

Cyclistic Case Study

Cyclistic is a bike-sharing program that offers a wide variety of bikes available for use. Cyclistic offers annual memberships to customers as well as single day use, or full day passes. Cyclistic and their financial team have concluded that Cyclistic members are more profitable than casual riders and believe by converting those casual riders into members that the company will grow. This study is set to analyse the differences between members and casual riders' use of the Cyclistic bikes to recommend how to turn those casual riders into members.

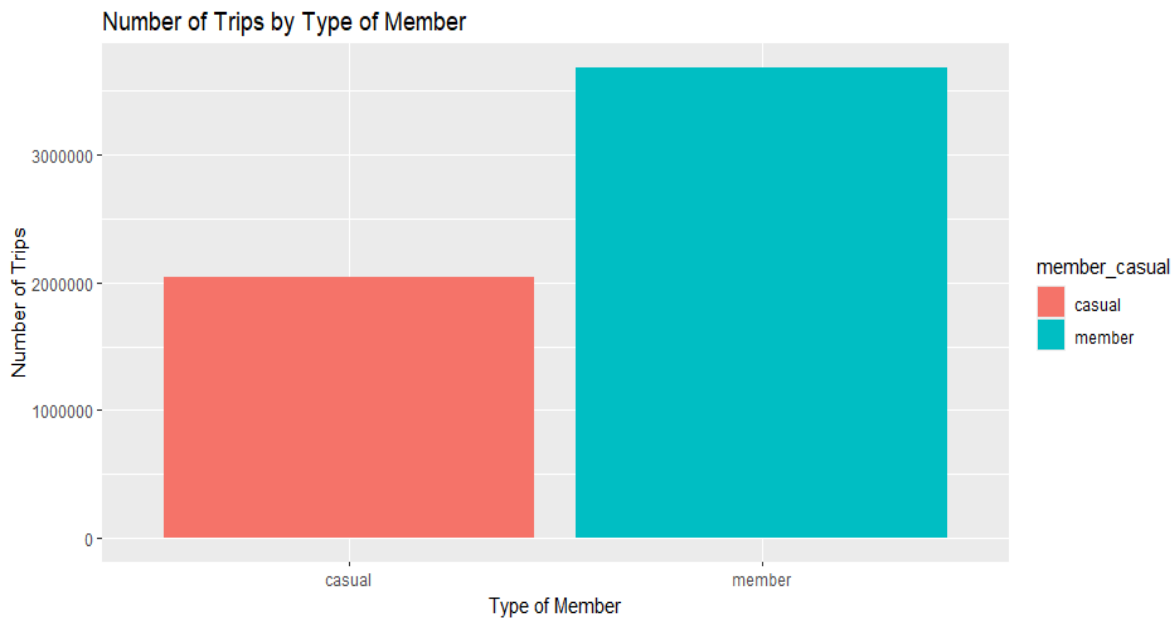
The data was imported from [here](#) which contains trip data of all Cyclistic bikes from April 2020 to April 2024. This study uses the latest year of available data, which is May 2023 to April 2024. The data was stored in monthly csv files, so the study used all the monthly files from “202305-divvy-tripdata.zip” to “202404-divvy-tripdata.zip”.

Adding and cleaning data

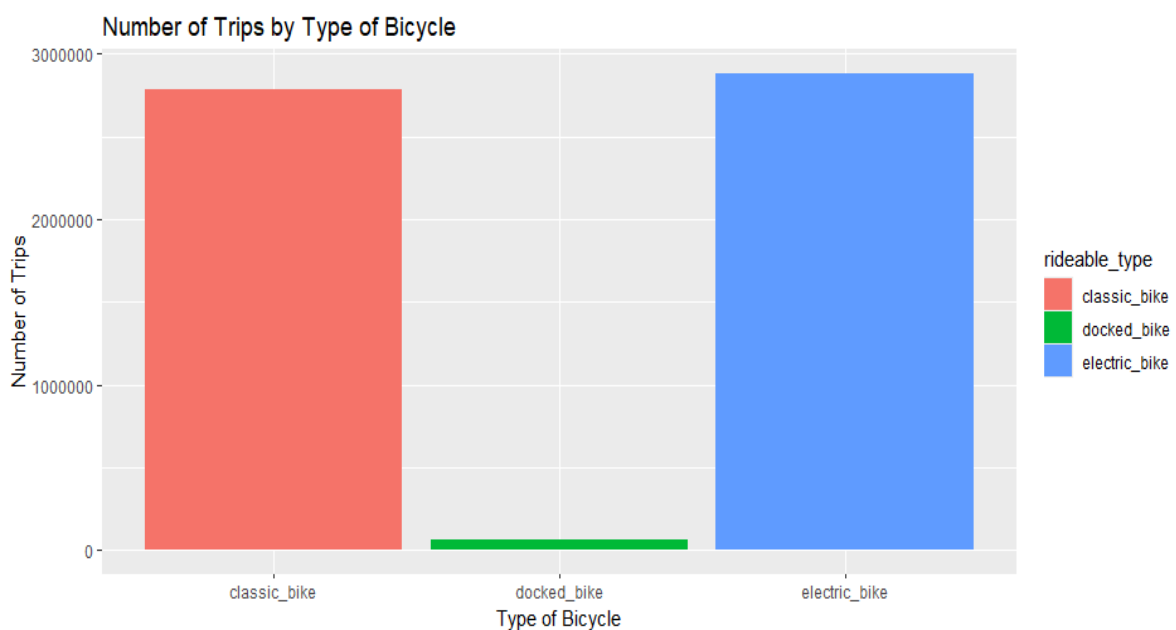
The 12 monthly files were uploaded individually, and then combined to create one big data frame. New columns were created for each ride's ride length, the day of the week it occurred and the month it occurred on. The day of the week and month were at first represented by a number but were then changed to a string (“January” instead of 1). The data was then cleaned to get rid of null values, duplicates and cases where the ride length was less than zero.

Analysis

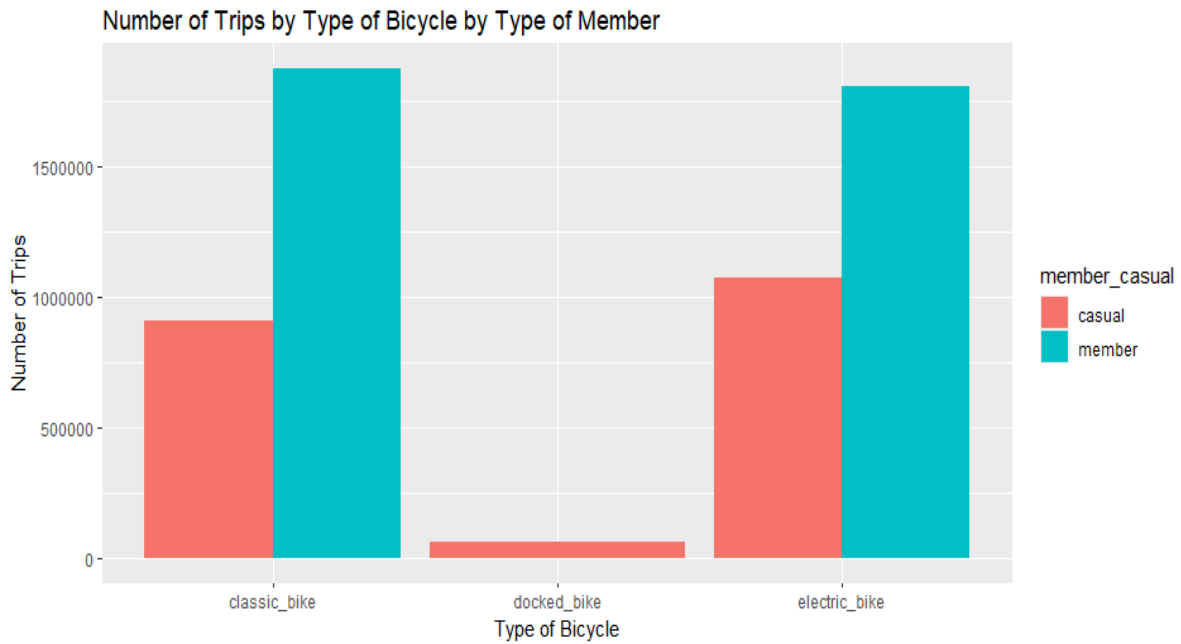
Over the 12-month span there were 5,729,386 rides, with 3,683,499 being from members and 2,045,887 being from casual riders. The average ride length was 923.6198 seconds or 15.3937 minutes. The median ride length was 579 seconds or 9.65 minutes. The shortest ride was 1 second and the longest ride was 202.272 hours or 8.416 days.



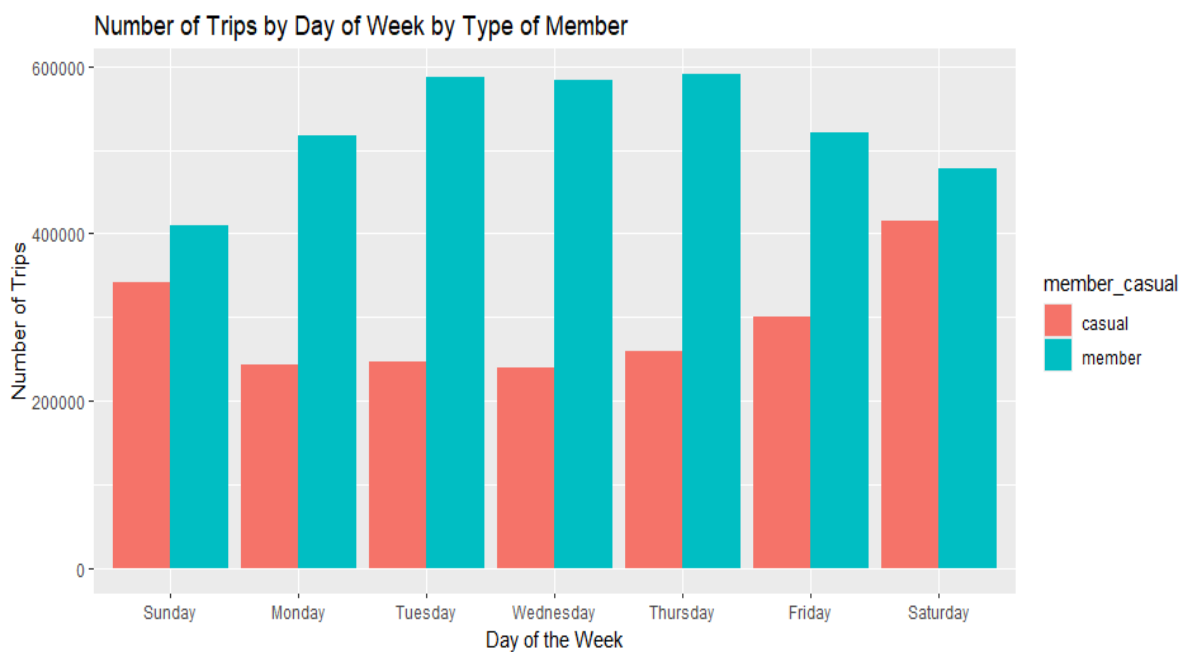
Out of those 5.7 million rides 2,786,773 were ridden on classic bikes, 60,687 were docked bikes and 2,881,926 were electric bikes.



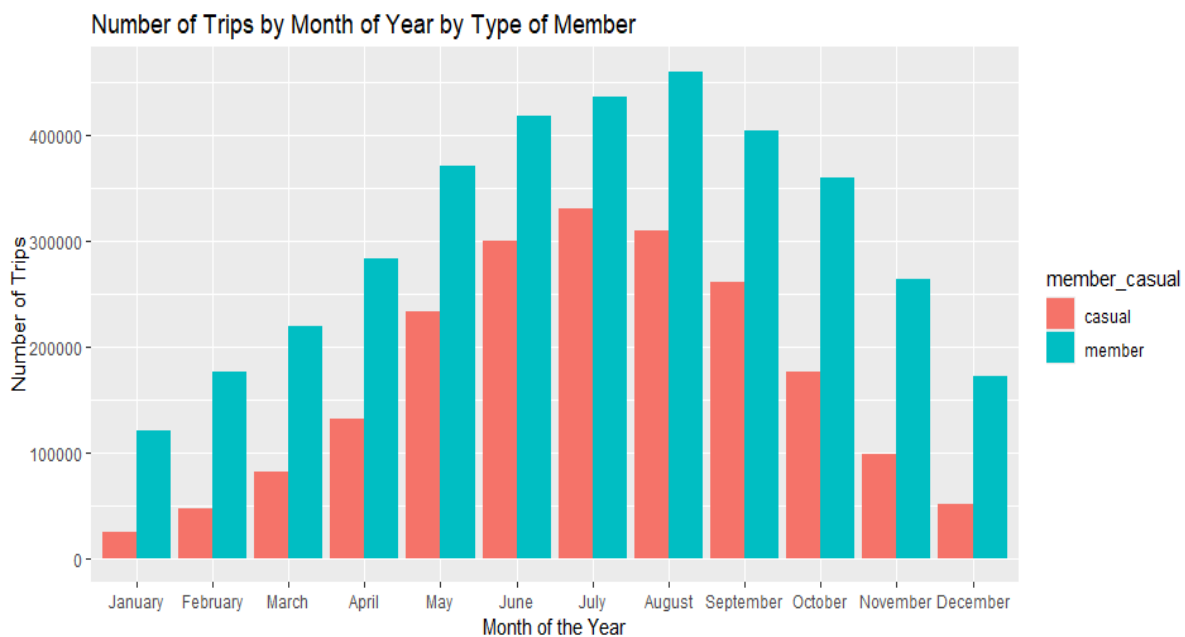
Casual riders used classic bikes 910,351 times, docked bikes 60,687 times and electric bikes 1,074,849 times. Members used classic bikes 1,876,422 times, docked bikes 0 times and electric bikes 1,807,077 times.



The most popular day of the week was Saturday which had a total of 892,836 trips over the 12 months, with the least popular day being Sunday with 750,491 trips. The most popular day for members was Thursday with 590,384 trips, but was closely followed by Tuesday and Wednesday. The least popular day for members was Sunday with 408,977 trips. The most popular day for casual riders was Saturday with 415,415 trips and the least popular days were Monday to Thursday with Wednesday being the least with 239,527 rides.



The most popular months were August and July, with 770,179 and 766,183 trips respectively. The least popular month was January with 144,488 trips. The most popular month for members was August with 460,248 trips and the least popular month by far was January with 120,149 trips. The most popular months for casual riders were the summer months of June, July and August with a high of 330,142 trips in July. The least popular month for casual riders was the winter period of December, January and February that reached a low in January with only 24,339 trips.



Takeaways

Using the analysis, we can see some trends. We can see that casual riders usually use Cyclistic bikes during the summer and on weekends. The casual riders barely use the bikes during the winter seasons, and they comparably use them far less than the members. We can also see that the members' usage of the bikes goes down during weekends, which suggests they are using their subscription on weekdays for their commute to work. Similarly, the decreased usage of the bikes during the work week for the casual rider means that they are using other means to commute. Regarding the bike types, the docked bikes are not used at all by members and the usage of electric and classic bikes are very similar.

Recommendations

Eliminate docked bikes as they are not even being considered as an option for members and casual riders barely use them. Replace those docked bikes with the more highly used electric and classic bikes.

Encourage casual riders to sign up for a subscription by offering deals and marketing to them during the busy time periods. Cyclistic should focus on pushing subscriptions during weekends and in the summer, and especially weekends during the summer!

Cyclistic should market to casual riders to start using a bike as their commute to work. Everytime a casual rider appears to be using a bike to go to work, Cyclistic should push a subscription that focuses on the benefits of commuting on a bike and how Cyclistic can provide that.