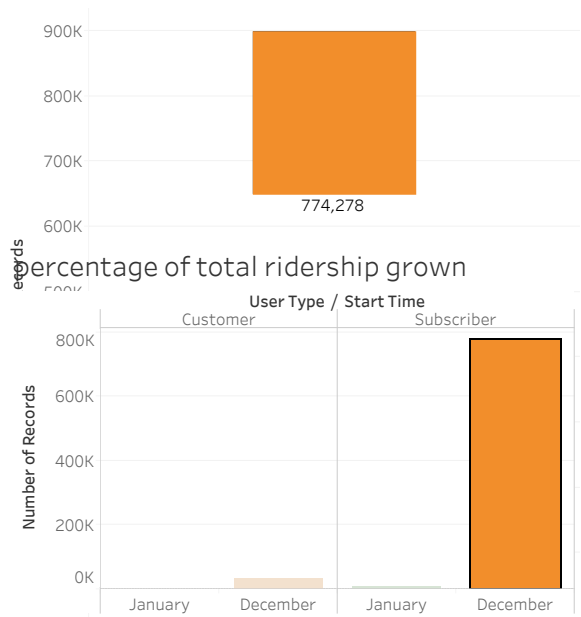
most popular locations to start a journey



Map based on Start Station Longitude and Start Station Latitude. Color shows sum of Number of Records. Size shows sum of Number of Records. The marks are labeled by Start Station Name. The view is filtered on sum of Number of Records, which includes values less than or equal to 26,778.

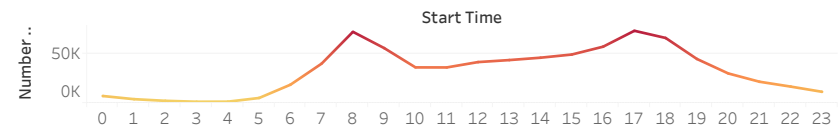
trip summary in 2016

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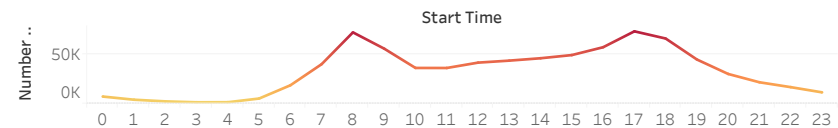


Month of Start Time
■ January
■ December

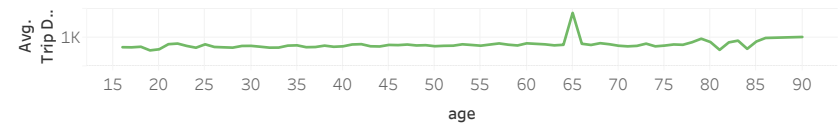
peak hour in summer season (Jun - Sep)



peak hour in winter season (Oct - Dec)



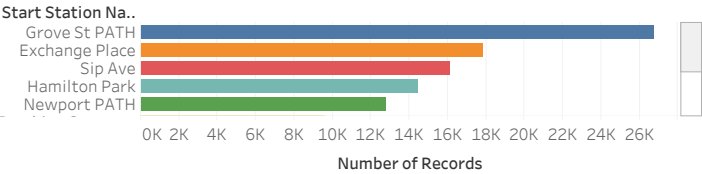
the average trip duration change by age



age
16 to 90

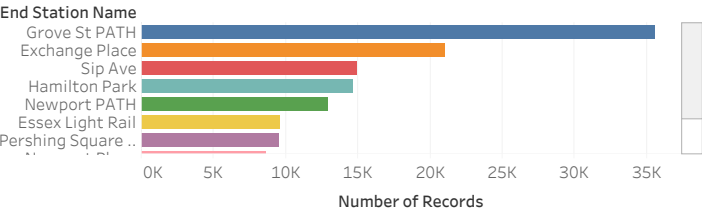
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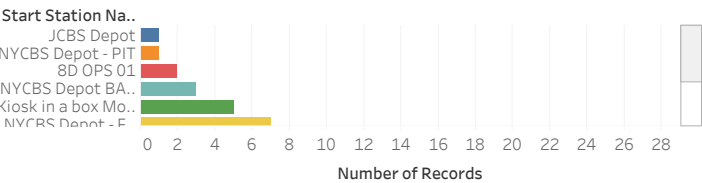
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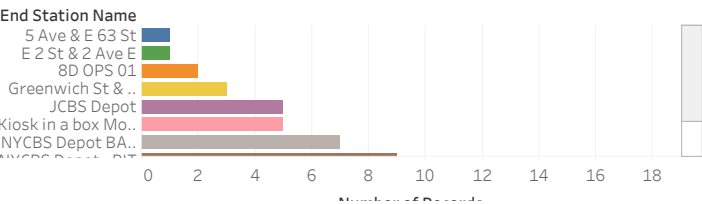
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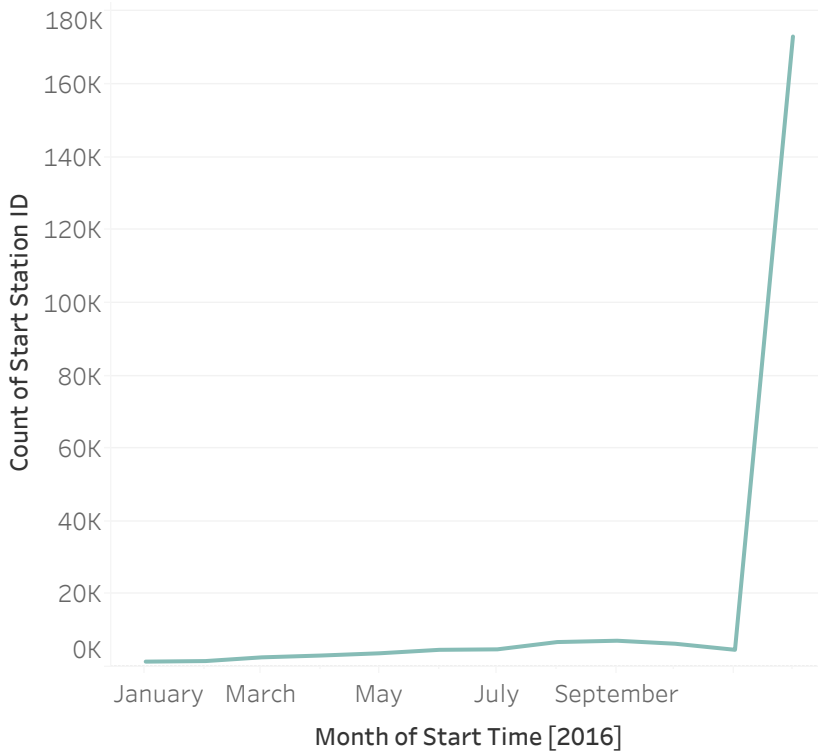
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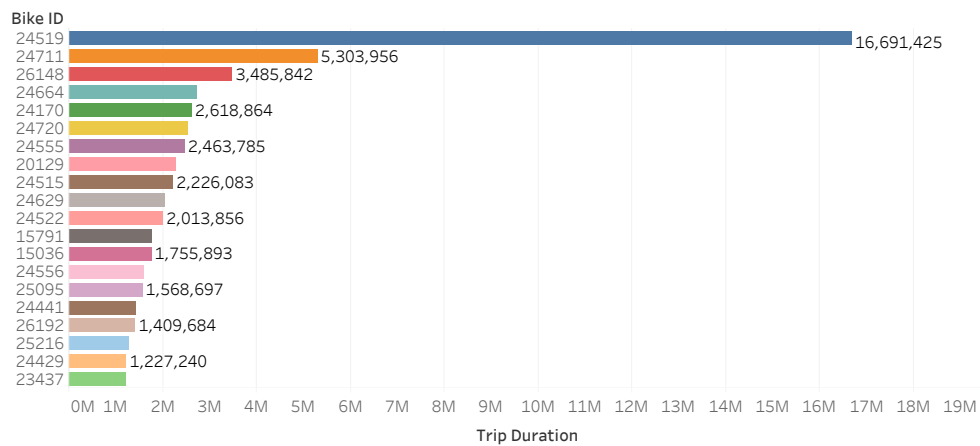


average
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monthly dynamic map - January 2016



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