After analyzing the bike usage throughout the month, there seems to be another underlying reason behind the peaks throughout the month. At first, I hypothesized that the presence of federal holidays would increase casual bike usage and decrease member bike usage. However, after analyzing the data from the previous 12 months, it seems that there is no correlation between holidays and bike usage throughout the year. As such, the next thing to look at would be the day of the week where the bikes are most commonly used. I hypothesize that the peaks that are seen throughout the months can be explained by a peak during the weekends. I believe that casual riders will more likely use the bikes during the weekends(friday, saturday, sunday).

February 2024

There seems to be a similar amount of bike usage within casual riders and less bike usage on the weekends in member riders.
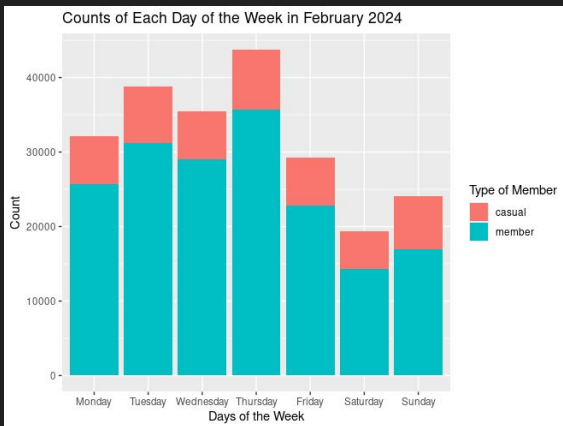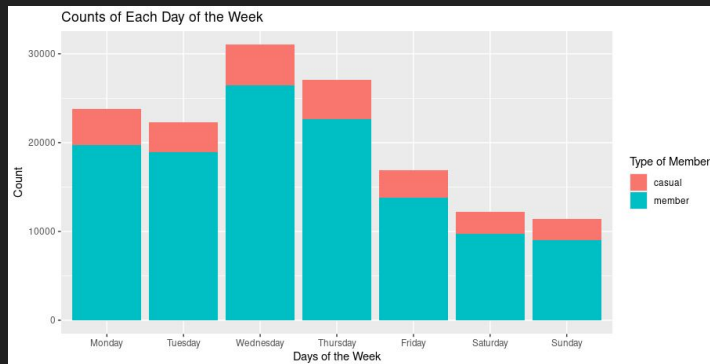

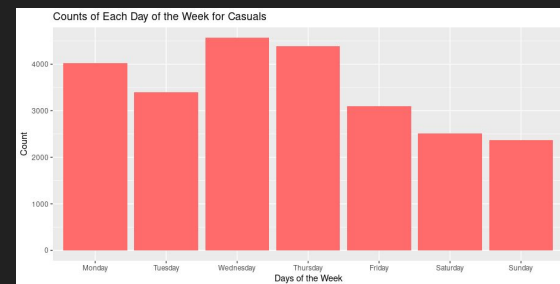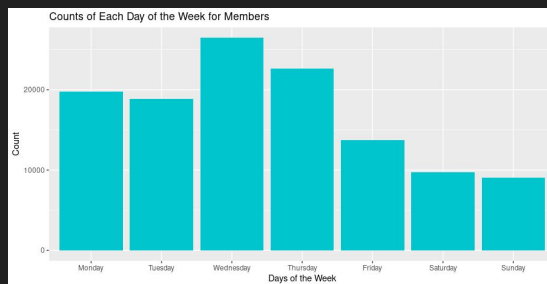| Day of week	count
monday	32099
tuesday	38828
wednesday	35464
thursday	43782
friday	29238
saturday	19379
sunday	24056
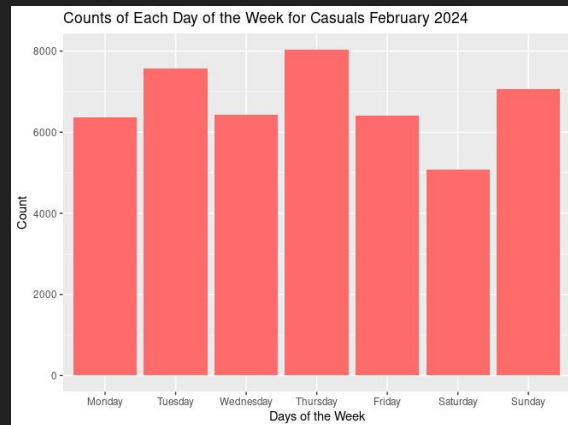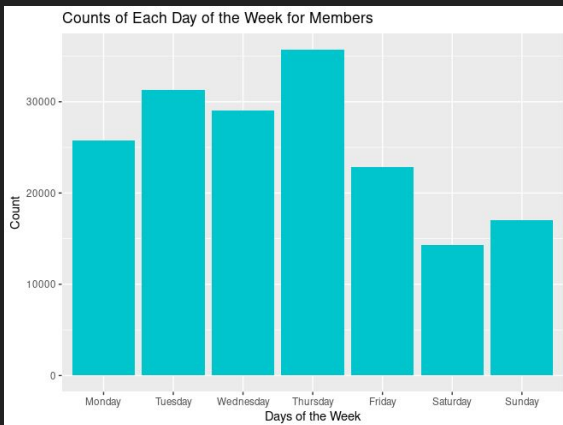
January 2024

There seems to be an overall decrease in bike usage over the weekends in both member and casual riders.

Counts of Each Day of the Week

Day of week	count
monday	23773
tuesday	22288
wednesday	31034
thursday	27054
friday	16852
saturday	12210
sunday	11374

Counts of Each Day of the Week for Members

Counts of Each Day of the Week for Casuals

December 2023

There seems to be a decrease in member riders in the weekends and an increase of bike riders towards the weekends in casual riders.

Counts of Each Day of the Week
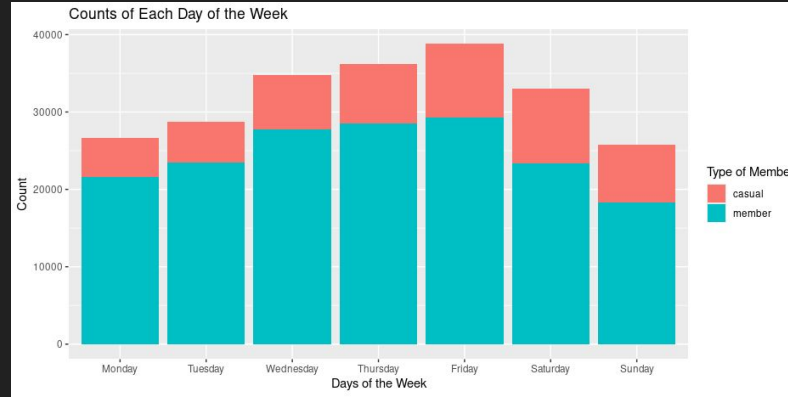
Day of week	count
monday	26612
tuesday	28765
wednesday	34737
thursday	36153
friday	38805
saturday	32980
sunday	25782

Counts of Each Day of the Week for Members

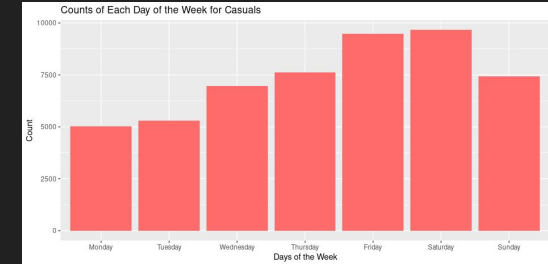Counts of Each Day of the Week for Casuals

November 2023

There seems to be a decrease in member riders in the weekends and an slight increase of bike riders towards the weekends in casual riders.
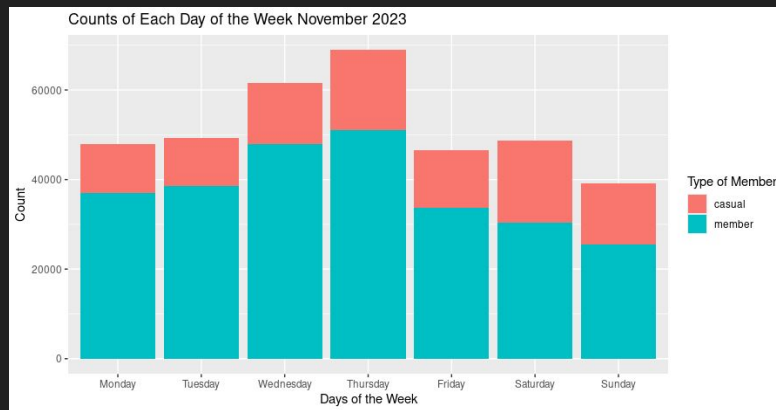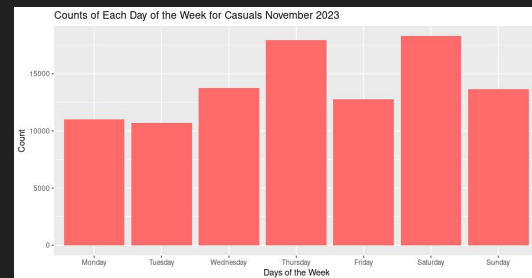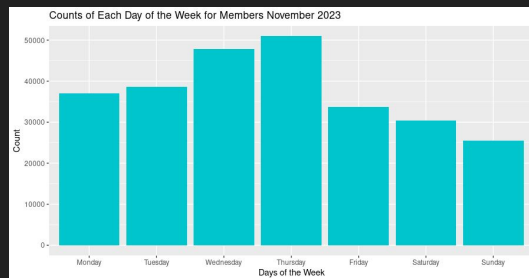

Counts of Each Day of the Week November 2023

Day of week	count
monday	47993
tuesday	49305
wednesday	61622
thursday	68920
friday	46500
saturday	48662
sunday	39166

Counts of Each Day of the Week for Members November 2023

Counts of Each Day of the Week for Casuals November 2023

October 2023

There seems to be a slight decrease in member riders in the weekends and a slight increase of bike riders towards the weekends in casual riders.
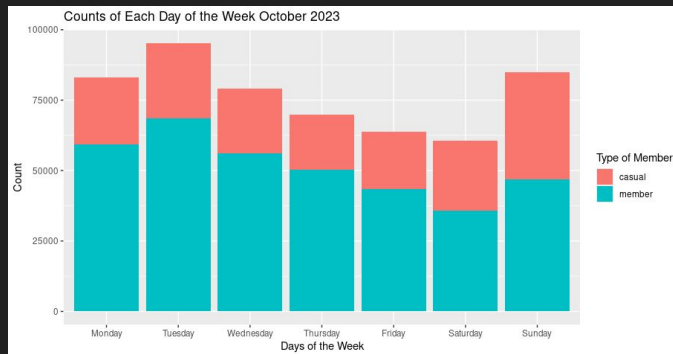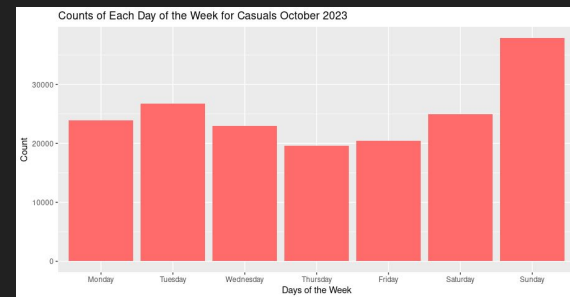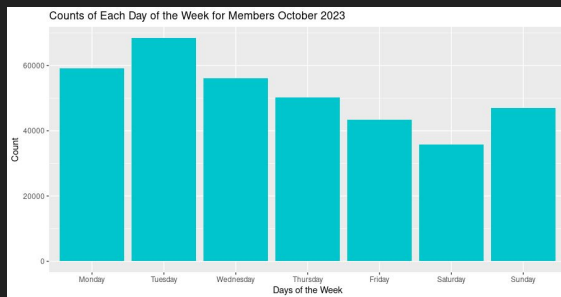

Counts of Each Day of the Week October 2023

Day of week	count
monday	83106
tuesday	95301
wednesday	79023
thursday	69844
friday	63756
saturday	60624
sunday	84867

Counts of Each Day of the Week for Members October 2023

Counts of Each Day of the Week for Casuals October 2023

September 2023

There seems to be a uniform amount of bike usage in member riders throughout the week but there is an increase in casual bike riders towards the weekends.

Counts of Each Day of the Week September 2023
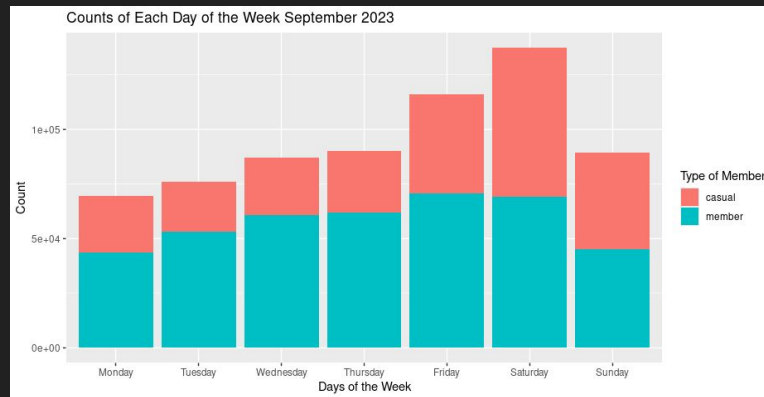
Day of week	count
monday	69577
tuesday	75875
wednesday	86933
thursday	90062
friday	115988
saturday	137587
sunday	89511

Counts of Each Day of the Week for Members September 2023

Counts of Each Day of the Week for Casuals September 2023

August 2023

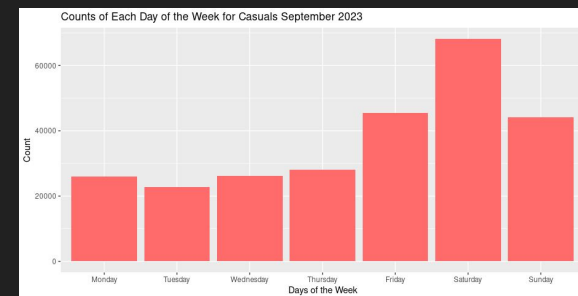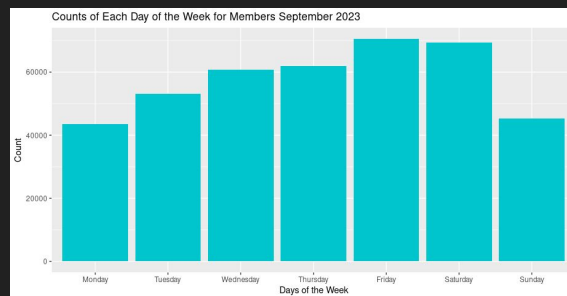There seems to be a slight decrease in bike usage in member riders towards the weekend and almost a uniform amount of casual riders throughout the week with the exception of Monday.

Counts of Each Day of the Week August 2023
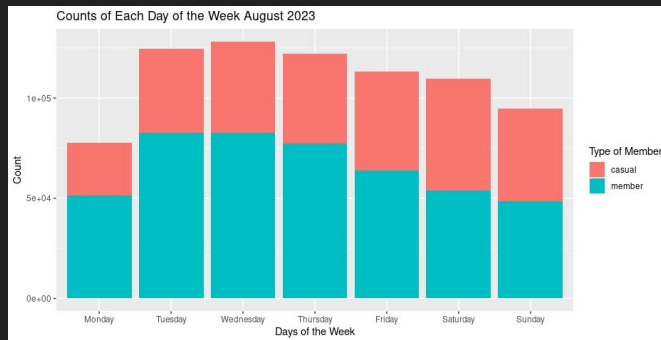
Day of week	count
monday	77750
tuesday	124769
wednesday	128289
thursday	122153
friday	113096
saturday	109628
sunday	94751

Counts of Each Day of the Week for Members August 2023

Counts of Each Day of the Week for Casuals August 2023

July 2023

There seems to be an uniform amount of bike usage in member riders and a increase in bike usage for casual riders towards the weekends.

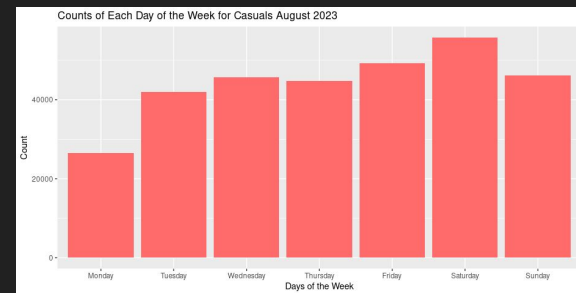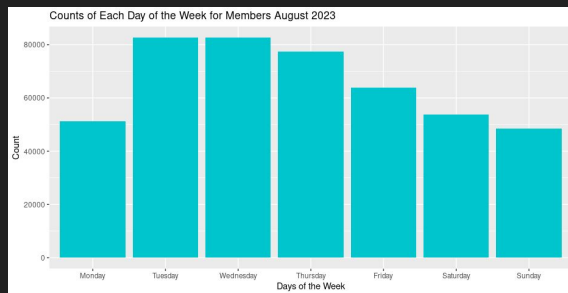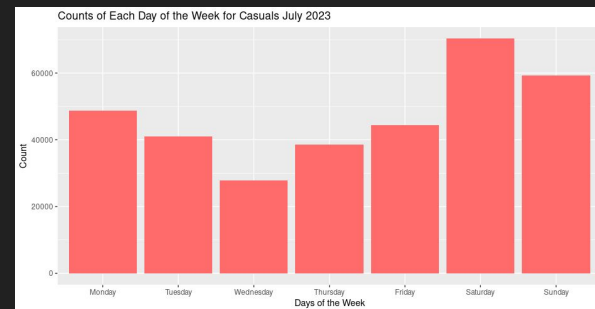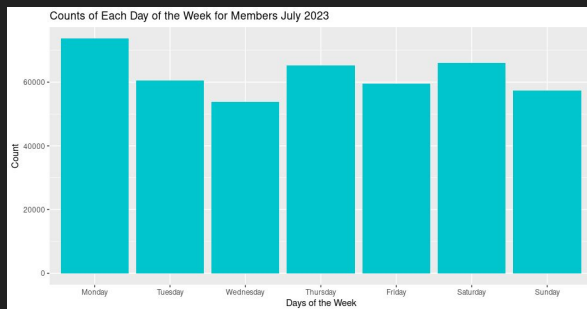Counts of Each Day of the Week July 2023
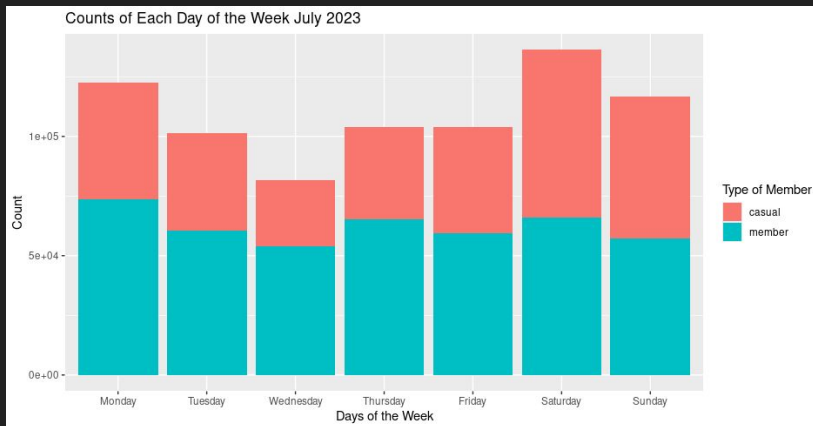
Day of week	count
monday	122367
tuesday	101528
wednesday	81774
thursday	103978
friday	103874
saturday	136308
sunday	116567

Counts of Each Day of the Week for Members July 2023

Counts of Each Day of the Week for Casuals July 2023

June 2023

There seems to be an increase in bike usage by casual riders towards the weekends with the peak at saturday and a dip on sunday. For member riders, there seems to be an almost uniform shape to the graph.
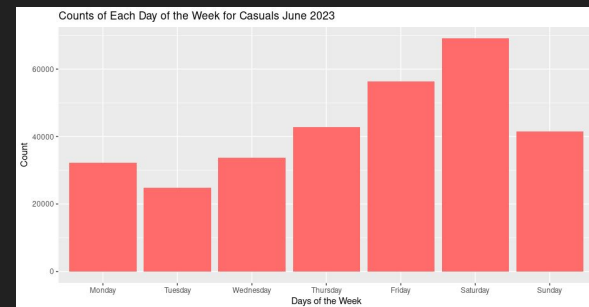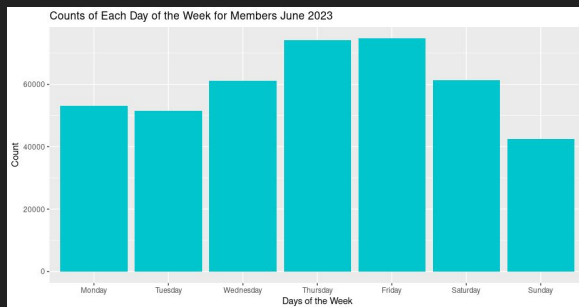

Counts of Each Day of the Week June 2023
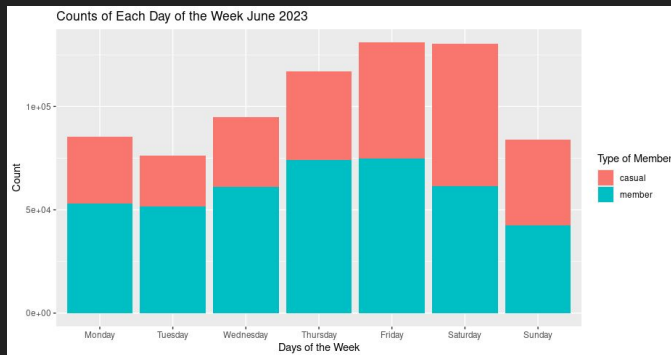
Day of week	count
monday	85205
tuesday	76366
wednesday	94761
thursday	117070
friday	130988
saturday	130410
sunday	83947

Counts of Each Day of the Week for Members June 2023

Counts of Each Day of the Week for Casuals June 2023

May 2023

There seems to be a slight decrease in bike usage by member riders towards the weekends and a slight increase in bike usage by casual riders over the weekends.

Counts of Each Day of the Week May 2023
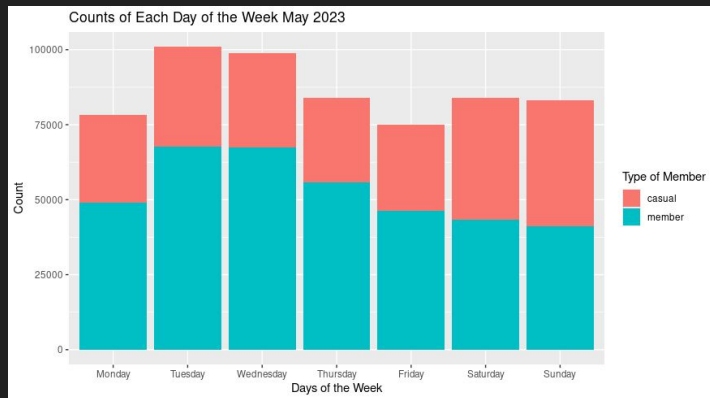
Day of week	count
monday	78351
tuesday	100956
wednesday	98815
thursday	83881
friday	74923
saturday	83939
sunday	83252

Counts of Each Day of the Week for Members May 2023

Counts of Each Day of the Week for Casuals May 2023

April 2023

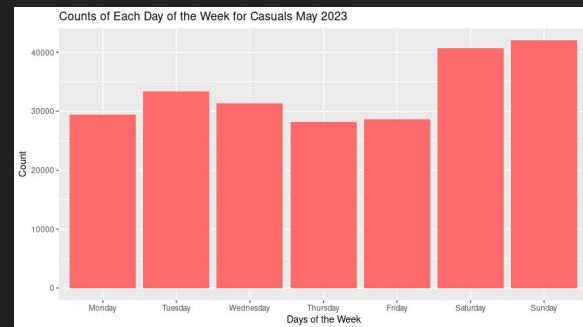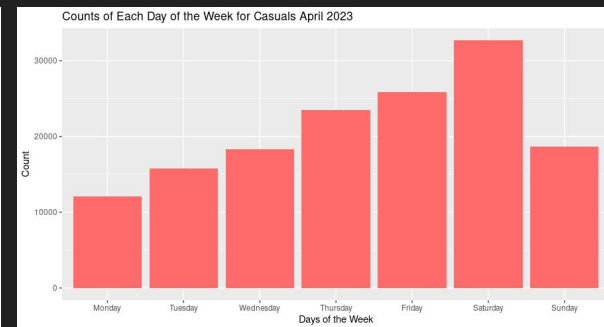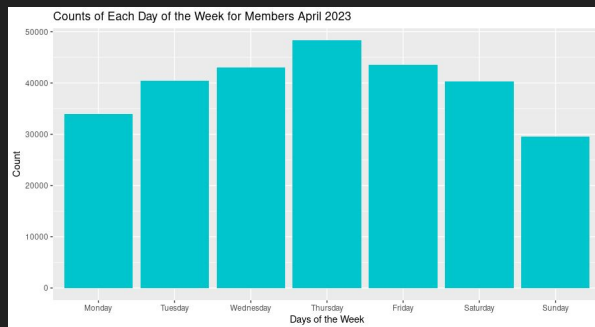There seems to be a slight increase in bike usage by casual riders towards the weekends where the peak is on saturday and a dip is on sunday. There seems to be a uniform bell curve for bike usage by member riders where peak riders are in the middle of the week (wednesday).

Counts of Each Day of the Week April 2023
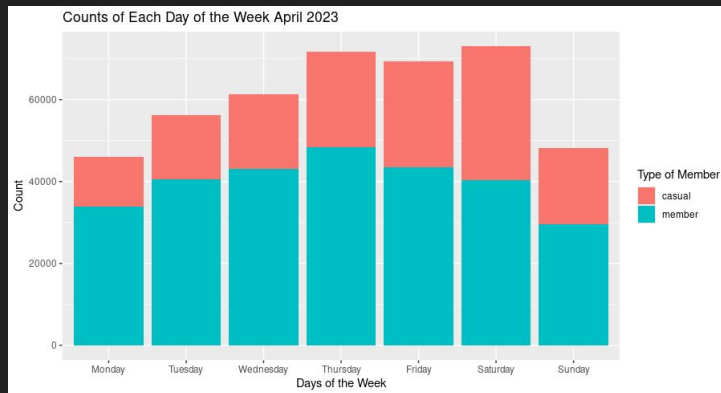
Day of week	count
monday	46008
tuesday	56277
wednesday	61402
thursday	71775
friday	69435
saturday	73023
sunday	48235

Counts of Each Day of the Week for Members April 2023

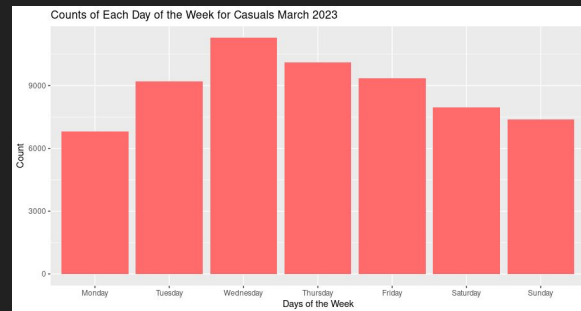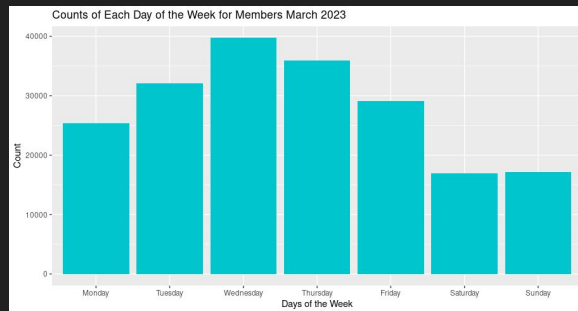Counts of Each Day of the Week for Casuals April 2023

March 2023

There seems to be a slight decrease in bike usage towards the weekend by both member and casual riders. The decrease is more significant in member riders where there is a dip in bike usage from friday to saturday and it continues like that on sunday.

Counts of Each Day of the Week March 2023
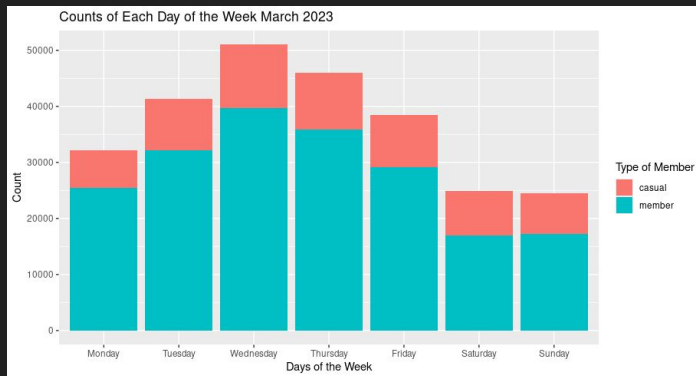
Day of week	count
monday	32182
tuesday	41321
wednesday	51027
thursday	46003
friday	38491
saturday	24916
sunday	24555

Counts of Each Day of the Week for Members March 2023

Counts of Each Day of the Week for Casuals March 2023

In Depth

It seems as though there seems to be a common trend of having a slight increase in bike usage by casual riders towards the end of the week in 8 out of the 12 months. In 3 out of the 12 months, there seems to be a slight decrease in bike usage in casual riders. In most months, sundays always seem to have less bike usage compared to the other days of the week. In the graph to the right we can see that sundays show the least amount of bike usage by both casual and member riders throughout the 12 month time frame. The data that is concluded here might hint at a connection between a higher amount of bike usage by casual riders in friday and saturdays.

day of week	total count
monday	725023
tuesday	811579
wednesday	844881
thursday	880675
friday	841946
saturday	869666
sunday	726063

total count vs. day of week