

Cyclistic Users : From Casuals to Members

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The agenda

- ❖ The business task
- ❖ Data sources
- ❖ Data cleaning & transformation
- ❖ The analysis
- ❖ Key takeaways
- ❖ So what's next ?



The business task



The business task

- Examining the differences between **casual Cyclistic users** and **Cyclistic's members** in order to design a better marketing strategy aimed at converting casual riders to annual members.



Data sources



Data sources used

- During this analysis I have used the divvy-trip-data datasets from the past 12 months period (May 2021 – April 2022) made available by Motivate International Inc. (under this [license](#)) .



Data cleaning & transformation



Steps taken

- Created a column called “day_of_week” which contains the day of the week that a user started a ride.
- Created a column called “ride_length” which contains each ride’s length in a HH:MM:SS time format.



Steps taken

- Editing false entries where the ride's start time is later than the ride's end time instead of vice-versa.
- Editing gibberish entries in the calculated field “ride_length”.



Steps taken

- Removing the observation that had “NA” values in their start / end stations.
- Ensuring there are no duplicate observations.
- Creating a single data frame that includes the entire 12 months collected data altogether.



The analysis



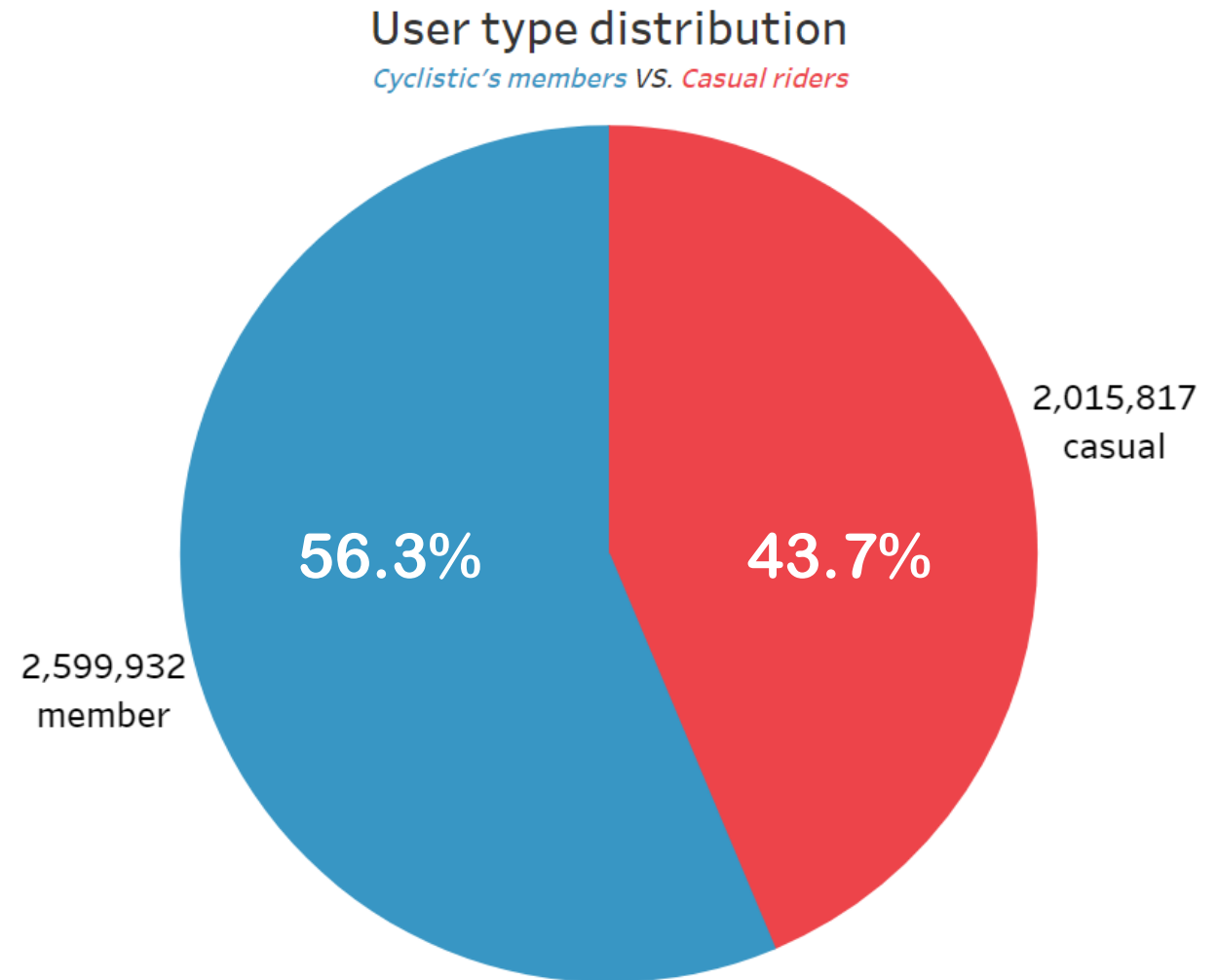


Our data population



The distribution of user type : **Members** vs. **Casual riders**

- During the 12 month period of **May 2021 – April 2022** there was a majority of **members** among Cyclistic users.





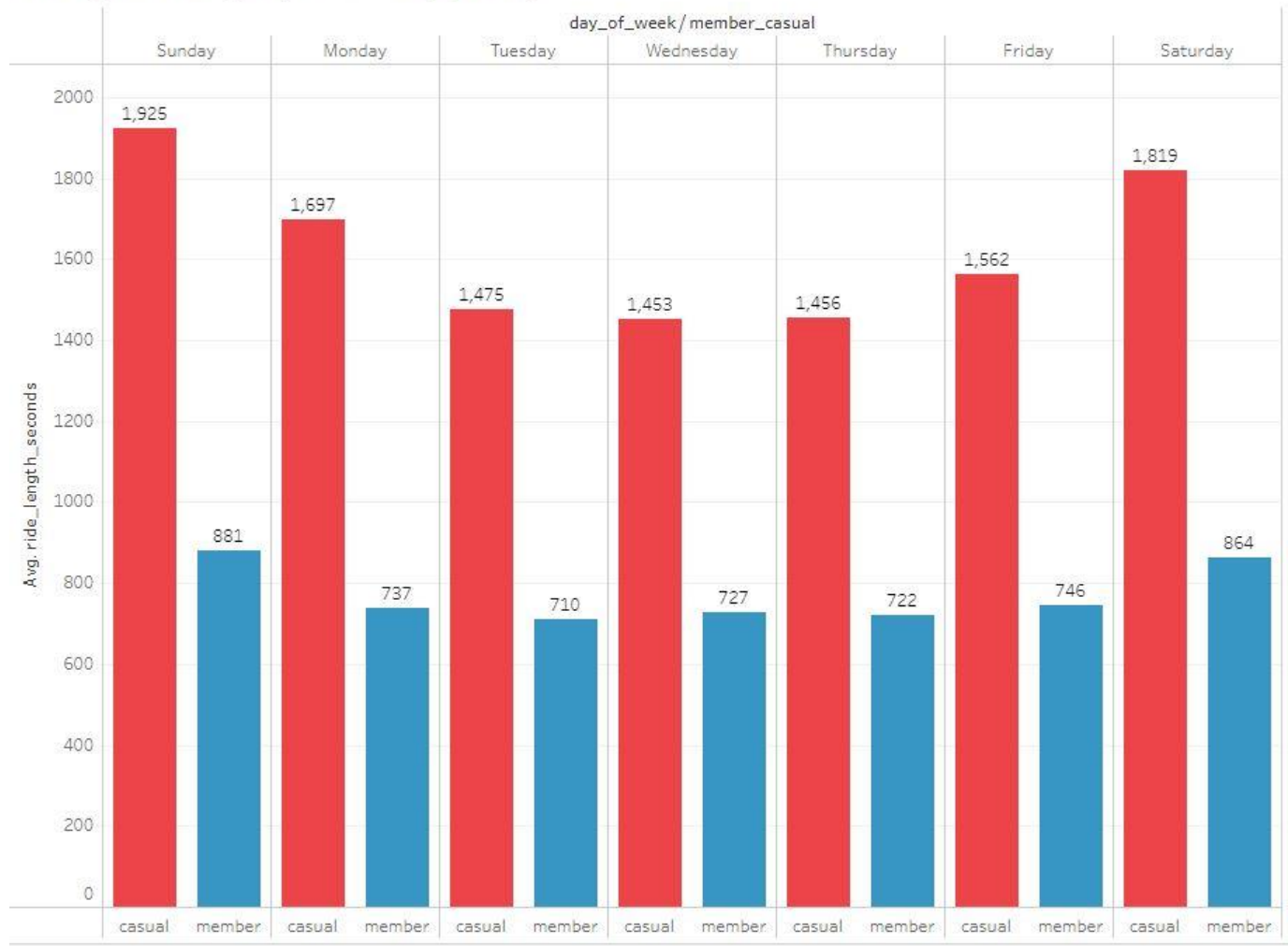
Ride length

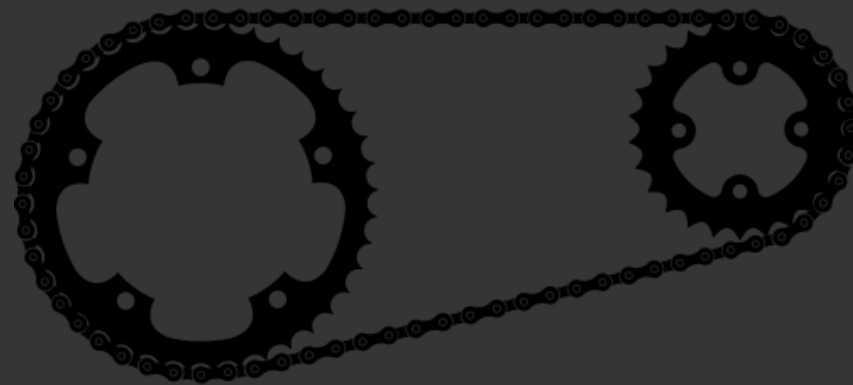


Ride length : **Members** vs. **Casual riders**

- On average, the ride time of a **casual rider** is **more than double** the ride time of a **member**.
- ~28 minutes** for a casual rider compared to **~13 minutes** for a member

Average ride length (in seconds) per day



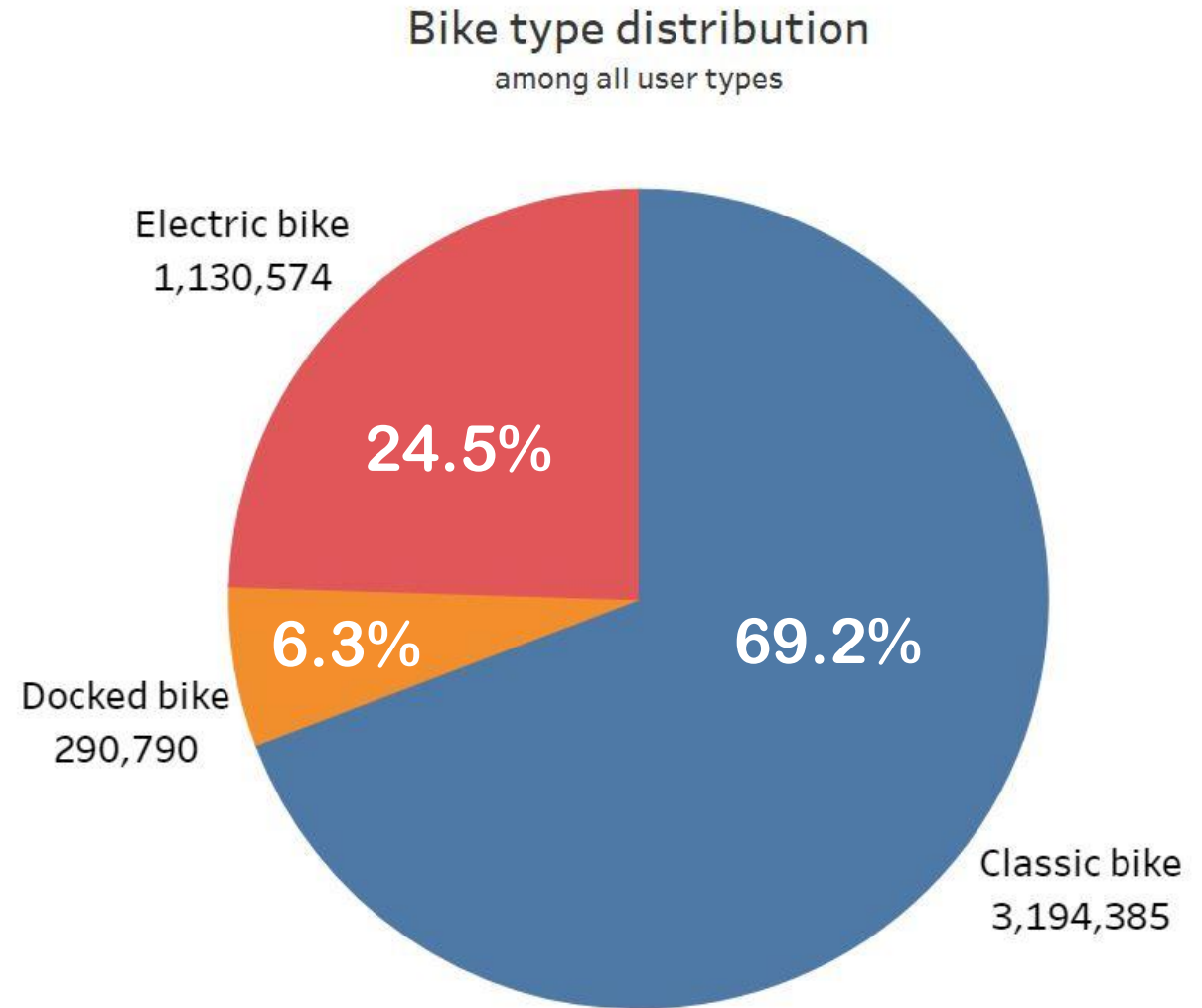


Bike type



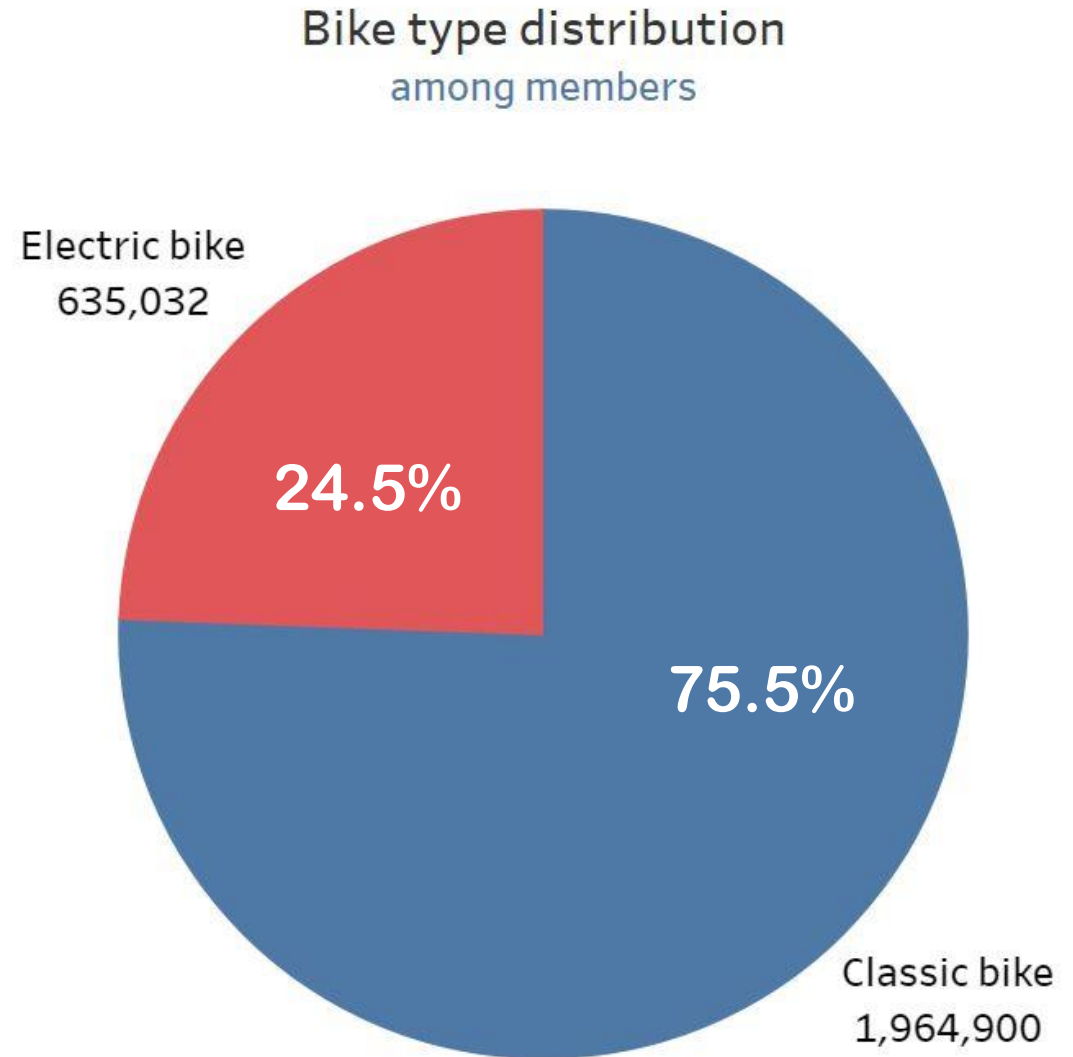
Bike type : **Members** vs. **Casual riders**

- A vast majority among Cyclistic users ride a **Classic bike** (69.2%).
- Another 24.5% of the users ride an **Electric bike**.
- 6.3% of the users ride **Docked bikes**.



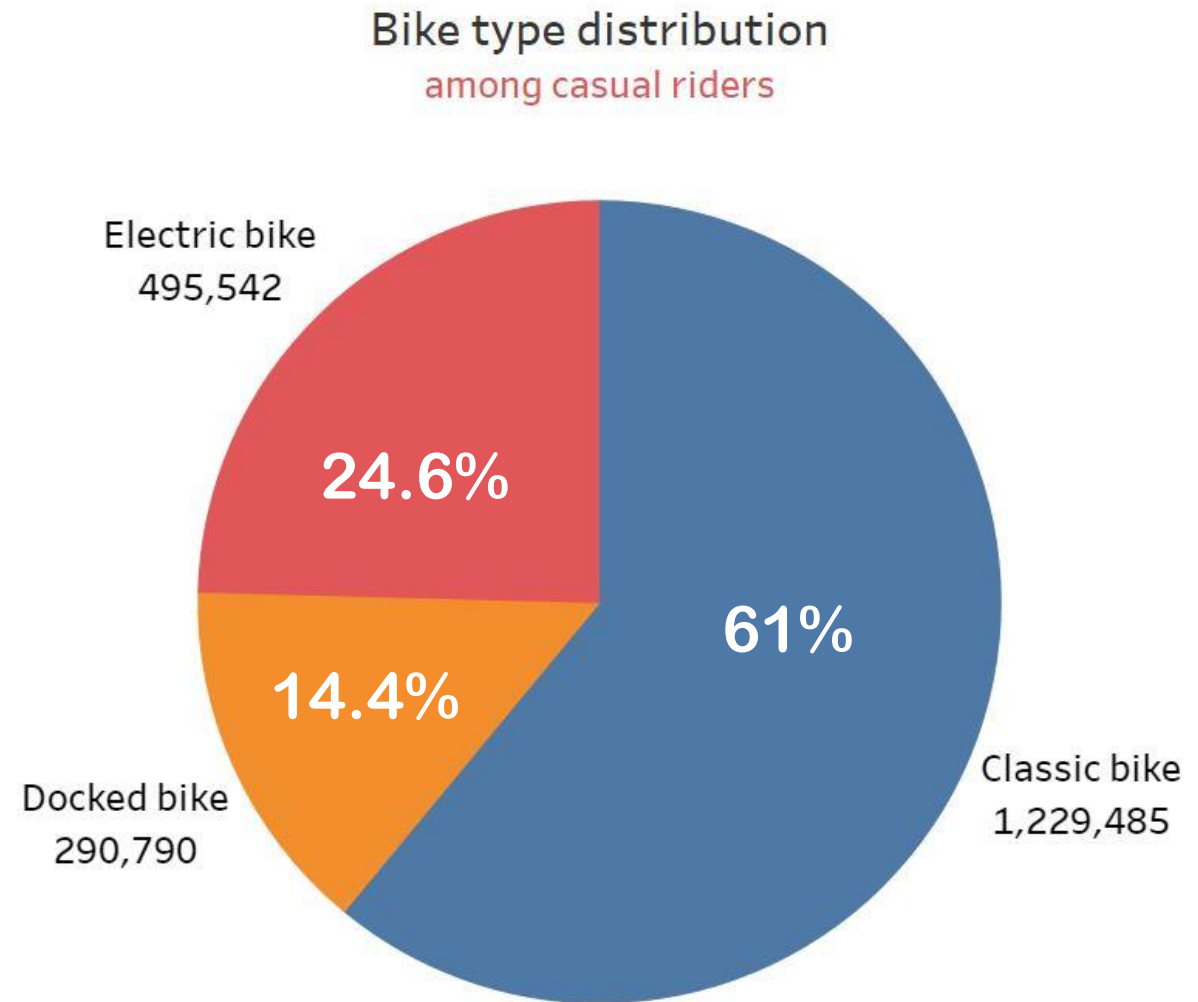
Bike type distribution : **Members**

- Among Cyclistic members :
 - **75.5%** ride a **Classic bike**
 - **24.5%** ride an **Electric bike**
- **None** of Cyclistic's members rides a **docked bike**.



Bike type distribution : **Casual Riders**

- Among the casual riders :
 - **61%** ride a **Classic bike**
 - **24.5%** ride an **Electric bike**
 - **14.4%** ride a **Docked bike**



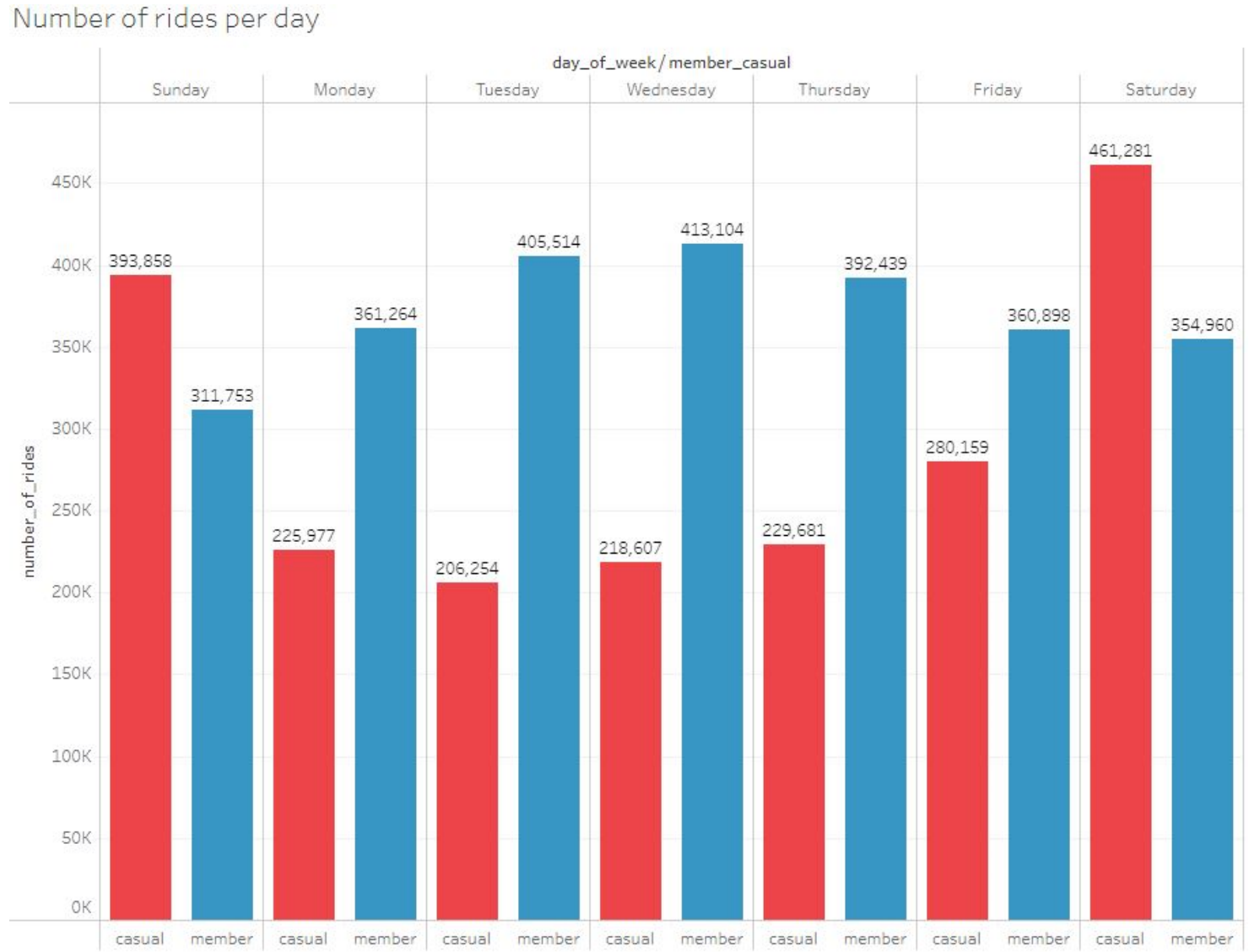


Rides by day



Rides by day: **Members** vs. **Casual riders**

- During weekdays a majority of the riders are **members**.
- During weekends a majority of the riders are **casuals**.



Rides by day: **Members** vs. **Casual riders**

- **Wednesday** is the day with the most **member rides**.
- **Saturday** is the day with the most **casual rides**.



Rides by day : Members

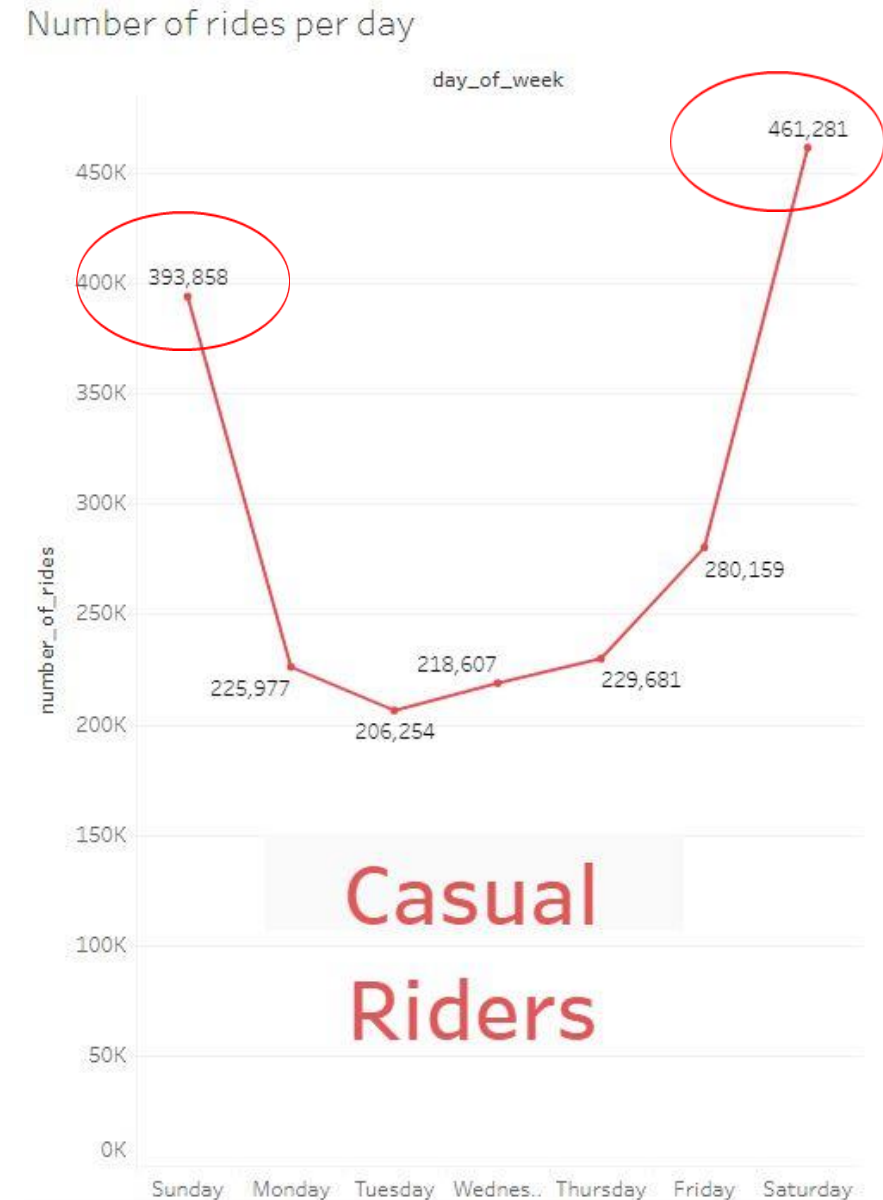
- **Members** tend to ride most during the **Tuesday – Thursday** period of the week.
- There is a noticeable decline in the amount of their rides during **the weekend**.

Number of rides per day



Rides by day : Casual riders

- **Casual riders** tend to ride most during **the weekend**.
- There is up to **55% decline** in the amount of casual rides during **the weekdays**.





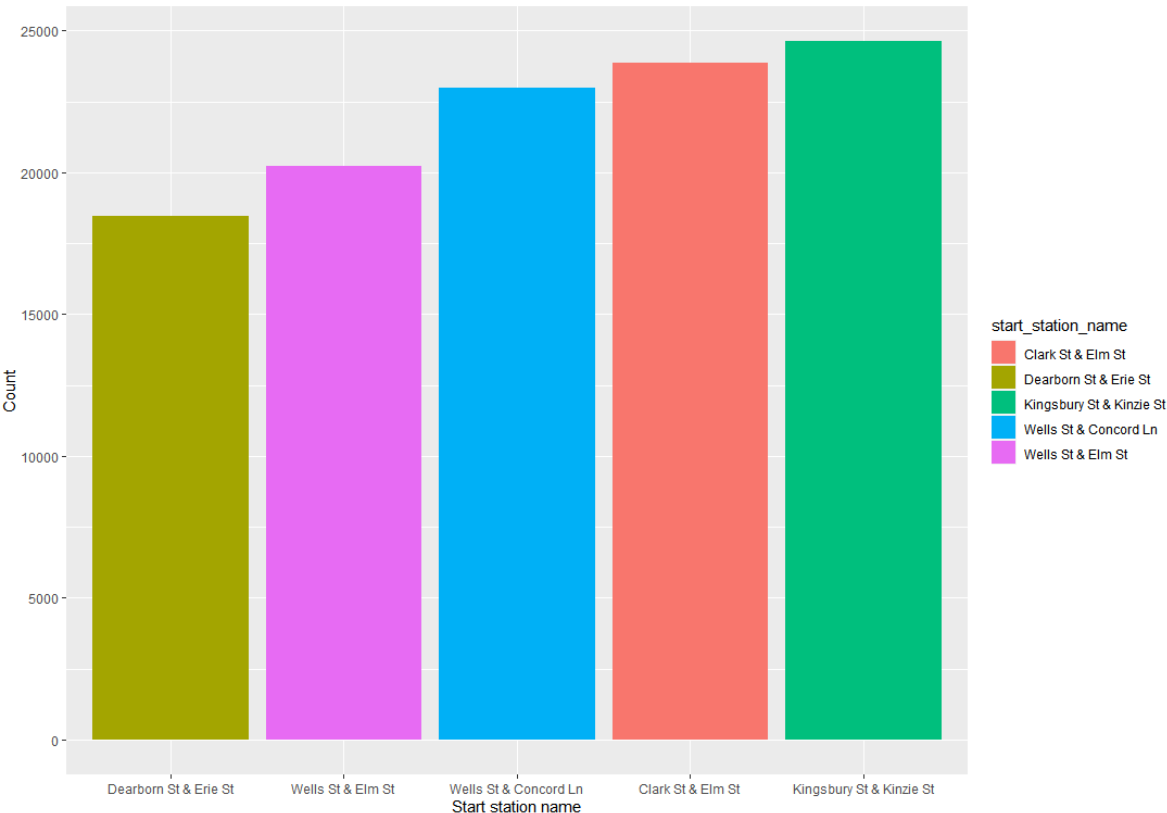
Rides locations



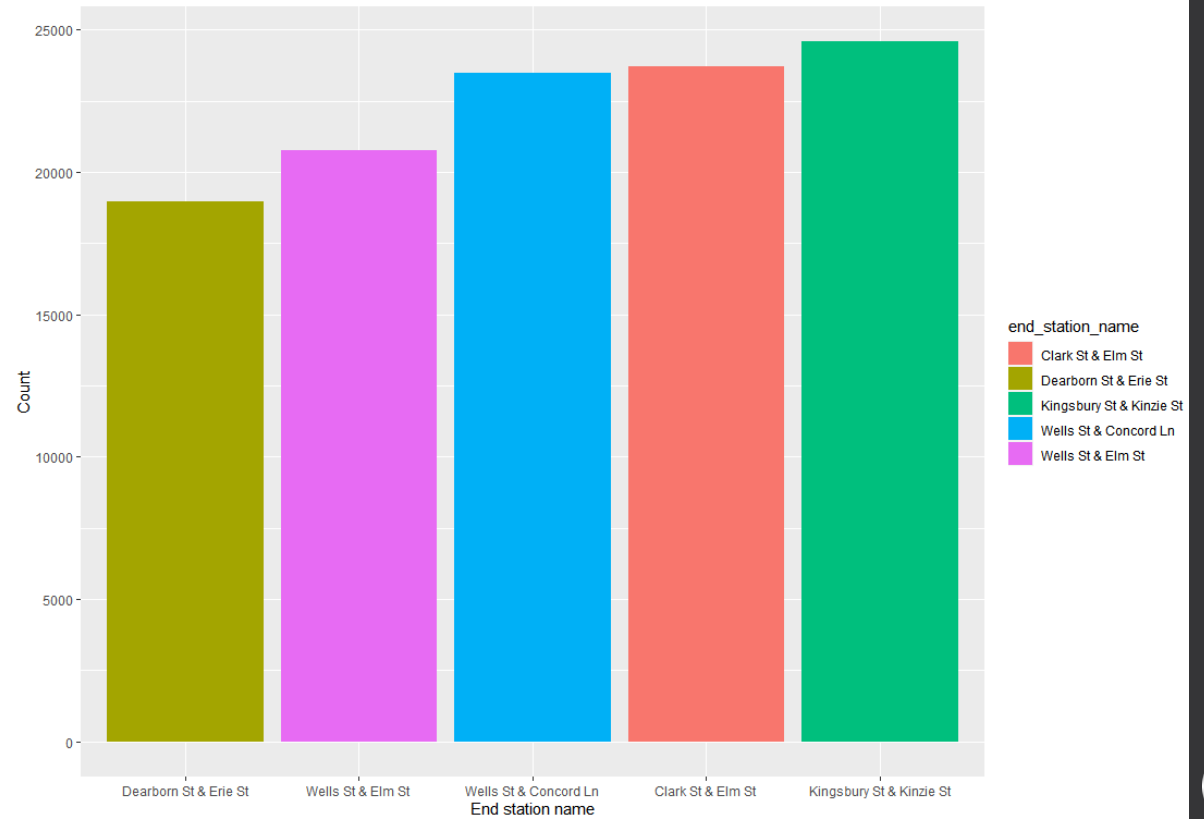
Rides locations : Members

- The top 5 start and end stations for **members** are exactly the same both in their location and popularity order.
- After examining the following stations locations on Google Maps it appears that most of the stations are located near **education and work facilities** such as schools, law firms, etc.

Top 5 start stations for members



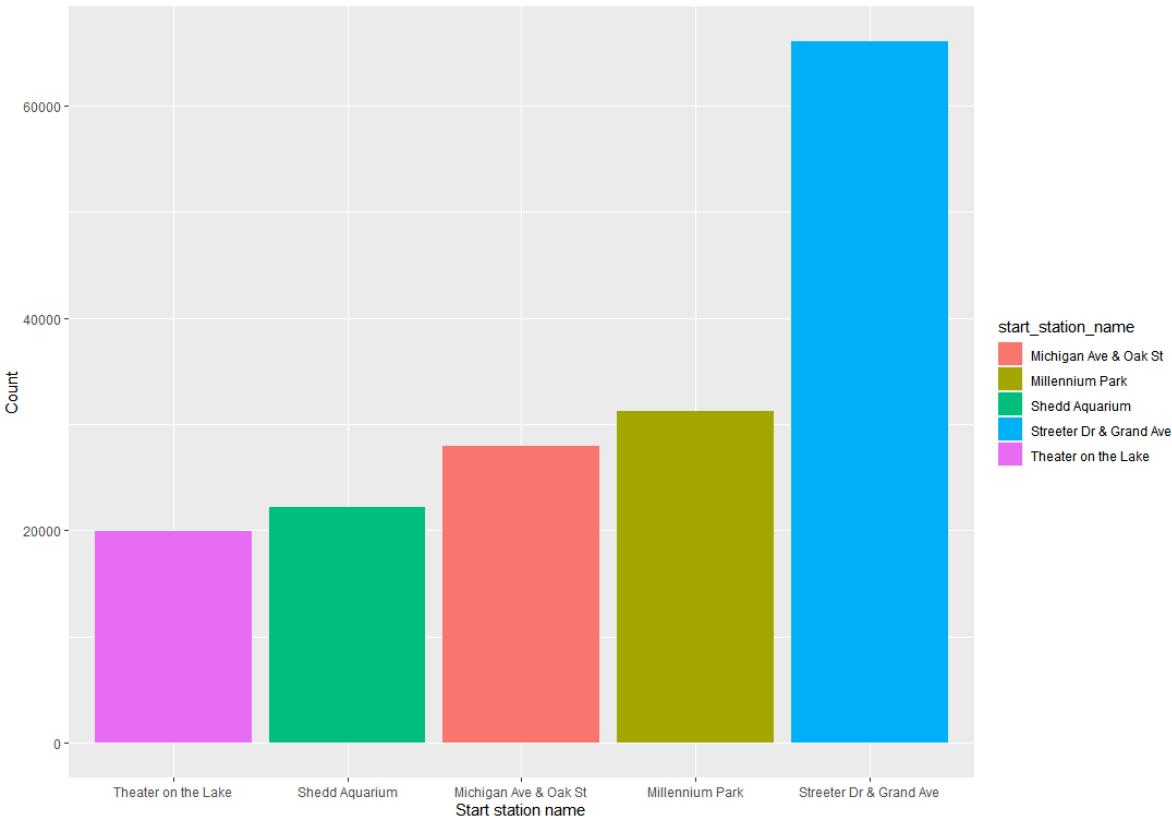
Top 5 end stations for members



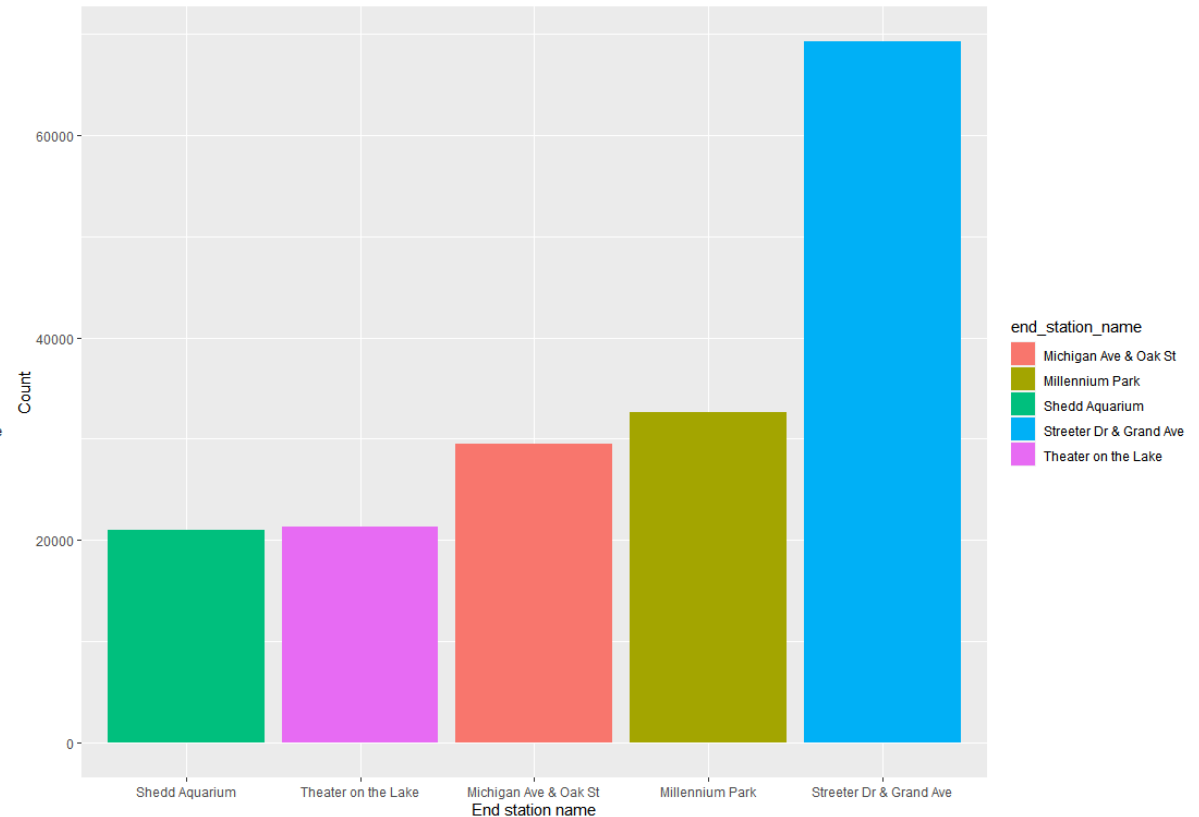
Rides locations : Casual riders

- The top 5 start and end stations for **casual riders** are exactly the same in location, yet, their popularity order slightly differs.
- After examining the following stations locations on Google Maps it appears that most of the stations are located near **leisure locations** like an Aquarium, a theater, a park, etc.

Top 5 starting stations for casual riders



Top 5 end stations for casual riders





Key takeaways



Key takeaways to improve Cyclistic's marketing strategy

1) Most of the **casual rides** occur **during the weekends** and **especially on Saturdays**.

Thus, adjusting our marketing strategies to focus our targeting efforts of casual riders on **Saturdays and Sundays** could benefit the conversion success rate due to a greater exposure to the target audience, offering our annual membership deals at the most suitable time of the week for them.



Key takeaways to improve Cyclistic's marketing strategy

2) The most common start and end stations of **casual riders** are nearby leisure locations, **a cooperation with such businesses**, especially in the following stations:

- Streeter drive & Grand Ave
- Millennium park
- Michigan Ave & Oak street
- Theater on the lake
- Shedd aquarium

could drive more casual riders into considering having an annual membership.



Key takeaways to improve Cyclistic's marketing strategy

3) The bike type distribution among **casual riders** slightly differs from **Cyclistic's members** bike type distribution, so **the targeting should be focused primarily on Classic bike casual riders (61%) and Electric bike casual riders (24.6%)**





So what's next ?



A deeper analysis should include the following :

- Comparing this 12 month period analysis to previous years data, checking out for the differences and the **recent trends** that evolved.
- Exploring for deeper insights from **casual riders** regarding their use of Cyclistic's bike rental service in a **survey / questionnaire**, for example :
 - ❑ How often do you use Cyclistic's service to get to work ? For leisure purposes ?
 - ❑ Tell us the main reason **why you are using Cyclistic's service casually** instead of having a membership ?
 - ❑ Specify the thing you **like** and **dislike** most about Cyclistic's bike rental service.



Thank You

