

# Analysis of Cyclistic bikes Users: annual members vs. casual riders

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## Objective

Analyze Cyclistic's ridership data to understand bike use between Annual members and casual riders.

# Data

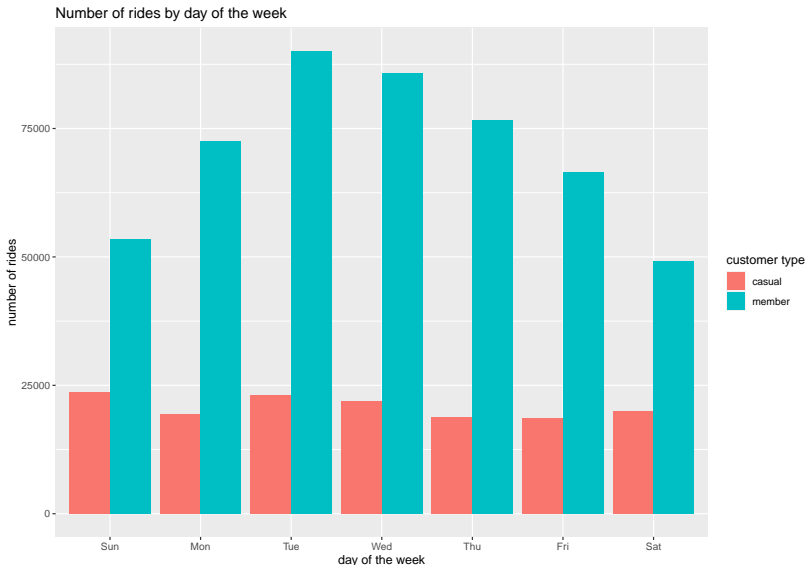
- ▶ This analysis uses Cyclistic's (Divvy's) historical trip data recorded for the first quarter of 2023 (January, February & March) found here  
**<https://divvy-tripdata.s3.amazonaws.com/index.html>**.
- ▶ Data Wrangling and cleaning steps taken can found in this **R markdown**
- ▶ Additional visualizations can be found here  
**<https://public.tableau.com/app/profile/kenny.brian/vizzes>**

# Executive Summary

- ▶ More *annual members* use the bikes during the weekdays as compared to the weekend, Bike use by *casual users* varies within the week
- ▶ *Casual users* generally have a higher trip duration compared to *members*. The number increases sharply on the weekends. The trip duration for *members* is steady on weekdays with a slight increase over the weekend.
- ▶ Daily bike use by *members* peaks at 8am and 5pm
- ▶ *Both* customer segments prefer electric bikes. However, *casual riders* prefer docked bikes for longer trip duration.
- ▶ Focus on *bike use, day of the week* and *bike preference* while designing marketing strategies

# Number of rides by day of the week

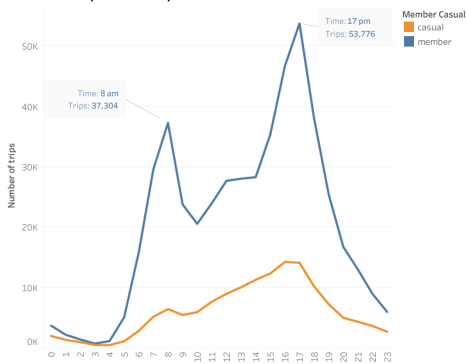
- ▶ The subscribed members use the bikes more on weekdays as compared to weekends.



# Number of rides by time of the day

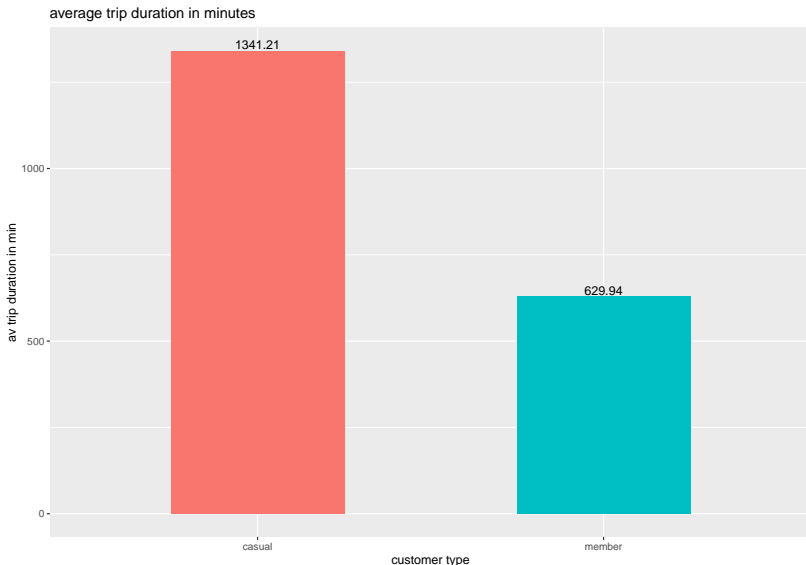
- Daily bike use by *members* peaks at 8am and 5pm while number of trips by casual riders increases steadily during the day and peaks at 4 pm

Number of rides by time of the day



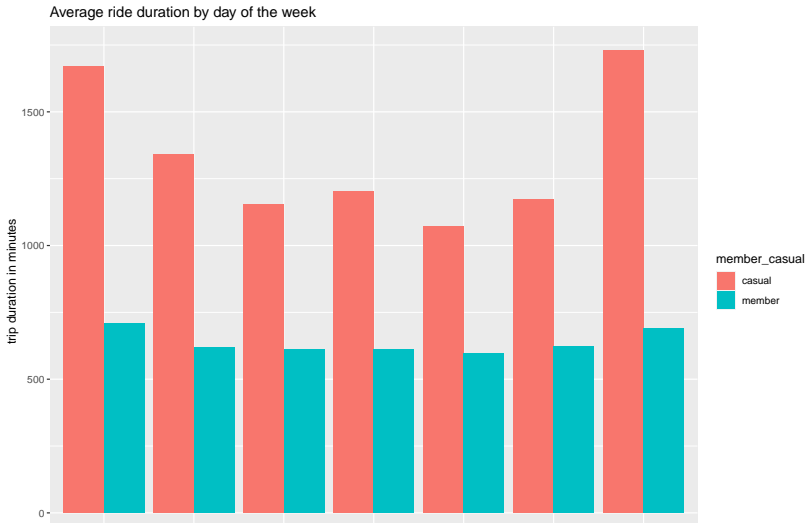
## Average trip duration by customer type

- ▶ The average trip duration for casual riders is more than double the average trip duration for members.



## Average ride duration by day of the week

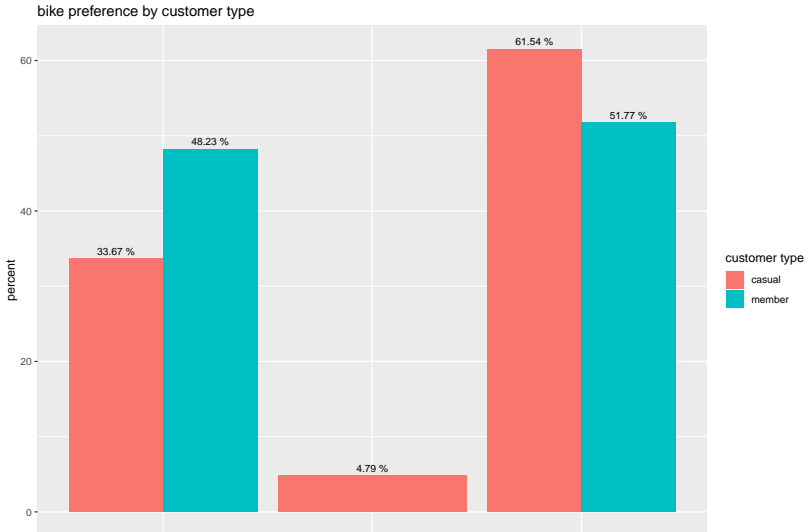
- ▶ While both customer segments have relatively higher ride duration during the weekends, ride duration for casual riders increases sharply over the weekend.





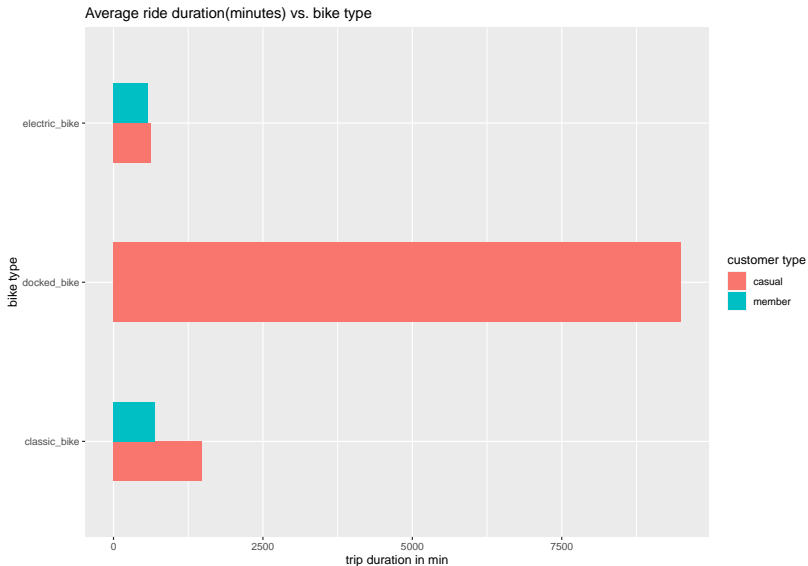
## Bike preference by customer type

- ▶ There are no subscribed members that used docked bikes.
- ▶ A higher proportion of customers in both segments prefer electric bikes over other bike types.



# Average ride duration by bike type

- ▶ Docked bikes have a higher ride duration compared to other bike types.



## Findings and Hypothesis

- ▶ The average ride duration for Casual users (22.35 minutes) is more than double the average duration for members (10.5)
  - ▶ Average ride duration by day of the week relatively higher for casual users. This number peaks during the weekend.
  - ▶ we can assume that casual members use bikes for leisure/recreation
- ▶ Bike use varies by the day of the week
  - ▶ More subscribed members use the bikes more on weekdays
  - ▶ Owing to the number of rides over the weekdays, shorter ride duration and peak hours, we postulate that annual members mostly use the bikes to commute to and from work
- ▶ While Docked bikes accounted for the highest trip duration for casual riders, majority (61.5%) prefer electric bikes. Could bike range/charging stations be a factor?

## Next steps

Further analysis needed on

- ▶ Trip duration, we have trips that lasts that  $< 5$  seconds
- ▶ More data on the use of bikes by the customers
- ▶ Additional demographics for analysis e.g. age of users