Cyclistic Bike-Share Case Study

Google Data Analytics Capstone Project

Presented by: Bernard Bamidele Aghedo

20/07/2022

Introduction

A bike-share program that features more than 5,800 bicycles and 600 docking stations. Cyclistic sets itself apart by also offering reclining bikes, hand tricycles, and cargo bikes, making bike-share more inclusive to people with disabilities and riders who can’t use a standard two-wheeled bike. The majority of riders opt for traditional bikes; about 8% of riders use the assistive options. Cyclistic users are more likely to ride for leisure, but about 30% use them to commute to work each day.

Stakeholders

Lily Moreno: The director of marketing

Cyclistic marketing analytics team

Cyclistic executive team

Objective

How do annual members and casual riders use Cyclistic bikes differently?

Data Preparation

I used the Cyclistic's historical trip data to analyze and identify trends. The data has been made available by Motivate International Inc. under this license.

I downloaded the zip files from the above link, extracted the csv files and imported it into google sheets for glimpse of the data set.

The dataset is then imported into R for further analysis

Data Processing

I used R for the data cleaning process.

I read all 26 csv files from April 2019 to April 2022 and binded all into a dataframe: bike_rides

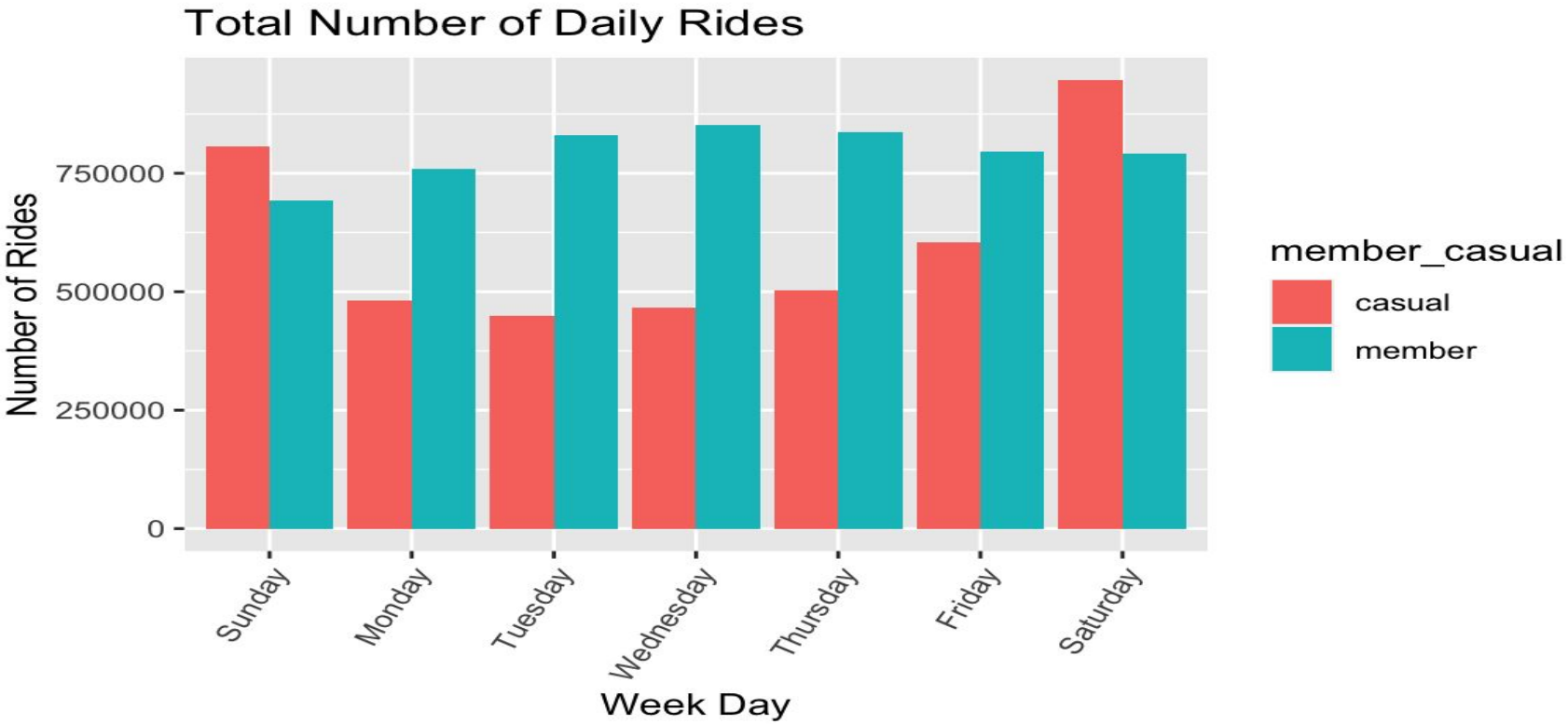
I removed empty columns from the dataframe

I checked and filtered Test stations

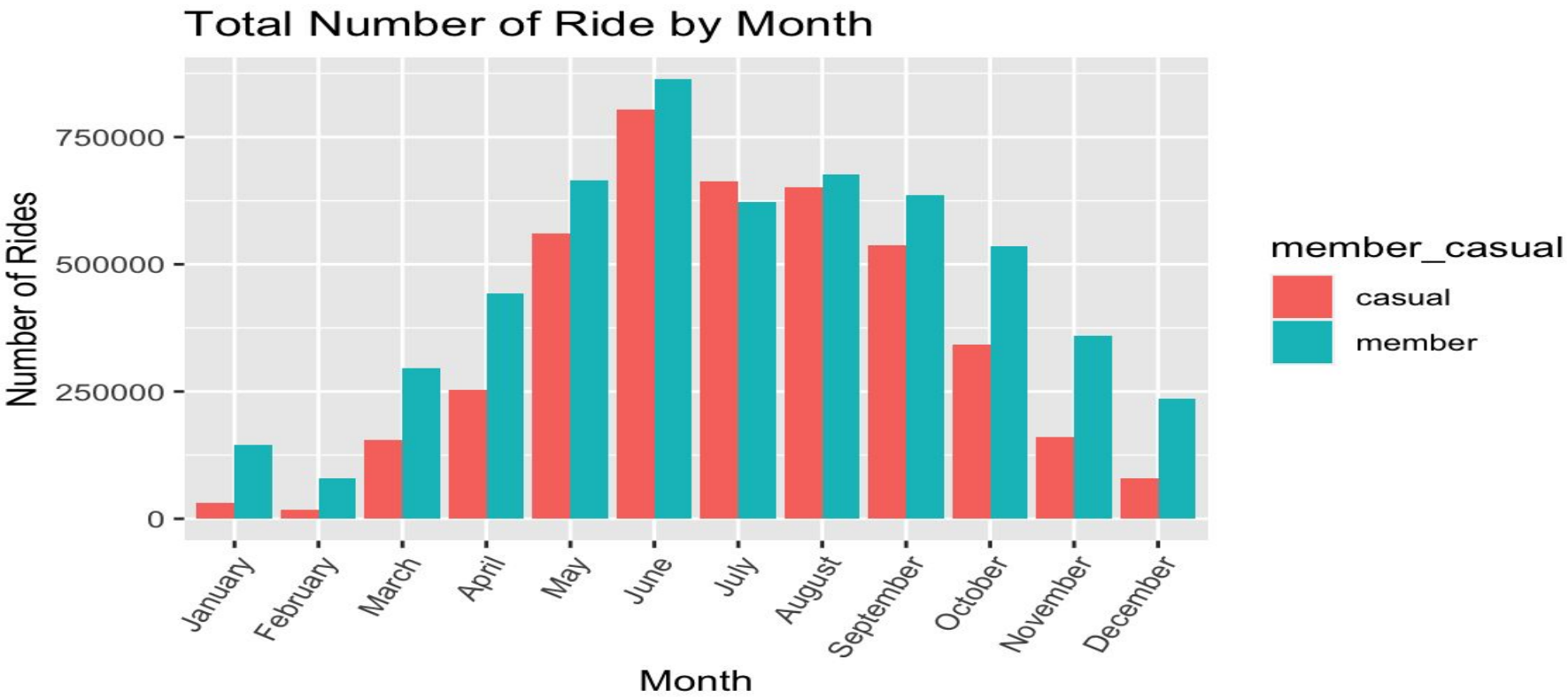
Columns were created for hours, weekday, month and year of rides

Graphical representations were made with its respective correlations

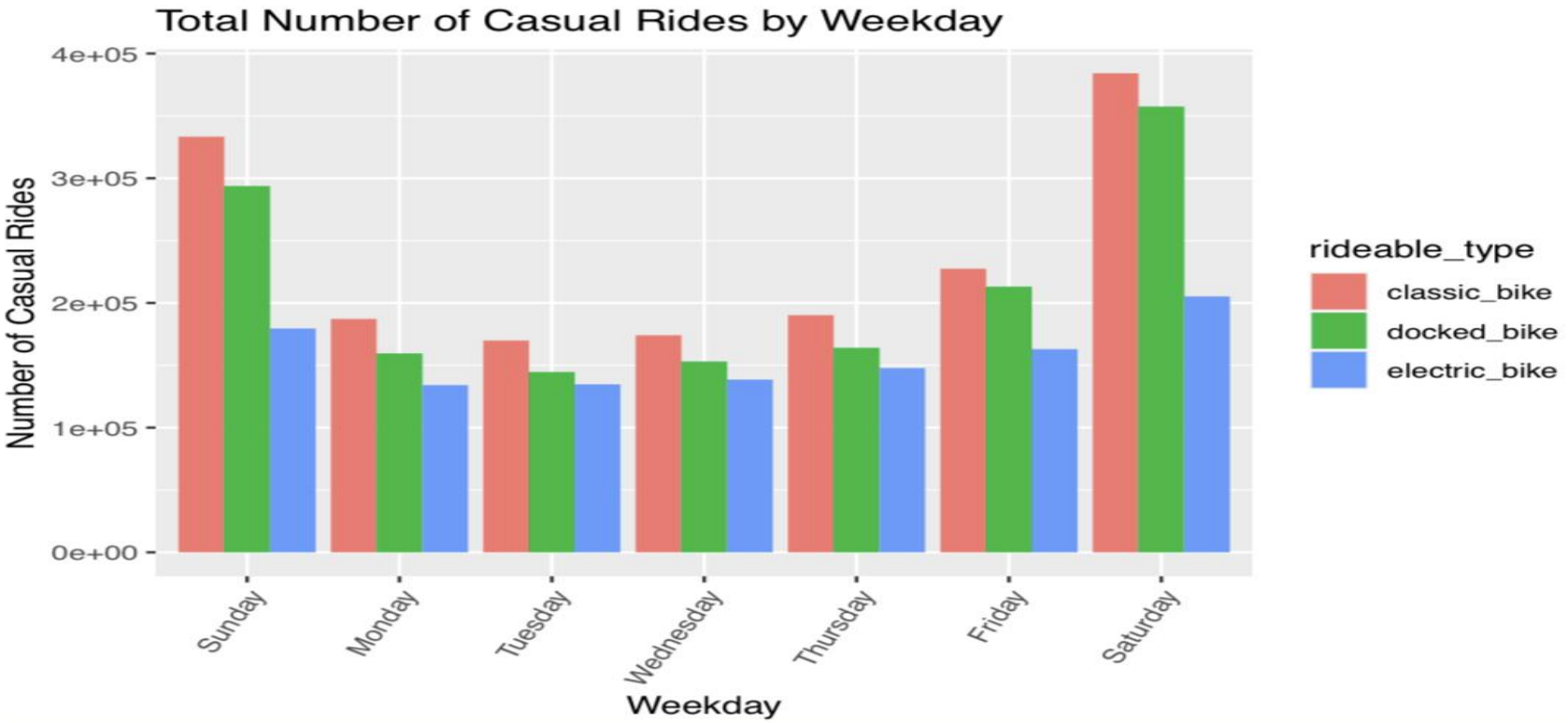
Daily Membership Rides



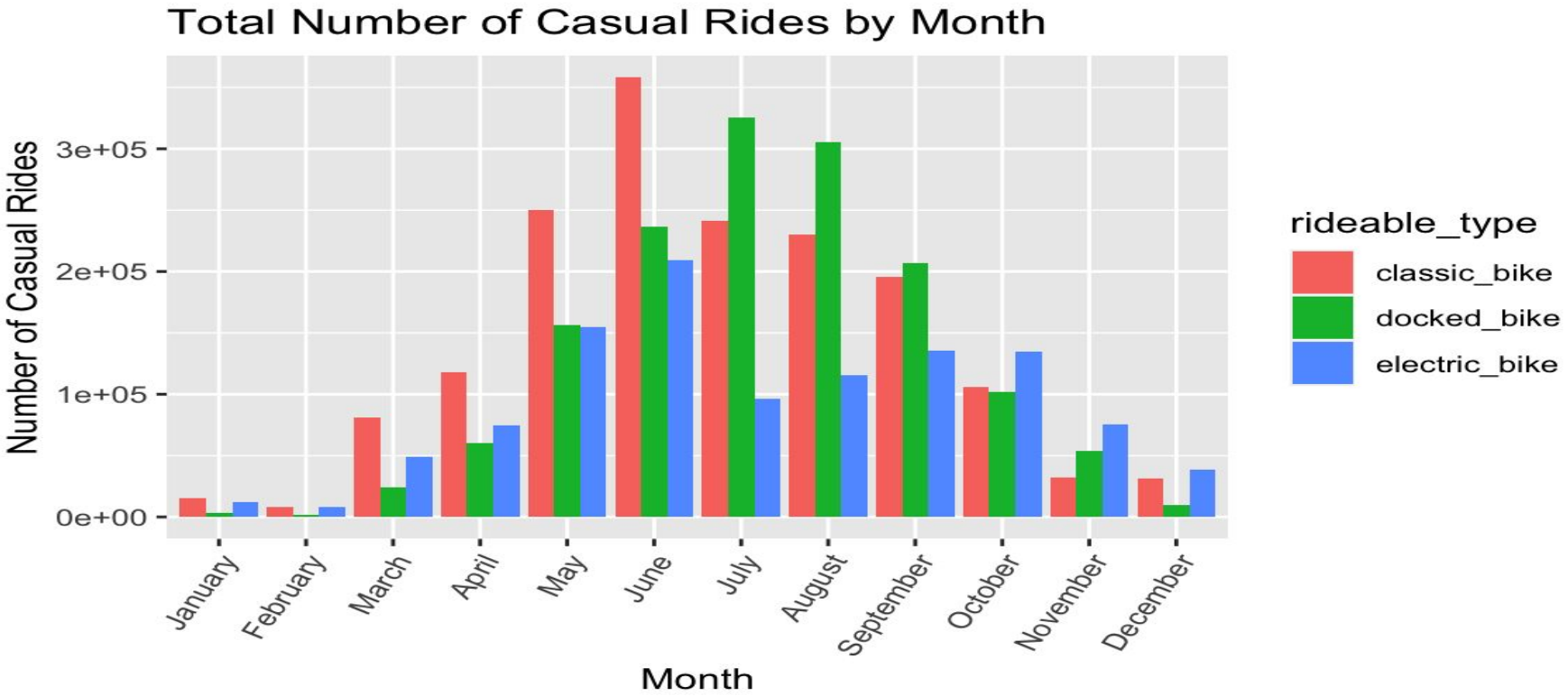
Monthly Membership Rides



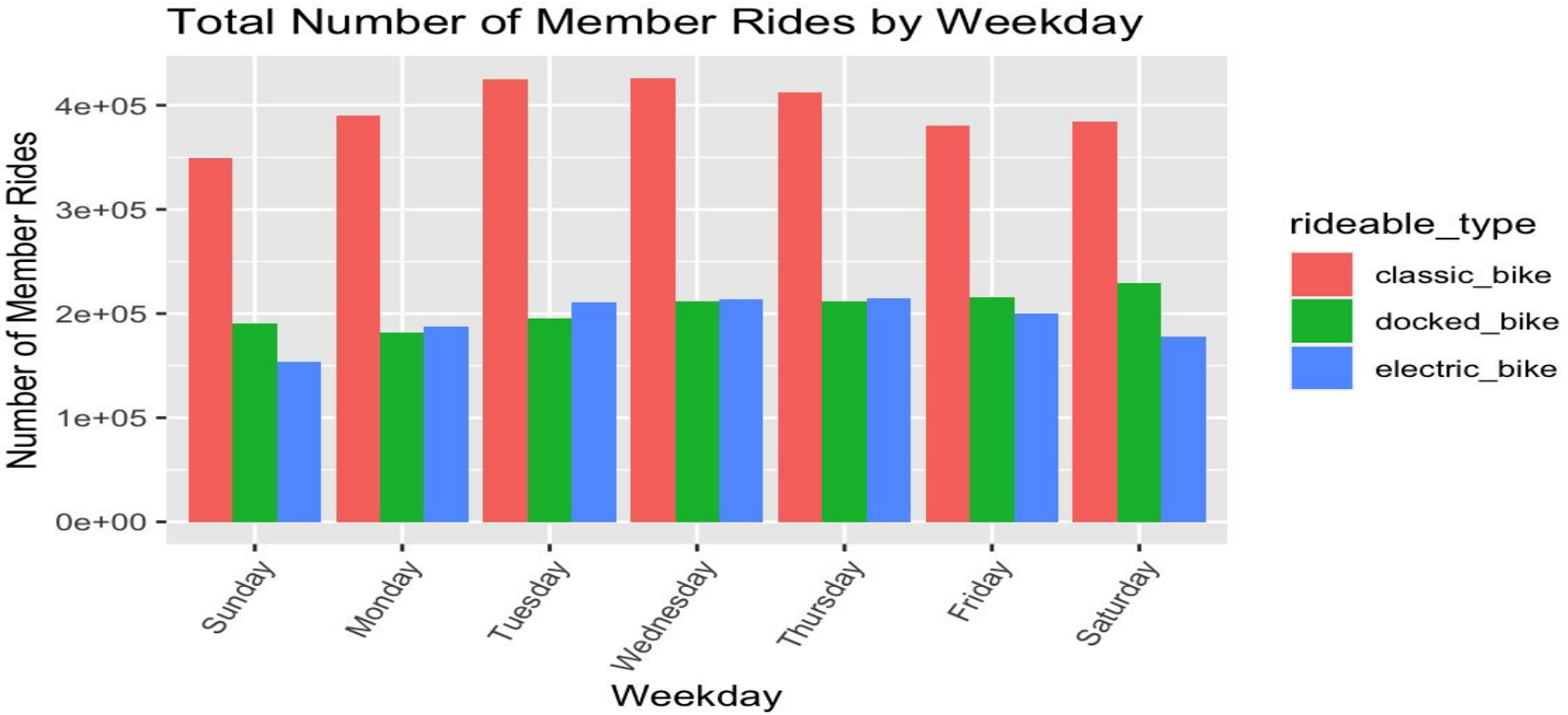
Casual Riders Type by Weekday



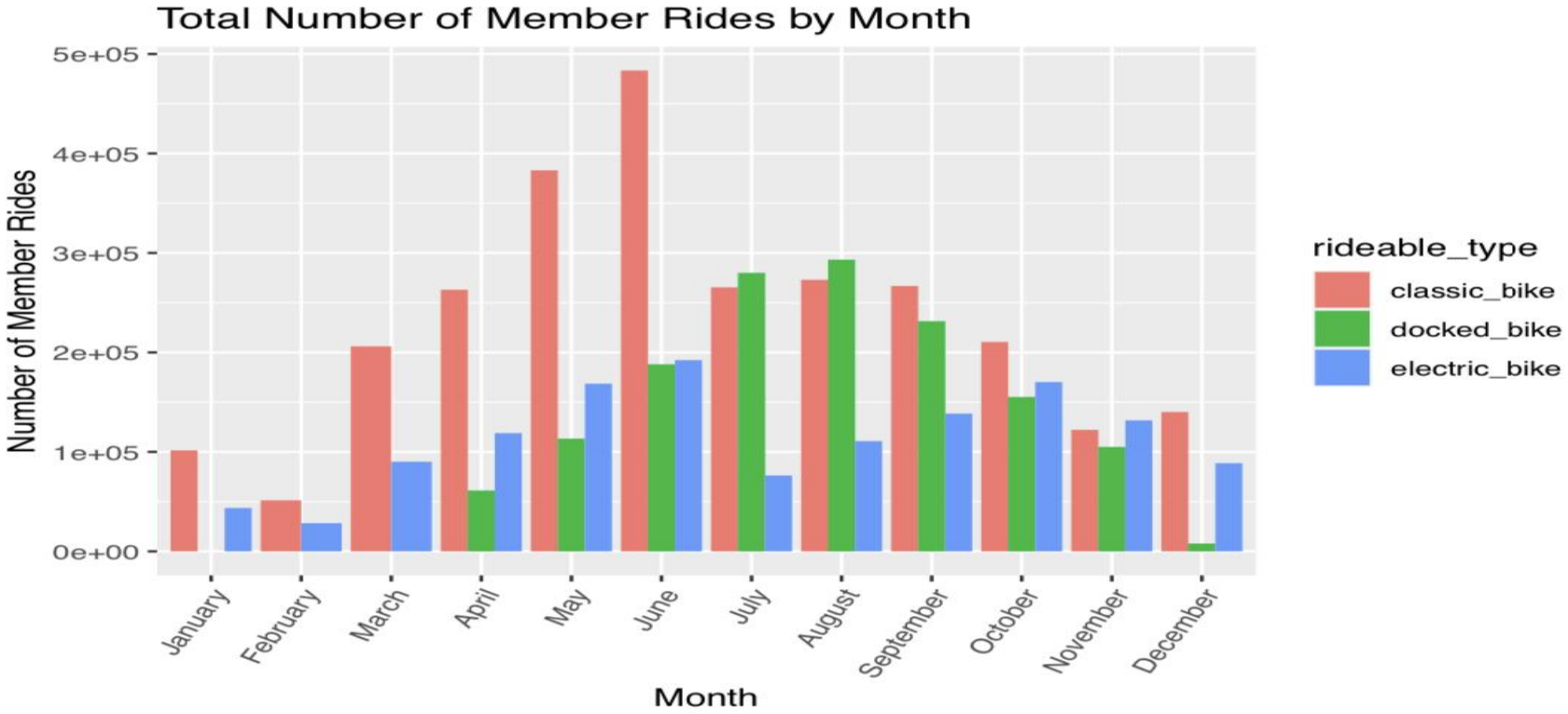
Casual Riders Type by Month



Member Riders Type by Weekday



Member Riders Type by Month



Conclusion

Classic bike is being used the most by both casual and member riders with most rides at the first half of the year, Docked bike is the next used bikes to classic bike

Member riders have more rides during the week which is between Mondays to Fridays While Casual have more rides during weekends which is Saturdays and Sundays

Rides around the mid months have relatively high number of rides with June being the highest

Business Suggestions

Casual Riders have more rides during weekends compared to other days of the week. Field interventions such as digital marketing awareness in each stations can be created as many casual riders will be present

Classic bikes are the most used type of rideable bikes used by both membership and casual riders, followed by Docked bikes. The marketing analytics team can focus on more of the Classic and Docked bike types due to recent riders choices