

Introduction

The Project 3 is about data visualization. In this project, I wrangled the Fordgobike trip data and created visualizations from the data.

The Dataset

The dataset used for this project contains information of 183,412 records of Fordgo bike trip in San Francisco. The dataset was made up of 16 columns and 183,412 rows. The columns are as follows:

1. duration_sec
2. start_time
3. end_time
4. start_station_id
5. start_station_name
6. start_station_latitude
7. start_station_longitude
8. end_station_id
9. end_station_name
10. end_station_latitude
11. end_station_longitude
12. bike_id
13. user_type
14. member_birth_year
15. member_gender
16. bike_share_for_all_trip

The data set was downloaded from the udacity website for this project.

Data cleaning

I carried out some cleaning on the dataset.

1. Change the data type of start_time and end_time to DateTime datatype.
2. Change the datatype of bike_share_for_all_trip to boolean.
3. Create new columns (Start_hour, start_day, start_month) from start_time.
4. Change Duration_sec to minutes.

Exploratory Analysis

In the exploratory analysis, I found that the highest trip duration was about 500secs, I also noticed that as trip duration increases the number of trips decreased showing a negative correlation.

I went further to investigate other variables like member_age and discovered that users between age 20 and 50 rode for higher durations than users from 60 years of age. Investigating the user_type variable, I found that customers used the bikes for longer durations than subscribers.

The service had higher number of rides between the hours of 8am and 9am and also between 5pm and 6pm on weekdays for both type of users.