# HOW DO CASUAL RIDERS AND ANNUAL MEMBERS USE CYCLISTIC BIKES DIFFERENTLY ?


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## Difference between Casuals and Members


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# OBJECTIVE

- This research will help us drive key marketing strategies and techniques to convert casual riders to members , which will in turn generate more revenue to our company .

- Analyse and identify ways in which casual riders and annual members use cyclistic bikes differently from each other using Data from 2023 to drive marketing strategy aimed at converting  casual riders to members.

# NEXT STEPS

- We will start by analyzing the ride lengths in minutes and the ride volumes, ride volumes represent the total ride_Id's created in the current year 2023.

- This analysis will be broken down visually between the casual riders and member riders for comparison purposes as reflected in our objective.

# Total members and Total ride lengths by members

Total members and Total ride lengths by members

| | AVG_Ridelength | Ride Length | Ride Volume |
|---|---|---|---|
| casual | 23 | 29,164,077 | 1,248,201 |
| member | 13 | 26,121,742 | 2,083,474 |

## Key take aways

- The average ride length for casuals surpasses that of members by 10 mins
- The overall ride volume for members surpasses that of casuals but casuals have a larger overall ride length ride length in minutes than members.

# QUARTERLY RIDE VOLUME AND RIDE LENGTH UNDER EACH USER CATEGORY

| | | | AVG_Ridelength | Ride Length (mins) | Ride Volume |
|---|---|---|---|---|---|
| casual | Q2 | 2023 | 24 | 8,252,865 | 342,085 |
| | Q3 | 2023 | 24 | 16,214,752 | 667,036 |
| | Q4 | 2023 | 20 | 4,696,460 | 239,080 |
| member | Q2 | 2023 | 13 | 6,407,218 | 495,394 |
| | Q3 | 2023 | 13 | 12,865,253 | 981,446 |
| | Q4 | 2023 | 11 | 6,849,271 | 606,634 |

## Note:

This table requires a lot of zooming to view the values,

so feel free to zoom until you are comfortable viewing the data.

## Key take aways

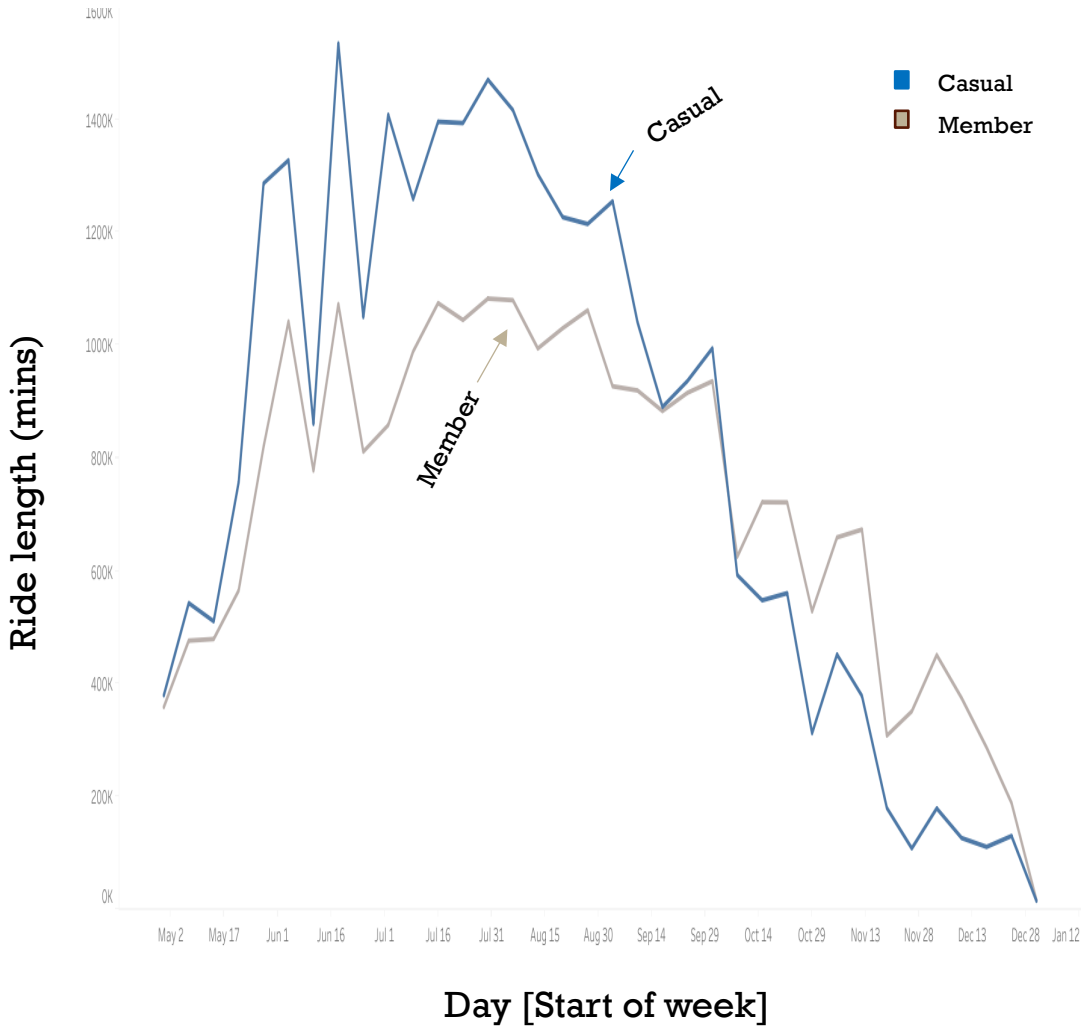
- From the second quarter, the casual riders, have an average ride length of 24 minutes while the members have an average ride Length of 13 minutes.
- Overall Ride length and ride volume follow a similar trend through-out the quarters for both user categories.
- The only period where , member's overall ride length is greater than
- casual's is at the 4th quarter.
- Through-out each quarter the casual riders' ride volume Is lower than members' respectively.

## Next steps

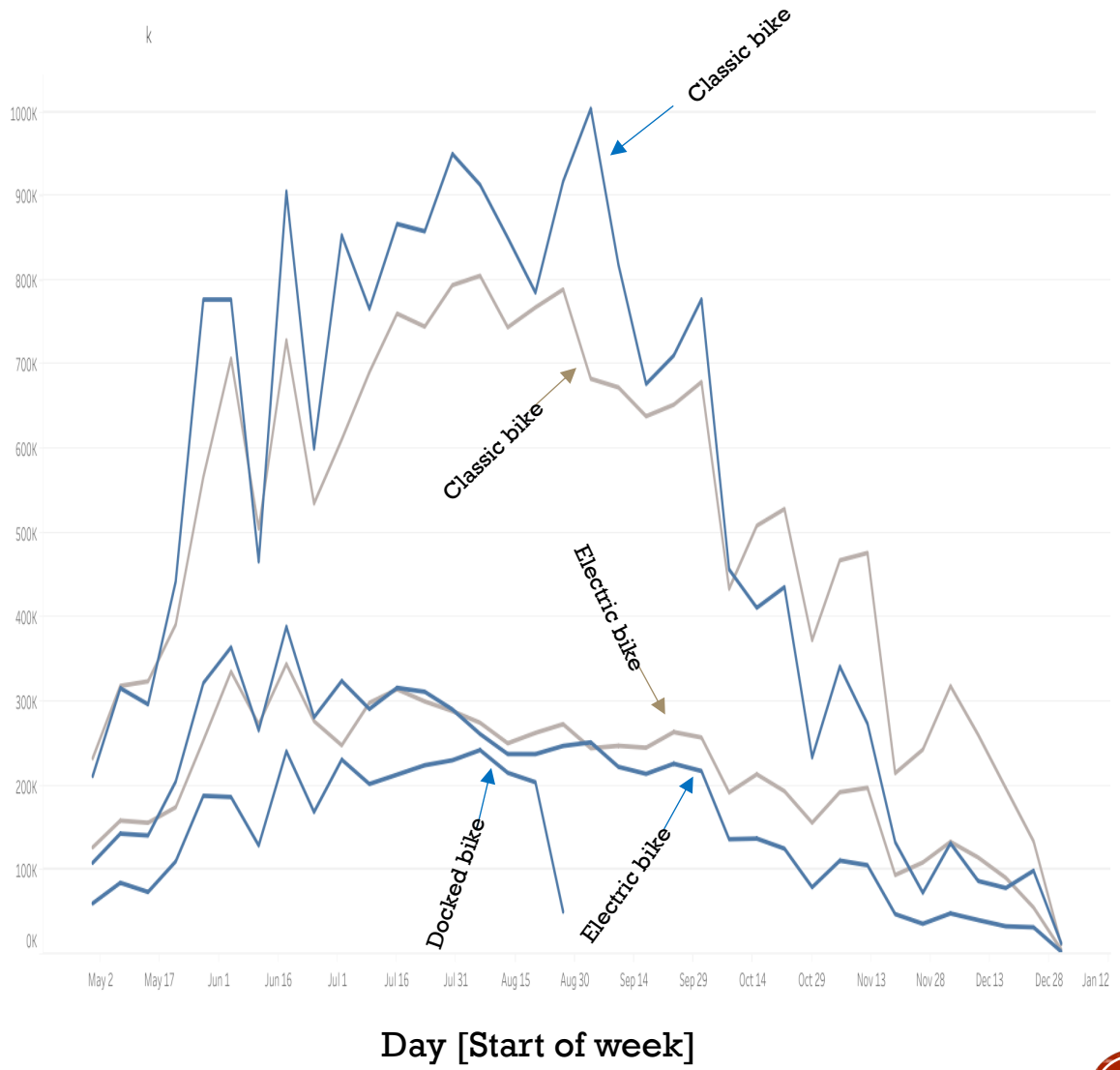
We will describe how ride lengths varies over time specifically start of week, under each user category through the medium of line graphs.
We have to note that the ride company has three sorts of bikes : Electric bikes, Classic bikes and docked bikes.

Note : for the graphs consider the blue lines and the blue arrows to represent casual riders and the grey lines and/or grey arrows represent the members.

## Ride length vs Start of week grouped by user type




## Ride Length by start of week under each user category grouped by rideable type

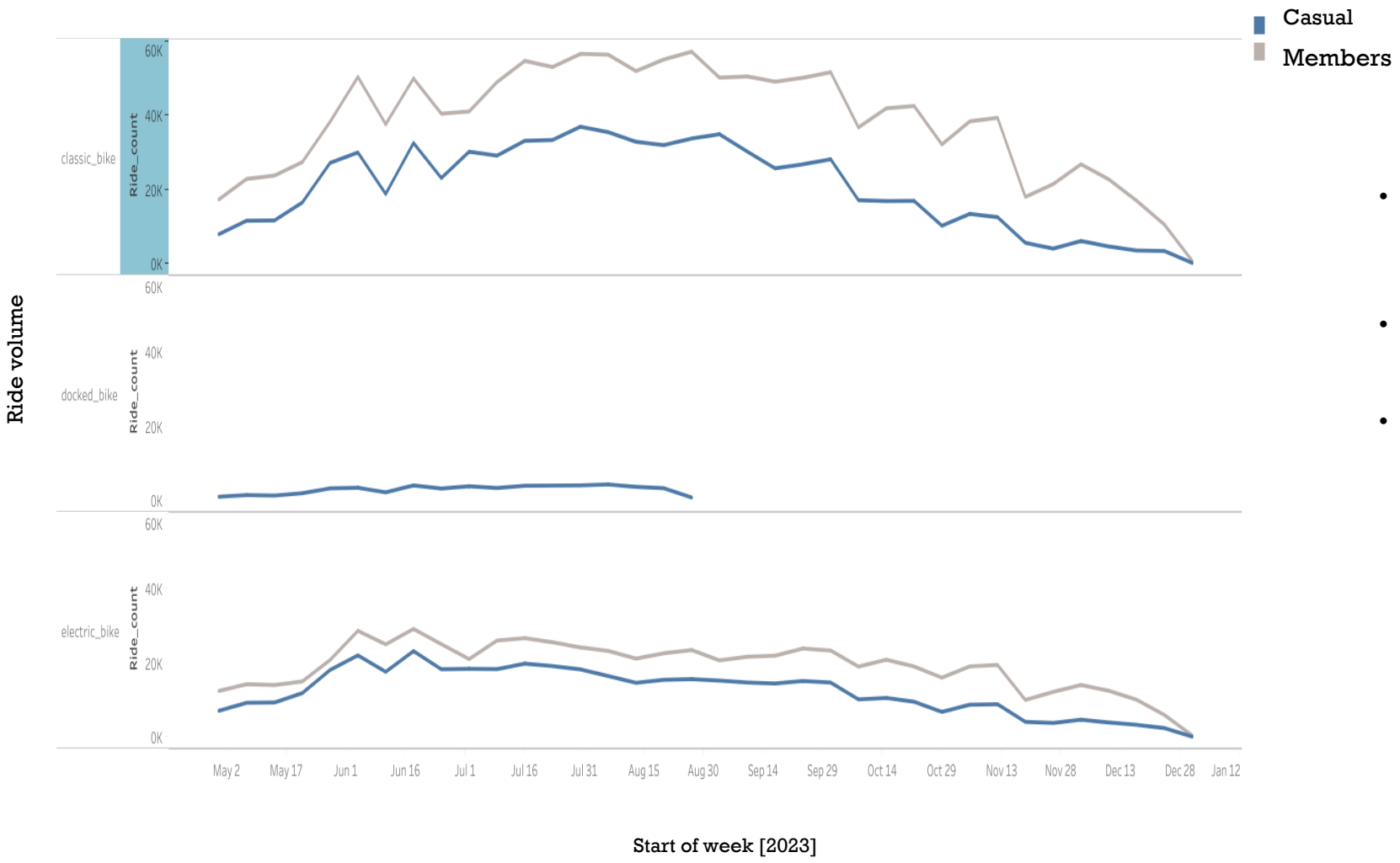


## Key take aways

- The ride lengths for casual and members follow a similar seasonality and a similar trend overall.

- Total ride lengths by start of week for casuals is greater than that of members' up to October 8th ,2023 for every week start. Then it falls below that of members till the end of the year.

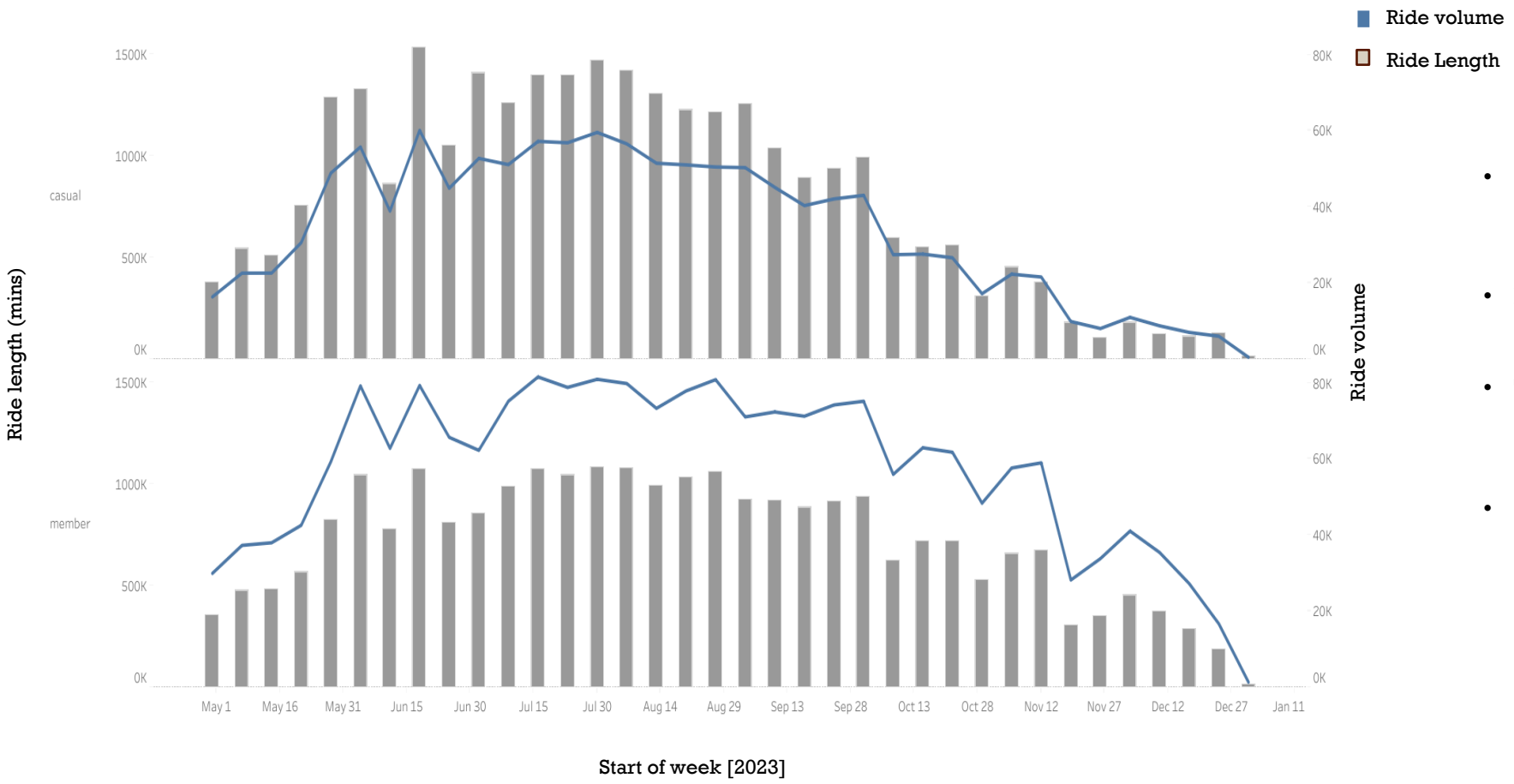
# Ride volume by Start of week under each user type and grouped by rideable type




## Key take aways

- Members have a higher bike usage frequency than casuals for both classic and electric bikes through-out the parameter week start.
- From the graph we clearly see that only casuals make use of docked bikes
- Casuals and members follow a similar seasonality and a similar trend through-out the year 2023

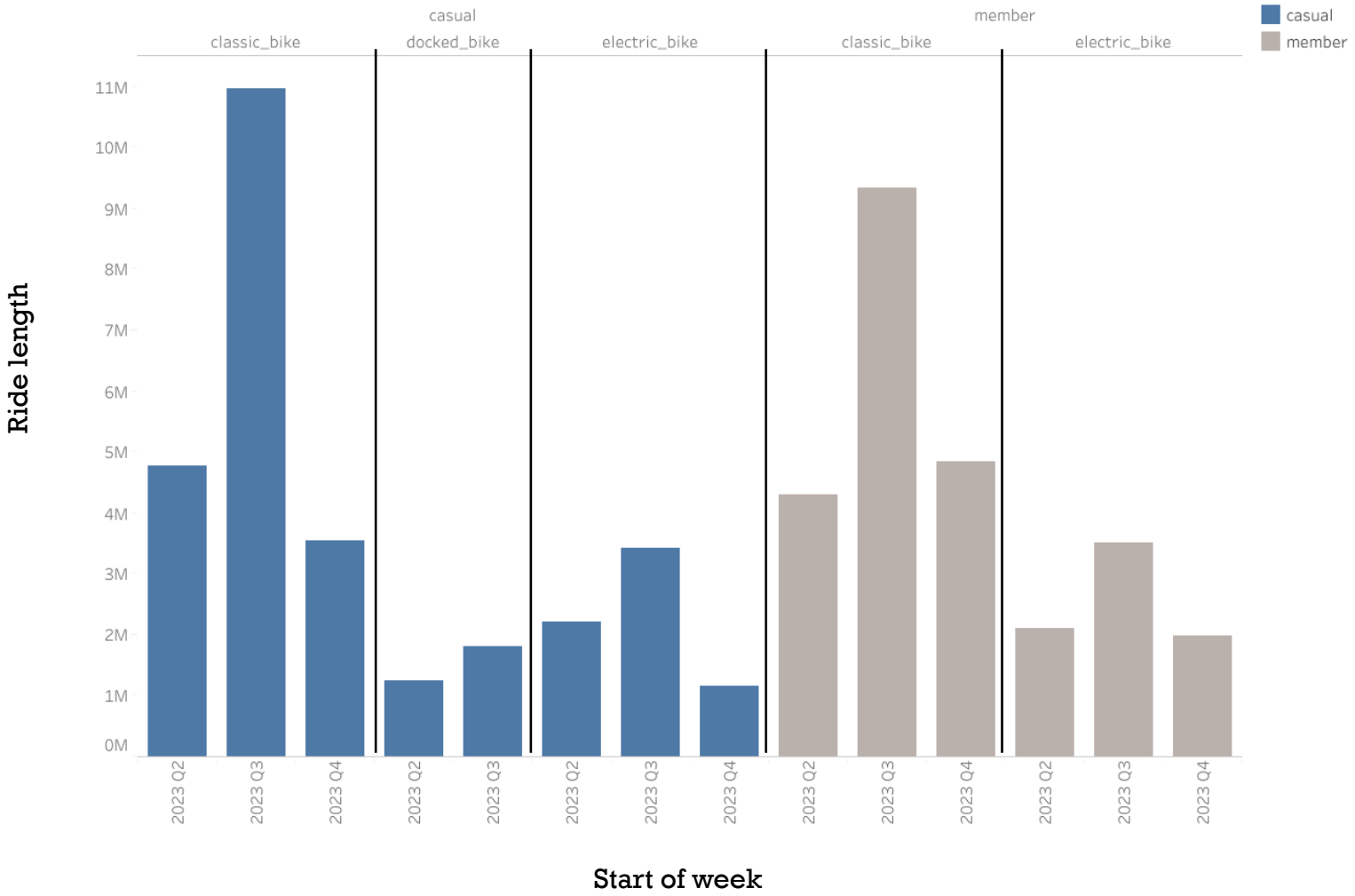
# DUAL CHART OF RIDE LENGTH AND RIDE VOLUME BY START OF WEEK




## Key take aways

- Casuals and Members experience similar seasonality and trends in terms of the graphs parameters even though their magnitudes vary.
- From ending October, we observe that Members take longer rides than casuals up to the end of year.
- Towards the end of year annual members have a steep rise in Ride volume from Nov 19 to Dec 3 from 28339 to 41201 rides.
- Casuals experience a rise in ride volume from Nov 26 to Dec 3 but not as steep as that of Members. From 8185 to 11119.

# QUARTERLY RIDE LENGTH FOR EACH USER CATEGORY UNDER EACH RIDEABLE TYPE



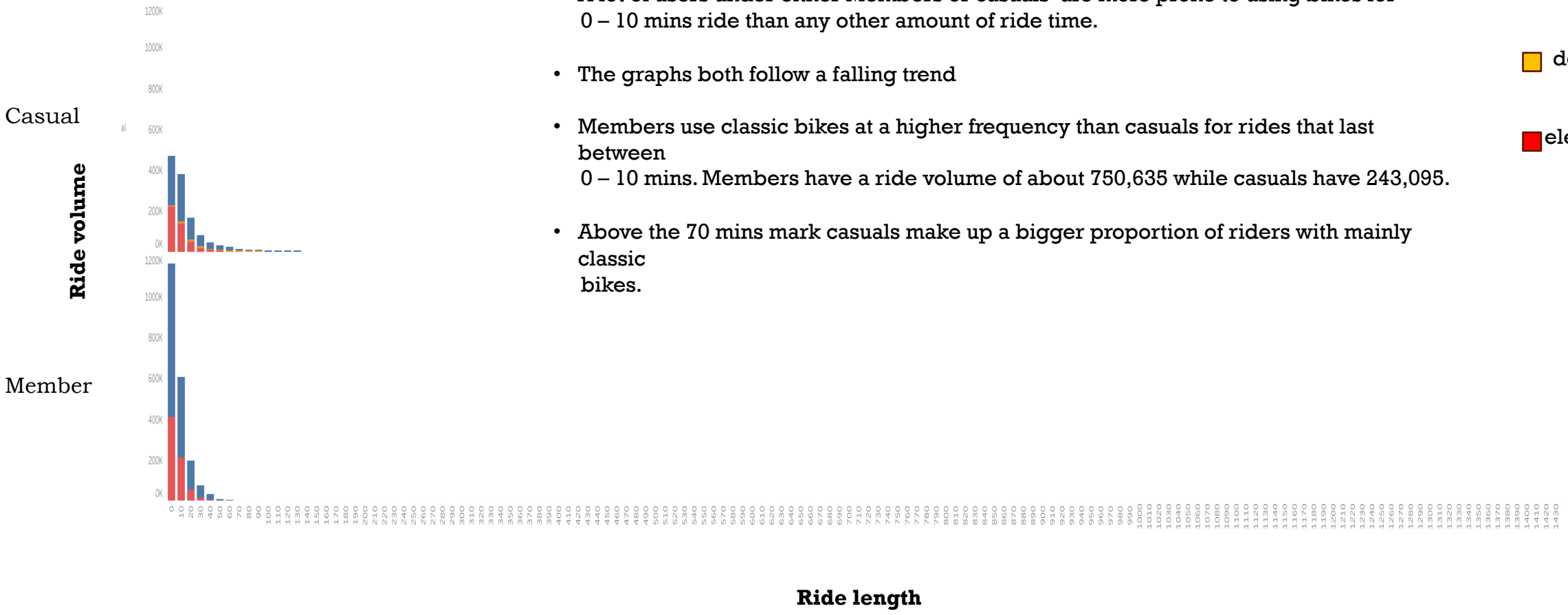

## Key take aways

- Casuals take longer rides than members on classic bikes On the third quarter of the year .
- Casuals and members have similar ride lengths on electric bikes for the second and third quartiles , but by the 4th quarter members take longer rides in total than casuals.
- Towards the third quarter of the year, the Casuals take longer rides on classic bikes than Members . And in the final quarters we observe that the total ride length for members on classic bikes exceeds that of casuals.
- From the third quarter of 2023 to the last quarter the ride length on classic Bikes for casual users drop drastically by about 67% ,but that of members fall by about 48% .
- There is a drastic fall by 66% in Ride lengths for casual users on electric bikes occurring from the third quarter to the last quarter of 2023. Meanwhile there , is a similar trend for members, it drops by just 43%.
- Overall, the ride lengths for each user type under each rideable type Follows a similar trend and seasonality .

## Next steps

In the next graph we will be talking about binned ride lengths in intervals of 10, Versus Ride volume/frequency, for each user type grouped by rideable type.

# Binned Ride length vs ride volume under each user type grouped by Rideable type




## Key Takeaways

- A lot of users under either Members or casuals are more prone to using bikes for 0 – 10 mins ride than any other amount of ride time.
- The graphs both follow a falling trend
- Members use classic bikes at a higher frequency than casuals for rides that last between 0 – 10 mins. Members have a ride volume of about 750,635 while casuals have 243,095.
- Above the 70 mins mark casuals make up a bigger proportion of riders with mainly classic bikes.

## Next steps

Next , we will analyse the Top 10 start dation IDs For each user category under the specific rideable types. Getting to know the distribution/patterns of ride frequencies, and primarily who between Annual members and Casual riders have  the highest and lowest , as well as under which Rideable type category does this apply.

# Top 10 Start station ID by Ride volume by casuals

| Start station Name | casual |
|---|---|
| Streeter Dr & Grand Ave | 36,691 |
| DuSable Lake Shore Dr & Monroe St | 24,031 |
| Michigan Ave & Oak St | 18,292 |
| DuSable Lake Shore Dr & North Blvd | 16,522 |
| Millennium Park | 15,902 |
| Theater on the Lake | 13,408 |
| Wells St & Concord Ln | 8,777 |
| Clark St & Elm St | 8,110 |
| Kingsbury St & Kinzie St | 6,462 |
| Clinton St & Washington Blvd | 4,476 |

# Top 10 Start station ID by Ride volume for members

| Start station Name | member |
|---|---|
| Kingsbury St & Kinzie St | 17,326 |
| Clinton St & Washington Blvd | 17,303 |
| Clark St & Elm St | 16,873 |
| Wells St & Concord Ln | 14,239 |
| Streeter Dr & Grand Ave | 13,313 |
| DuSable Lake Shore Dr & North Blvd | 12,180 |
| Michigan Ave & Oak St | 10,973 |
| Theater on the Lake | 10,954 |
| DuSable Lake Shore Dr & Monroe St | 7,783 |
| Millennium Park | 7,395 |

## Key Takeaways

- The start station with the largest volume of casual riders is Streeter Dr & Grand Avenue with About 36691 , this station is in the 5th position under member riders with about 13313 distinct rides.

- On the other hand, the start station with the largest volume of member rides is Kingsbury St & Kinzie St with about 17326 rides , this station is in the 9th position under casual riders with about 6462 distinct rides.

Following this reasoning, we can clearly identify similar stations which appear at different ranks under The different user categories , generating a pattern.

## Next steps

We will add more granularity to the tables used above by subdividing the results under each specific rideable type to get more understanding as to how the rides are distributed under each rideable type.

Leading us to answer questions like what is the most or least used bike per start station ID under each specific member type and more.

# Top 5 Start stations for casual users by ride volume under each rideable type

| START_STATION_NAME | RIDEABLE_.. | casual |
|---|---|---|
| Streeter Dr & Grand Ave | classic_bike | 25,419 |
| | docked_bike | 3,408 |
| | electric_bike | 7,864 |
| DuSable Lake Shore Dr & Monroe St | classic_bike | 16,265 |
| | docked_bike | 2,393 |
| | electric_bike | 5,373 |
| Michigan Ave & Oak St | classic_bike | 12,242 |
| | docked_bike | 1,356 |
| | electric_bike | 4,694 |
| DuSable Lake Shore Dr & North Blvd | classic_bike | 11,224 |
| | docked_bike | 1,201 |
| | electric_bike | 4,097 |
| Clark St & Elm St | classic_bike | 5,088 |
| | docked_bike | 228 |
| | electric_bike | 2,794 |

# Top 5 Start stations for annual members by ride volume under each rideable type

| START_STATION_NAME | RIDEABLE_.. | member |
|---|---|---|
| Clark St & Elm St | classic_bike | 12,073 |
| | electric_bike | 4,800 |
| Streeter Dr & Grand Ave | classic_bike | 10,366 |
| | electric_bike | 2,947 |
| DuSable Lake Shore Dr & North Blvd | classic_bike | 9,235 |
| | electric_bike | 2,945 |
| Michigan Ave & Oak St | classic_bike | 7,868 |
| | electric_bike | 3,105 |
| DuSable Lake Shore Dr & Monroe St | classic_bike | 6,169 |
| | electric_bike | 1,614 |

## Key take aways

- For casuals the Start station with the largest ride count/volume/frequency is Streeter Dr & Grand Avenue, its Ride count under classic bikes is 25419 surpassing that of annual members of 12073 in their Top Region of Clark St & Elm St.

- For both members and casuals' category , classic bikes make up the biggest portion of the total ride count/ bike usage

- The same start stations occur in the top 5 listings of both Casuals and annual members, but they have different rankings. This shows that these start stations are really popular amongst our bike users . An example is Clark St & Elm. It also shows that a big portion of our users originate from or live in that area.

- Streeter Dr & Grand Ave is the Top start station under casuals with an impressive 25419 ride count for Classic bikes, meanwhile the same start station ID is found under members at the second position with a lower ride count of 10366 .

- Next for Casuals we have Dusable Lake Shore Dr & Monroe St, with about 16265 classic bikes, occupying the second position . For members Dusable Lake Shore Dr & Monroe St has a lower classic bike usage count of about 6169.

- Overall, the same reasoning can be applied to any other station that appears in Top 5 of both tables, under Casuals and Members respectively.

# Bottom 10 Start station ID by Ride volume under each user category

| START_STATION_ID | START_STATION_NAME | MEMBER_CASUAL casual | member |
|---|---|---|---|
| 1021 | Public Rack - Pulaski Rd & Flournoy St | 1 | |
| 1022 | Public Rack - Ewing Ave & 96th St S | 1 | |
| 1029 | Public Rack - Maplewood Ave & 63rd St | | 1 |
| 1034 | Public Rack - Kenneth Ave & 63rd St E | 1 | |
| 1041 | Public Rack - Throop St & 48t ST | 1 | |
| 1061 | Public Rack - Central Park Ave & Fulton Blvd | | 1 |
| 1062 | Public Rack - Kedzie Ave & Walnut St | | 1 |
| 1067 | Public Rack - Pulaski Rd & Grenshaw St | 1 | |
| 1071 | Public Rack - Ashland Ave & 74th St | 1 | |
| 1078.0 | Public Rack - 85th Pl & Pulaski Rd | 1 | |

## Key take aways

- We see that there are stations where the number of rides are very minimal getting Just about 1 casual riders and no annual members like Public Rack-Pulaski.

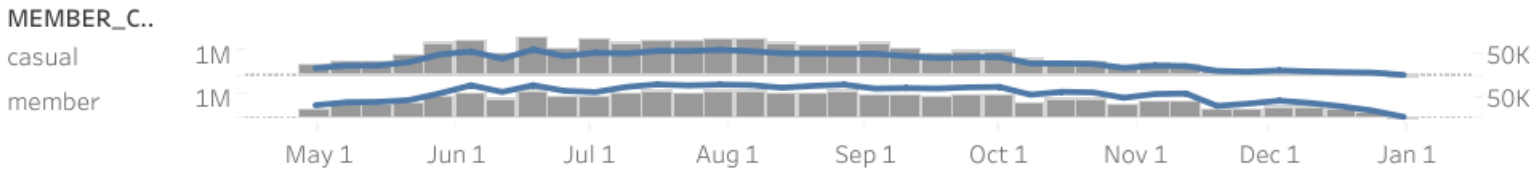
- Start station names that start with Public Rack generally have low ride counts for both Casuals and Annual members.

# DASHBOARD

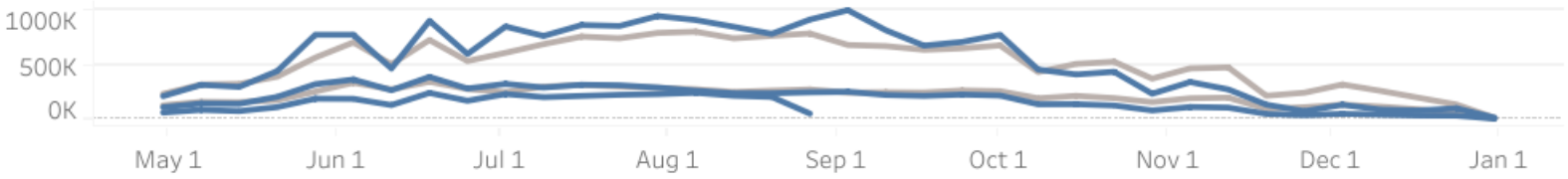
Total members and Total ride lengths by members

| | AVG_Ridelength | Ride Length | Ride Volume |
|---|---|---|---|
| casual | 23 | 29,164,077 | 1,248,201 |
| member | 13 | 26,121,742 | 2,083,474 |

Dual chart Ride length and ride volume




Ride length by day of week




Top 10 Start Station ID by ride volume gouped by rideable type under each user category

| START_STATIO.. | RIDEABLE_.. | casual | member |
|---|---|---|---|
| Clark St & Elm St | classic_bike | 5,088 | 12,073 |
| | docked_bike | 228 | |
| | electric_bike | 2,794 | 4,800 |
| Clinton St & Washington Blvd | classic_bike | 2,165 | 10,151 |
| | docked_bike | 122 | |
| | electric_bike | 2,189 | 7,152 |
| DuSable Lake Shore Dr & Monroe St | classic_bike | 16,265 | 6,169 |
| | docked_bike | 2,393 | |
| | electric_bike | 5,373 | 1,614 |
| DuSable Lake Shore Dr & North Blvd | classic_bike | 11,224 | 9,235 |
| | docked_bike | 1,201 | |
| | electric_bike | 4,097 | 2,945 |
| Kingsbury St & Kinzie St | classic_bike | 3,763 | 11,566 |
| | docked_bike | 134 | |
| | electric_bike | 2,565 | 5,760 |

## Solutions

- Focus our marketing strategy , in those regions with Start stations having large density of casual riders, for example the Top 10 start stations.

- Make docked bikes more attractive to casuals under the annual membership plan in our marketing strategy in order to attract those casuals who love to use docked bikes For riding.

- Rides above the 1-hour mark can only be done through an annual membership
  As Casuals make up the biggest portion of these rides. As seen in the binned graph

- Small rides between the zero and the 10 minutes mark , can only be carried out by Annual members.

- From the graph in slide 10 , it would be a good idea to include docked bikes only
  Under an annual membership to attract those casuals who enjoy using docked bikes in becoming annual members

# Conclusion

- The average ride length for casuals surpasses that of members by 10 mins
- The overall ride volume for members surpasses that of casuals but casuals have a larger overall ride length ride length in minutes than members
- The only period where member's overall ride length is greater than casual's is at the 4th quarter.
- Through-out each quarter the casual riders' ride volume Is lower than members' respectively.
- Total ride lengths by start of week for casuals is greater than that of members' up to October 8th ,2023 for every week start. Then it falls below that of members till the end of the year.
- Members have a higher bike usage frequency than casuals for both classic and electric bikes through-out the parameter week start.
- Only casuals make use of docked bikes
- From the third quarter of 2023 to the last quarter the ride length on classic Bikes for casual users drop drastically by about 67% , but that of members fall by about 48%
- There is a drastic fall by 66% in Ride lengths for casual users on electric bikes occurring from the third quarter to the last quarter of 2023. Meanwhile there , Is a similar trend for members, it drops by just 43%.
- Members use classic bikes at a higher frequency than casuals for rides that last between 0 – 10 mins. Members have a ride volume of about 750,635 while casuals have 243,095.
- Above the 70 mins mark casuals make up a bigger proportion of riders with mainly classic bikes.

## Next steps

In the next slide we will dive into some solutions listed above  in detail and describe how they could be Implemented .

## Solution [i]

- Small ride lengths between the zero and the 10 minutes mark , can only be carried out by Annual members.

This solution is adequate for the problem at hand as it provides a strong incentive for casuals to become Annual members. Keeping in mind that we have a volume of about 500,000 rides from riding between 0-10 mins , we have the possibility to convert this 500,000 casuals to Annual members (assuming All the riders are distinct). Thereby boosting our revenue and the performance of the business.

This could be implemented by making End station located within a 10 minutes ride from the every other start station only available to annual members, meaning Casuals will have no other choice to ride to a Farther station to drop the bike. If this works as planned casuals will really want to become members to run Away from the hassle of riding farther distances.

The person to enforce it is the manager.
This could be implemented as of the start of next year.

## Solution [ii]

-The company could make docked bikes available only to Annual members, because the only and primary users of docked bikes are Casuals.

On the other hand, the company could wait periods of peaks in the volume of rides, to restrict casual members access to docked bikes , making it available only to Members.

From June 11th – June 18th , 2023 Casuals experienced a hike in the ride volume. So , I suggest the company should seize this opportunity, identify periods where there are hikes like this, and make Docked bikes only available to annual members , this with the aim of converting docked bike lovers to Annual members.

The manager should enforce it during periods of sudden surges in ride volumes during the year by Casual riders.