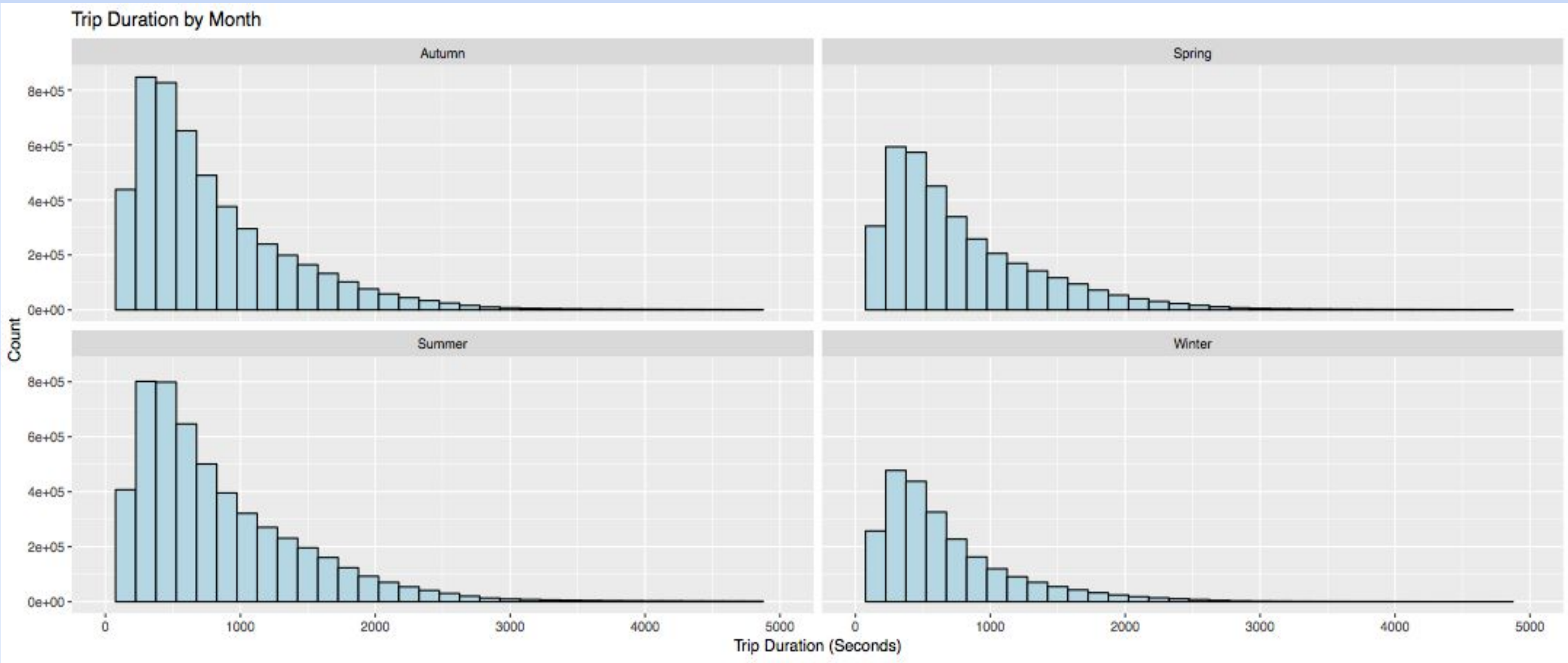# Analysis of CitiBike's 2017 Data

Malaika Handa, Abby Pfingsten, Aiden Shin, Helen Song

CitiBike lets users borrow a bicycle for a single trip. You can pick up a bike from one of their many locations, and then return it at a different location. We've looked at their data for New York City in 2017. The data includes information about each trip (including its duration, location, and time)) and information about the user (including their gender and birth year).

A trip between two stations is the edge of a graph. It is impossible to visualize all 300k trips, so the network shows those between the most used station, and the 20 stations with connected-ness closest to the median.
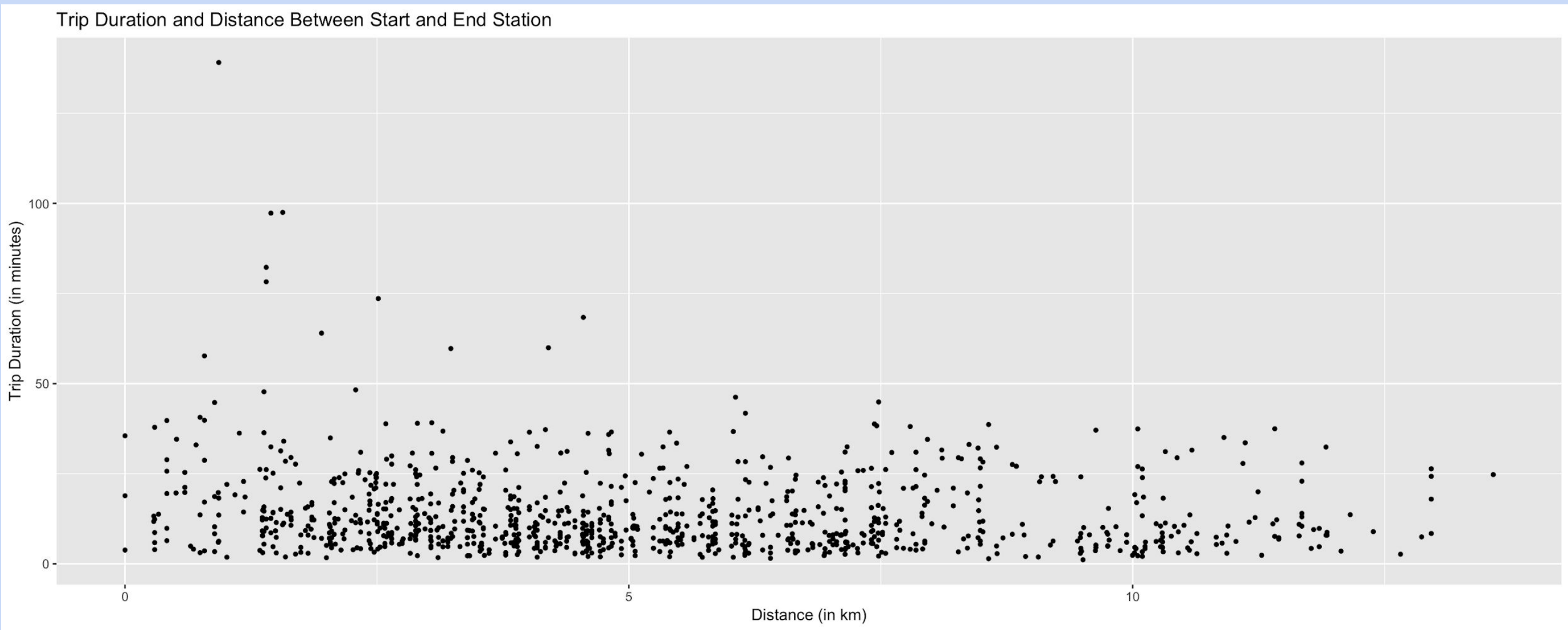
Network of Stations

Trip Duration by Month

Autumn · *Spring* · *Summer* · *Winter*

Trip Duration (Seconds)

Trip Counts per Month

Day of the Week: Friday, Monday, Saturday, Sunday, Thursday, Tuesday, Wednesday

Most people bike for less than 3 hours, regardless of the season.

A larger proportion of males use the service, but the majority of users for both genders are close in age to 30.
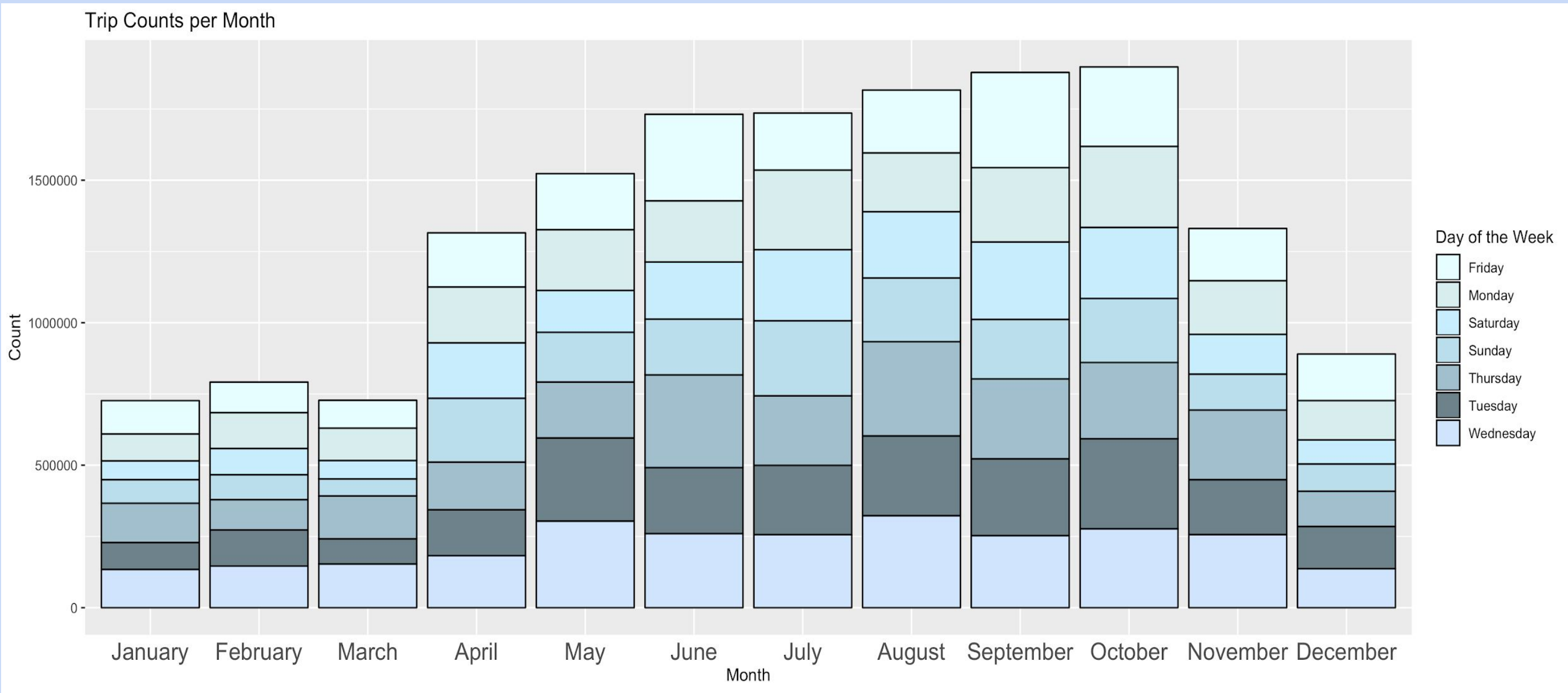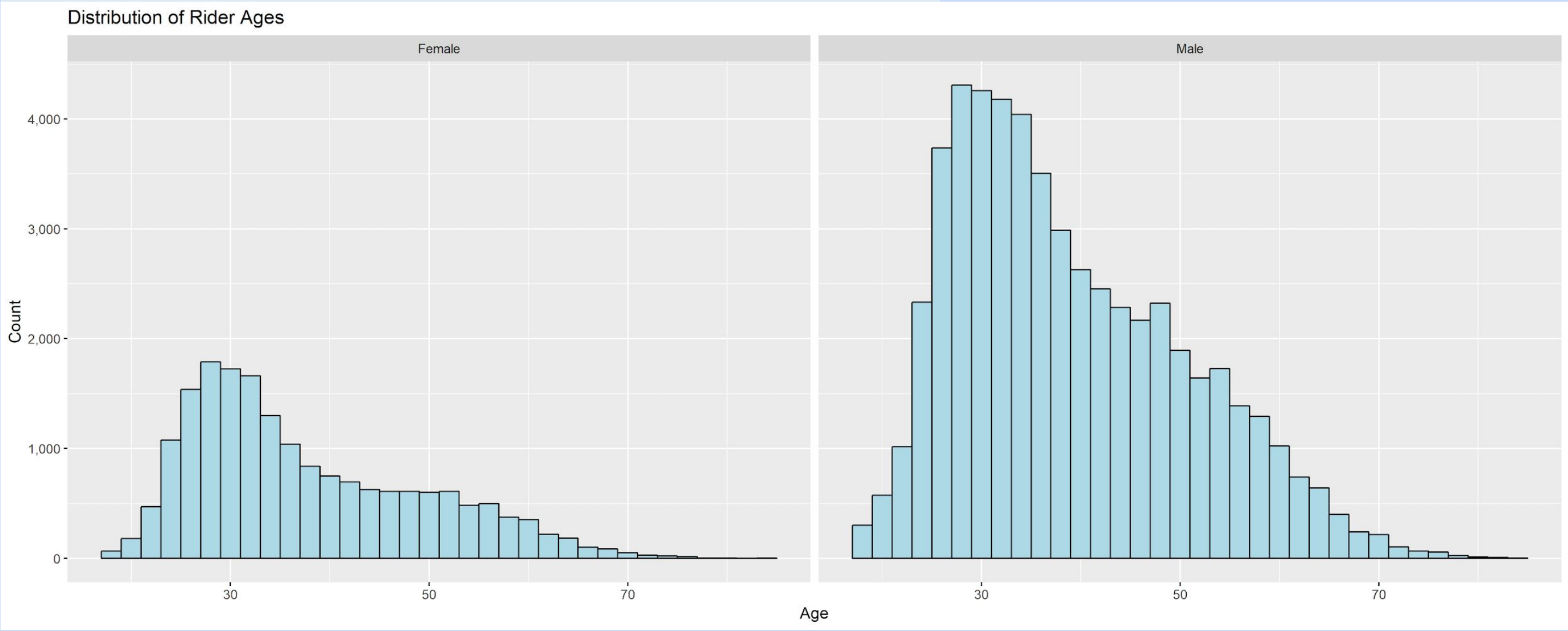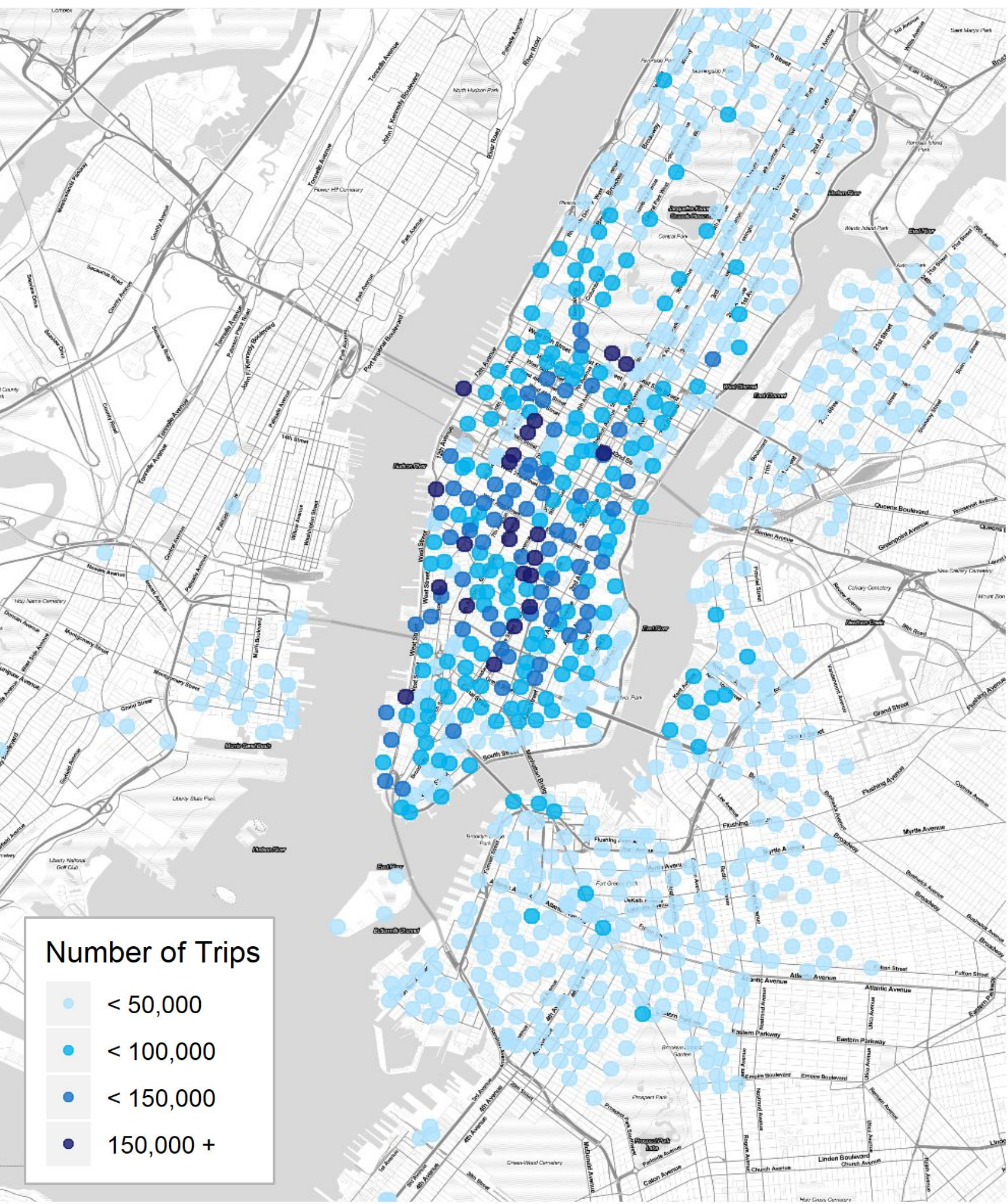
Many people seem to take round trips, starting and ending at similar locations.

CitiBike rentals are twice as popular in summer and fall than during winter.

Distribution of Rider Ages

Female · *Male* — Age

Trip Duration and Distance Between Start and End Station

Trip Duration (in minutes) — Distance (in km)

Station Popularity

Number of Trips
- < 50,000
- < 100,000
- < 150,000
- 150,000 +

Totalling the visits to each station lets us see which stations are the most heavily used.

Number of Annual Members in 2017

Total Annual Members (in ten thousands) — Date
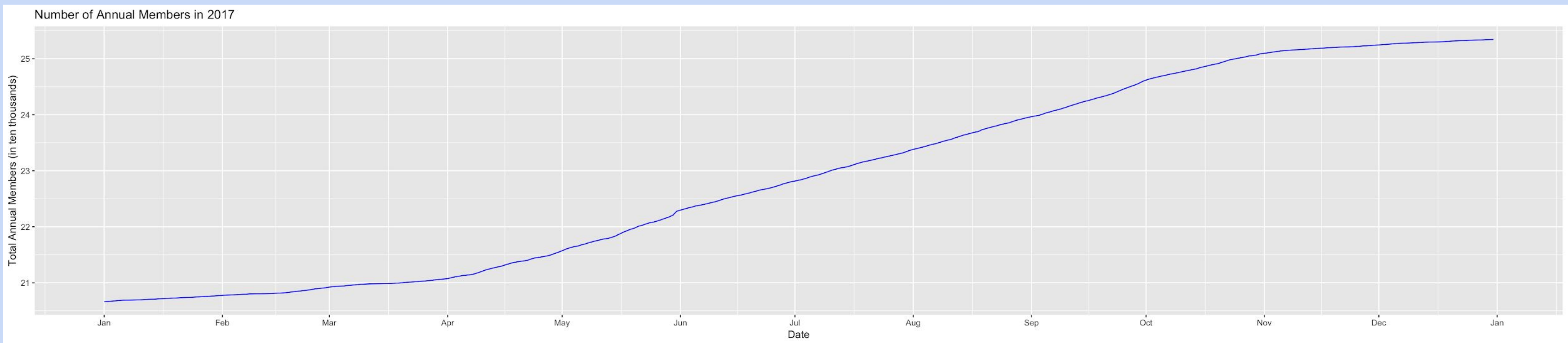
The longest trips occur during the summer. The huge spike in July could be attributed to activities in the city for the Fourth of July.

The number of annual members grow steadily throughout the year, with the most rapid increase in the spring, and slowest during the winter.

Summation of all Trips for Every Day in 2017

Total Time (in Hours) — Month