# How Does a Bike-Share Navigate Speedy Success?:

## A case study of Cyclistic

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# Cyclistic

- Cyclistic is a bike-sharing program in Chicago with a fleet of over 5,800 bikes and 692 stations.

- Cyclistic offers a range of pricing options, including **single-ride passes**, **full-day passes**, and **annual memberships**

- **Annual members are more profitable** for Cyclistic than casual riders, and the marketing team is interested in converting more casual riders into annual members.

# 01

# ASK PHASE

A short description of business task and what we are talking about today

# The Problem

- The business task at hand is to develop a new **marketing strategy** to **convert** casual riders into annual members. By understanding how these two groups use Cyclistic bikes differently.

- To do this, the marketing team will need to analyze historical bike trip data to identify trends and gather insights that can be used to create compelling data visualizations.

- These visualizations will help to clearly communicate the benefits of becoming an annual member and encourage more casual riders to make the switch.

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# PREPARE PHASE

A description of all data sources used and how to get them

# Dataset

- We will be using Cyclistic's historical trip data.
- This data is available for download and includes information from the previous 12 months.
- The data was made available by Motivate International Inc. and is licensed for public use.
- Some of these data:

ride id – rideable type –started at –ended at –start station name – end station name –member casual

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# PROCESS PHASE

Documentation of any cleaning or manipulation of data

# Data Cleaning

- We first discovered data to get familiar with how data is organized
- We started by getting some short summaries like unique values/ # of rides/ mean ride time
- We then discovered some invalid data such as person has Zero or negative ride length. There was small portion, so we ignored them
- We mainly used R (Programming language)

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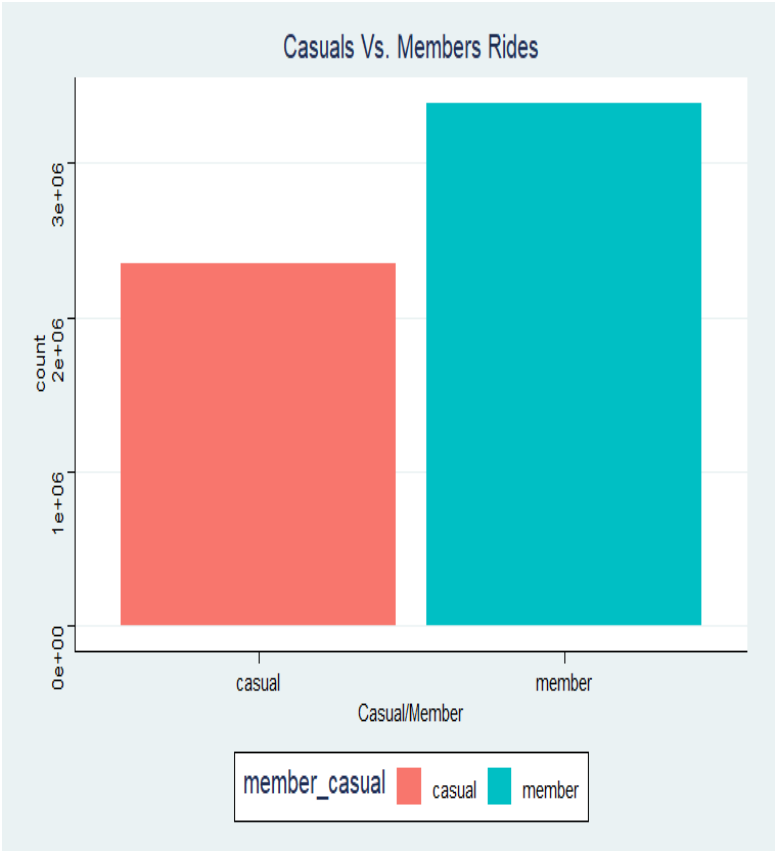
# ANALYZE PHASE

- Aggregate/Organize data
- Identify patterns and relationships

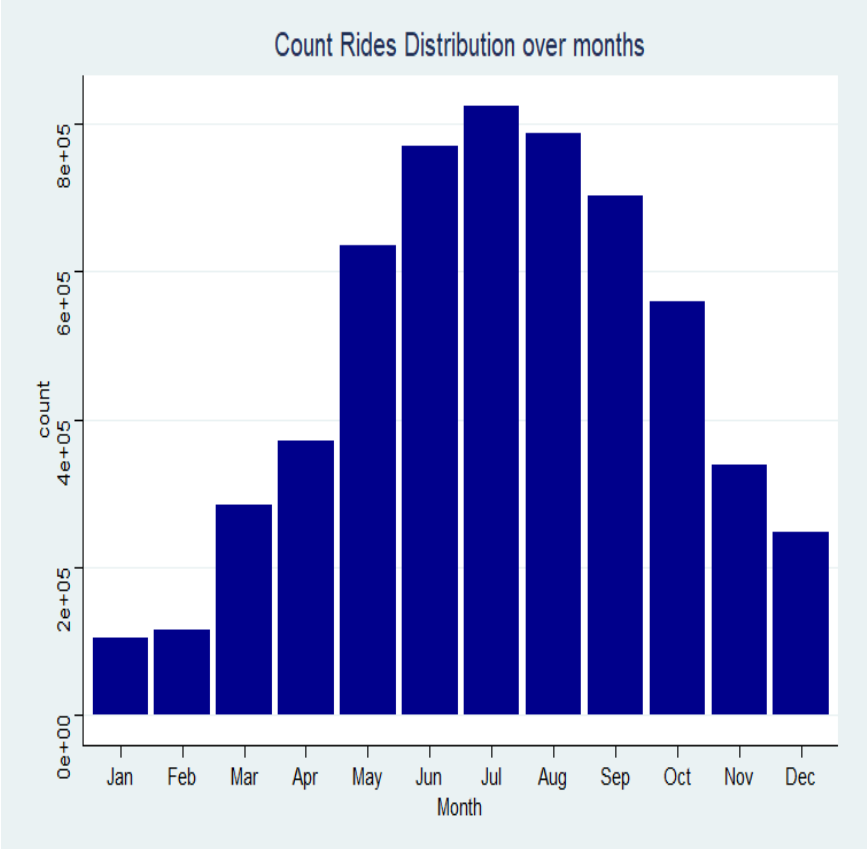
# Casuals Vs Members Summary

- It's obvious that members are more than casual at general with difference about **20%**.
- we will check later if this difference is usual in all months or in general



# Monthly Summary

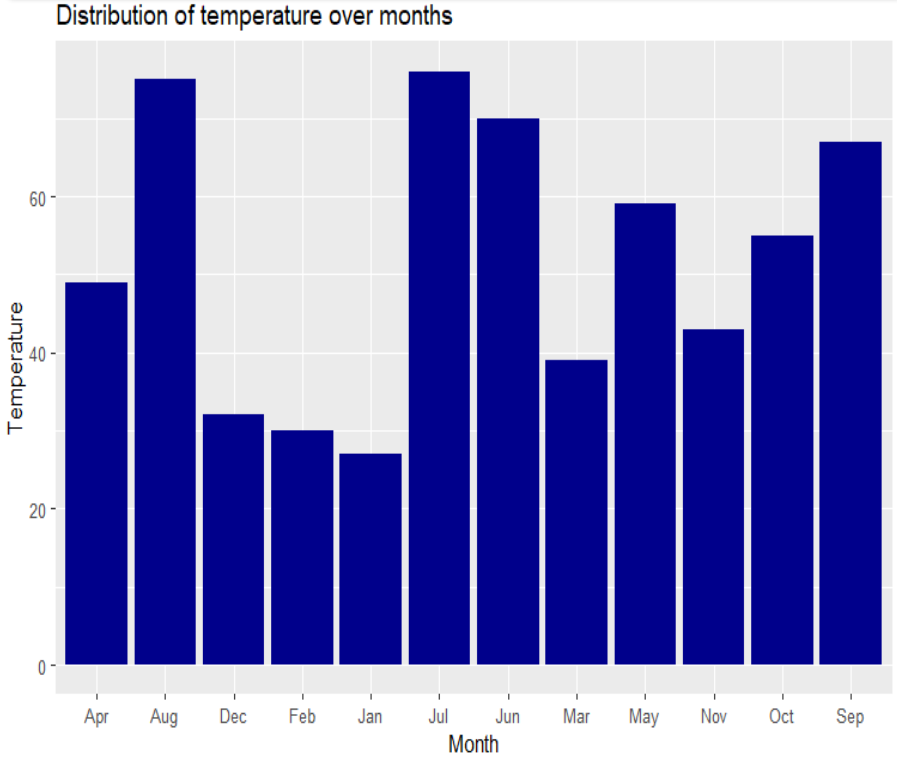
- We can observe that count of rides **increase** dramatically from **May to Oct**
- This may be due to **climate** so let's see



# Monthly Summary (Cont'd)

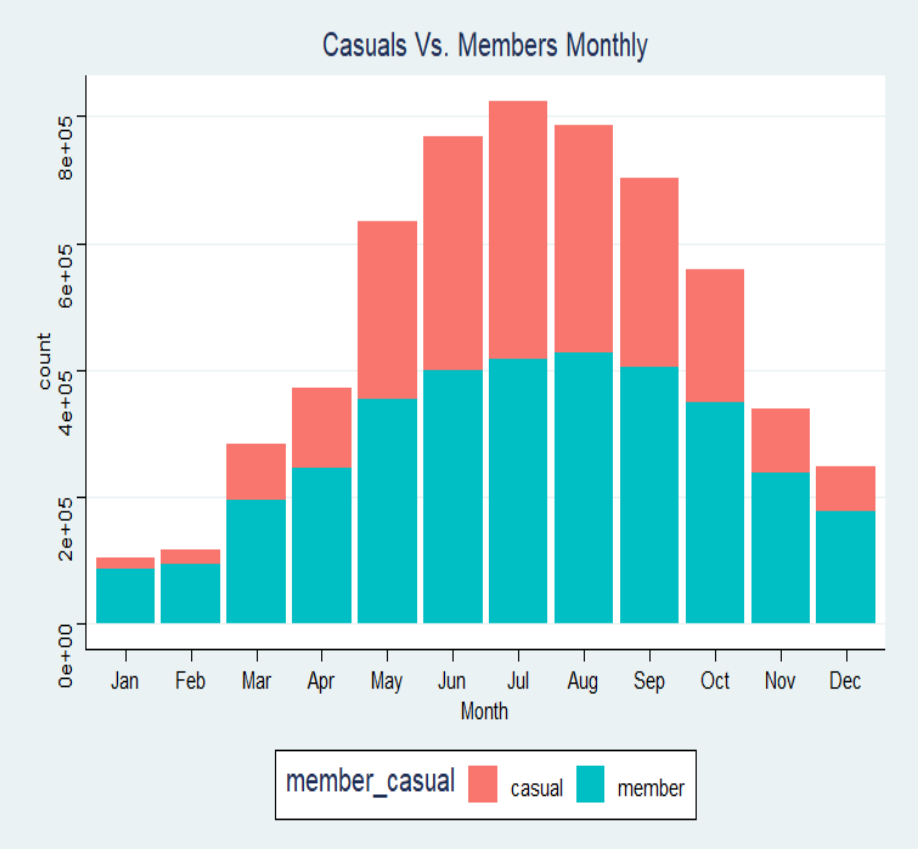
- Cyclistic operates in Chicago, so we searched for mean temperatures in Chicago in these months (Source)
- We can see from both graphs and **correlation** that this distribution may be due **to low temperatures** at the **start and the end of the year**

Correlation between temperature and # of rides = 0.989



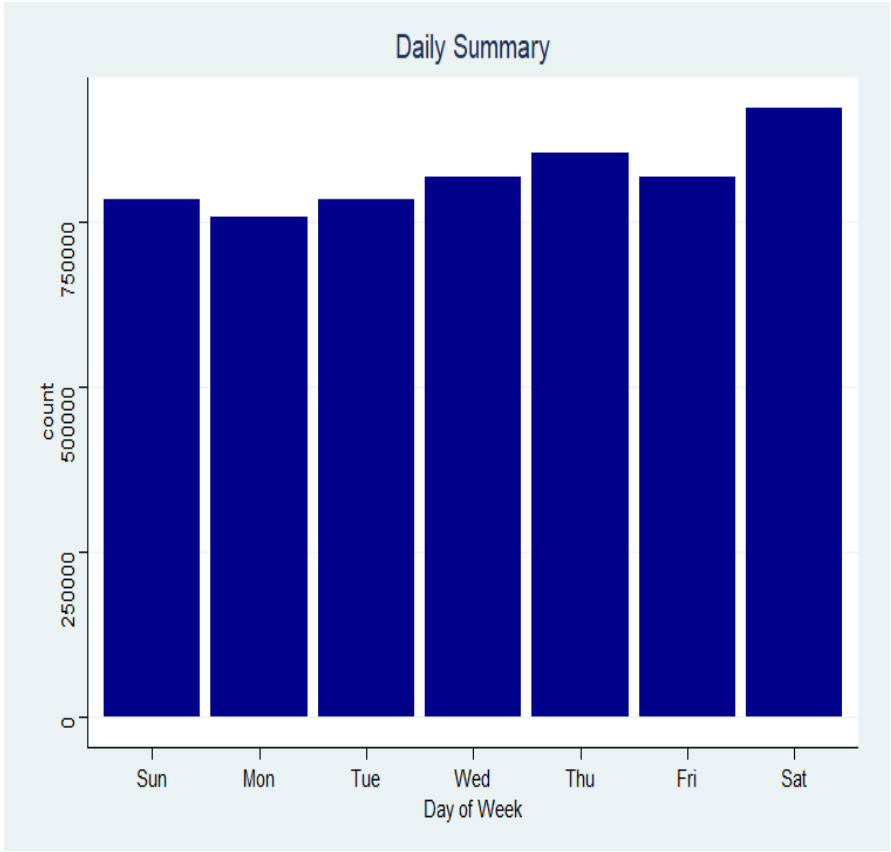
# Casuals Vs. Members Monthly Summary

- We can see that's the proportion of **member are greater than casual** in the start and end of year
- But they are nearly equal in the middle of the year
- **This can help us to make the campaign in the middle of the year**



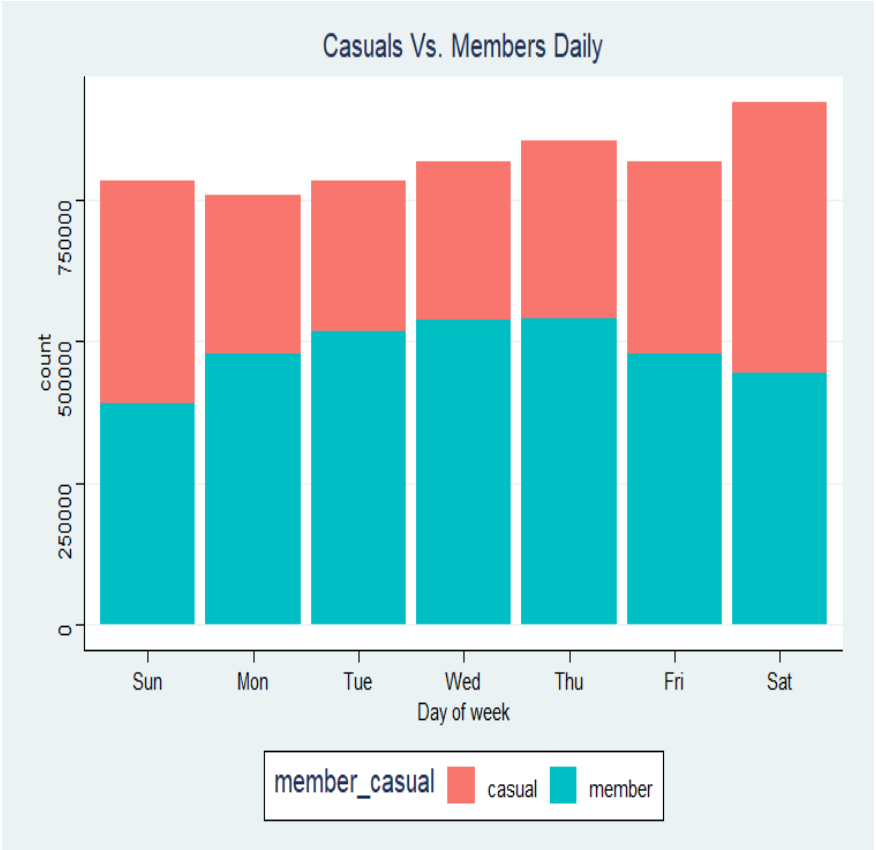
# Daily Summary

- We can see that all days are nearly equal with **mode = Saturday.**
- This may be due to weekend so more people tend to use it
- This also can help in determining which days we can focus on in campaign



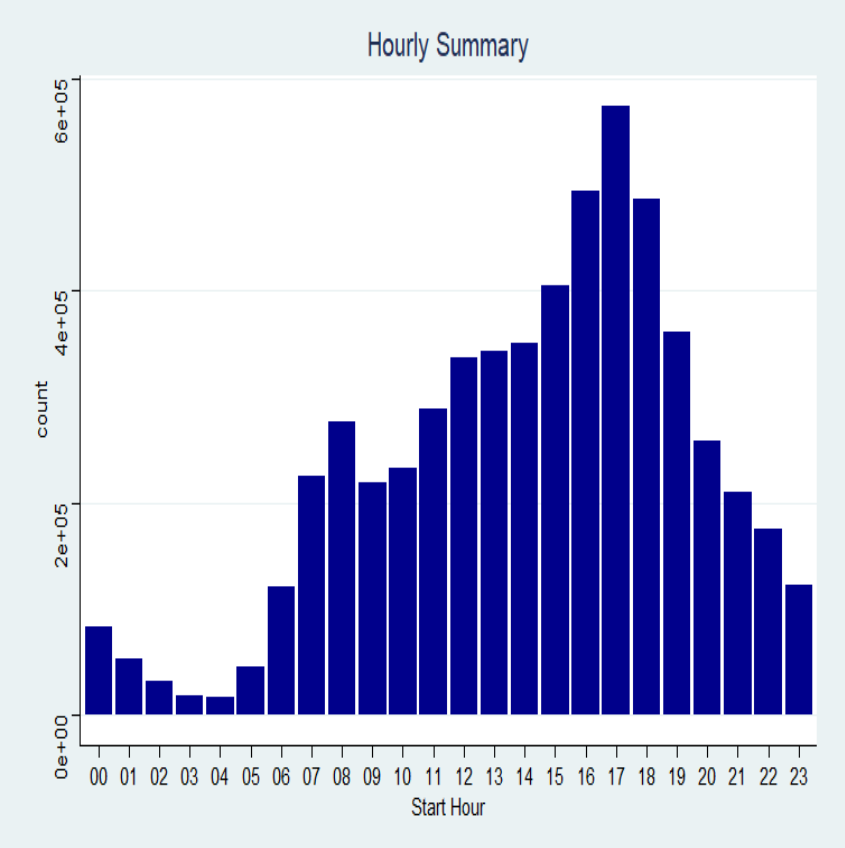
# Casuals Vs. Members Daily Summary

- Member rides are always greater than casual rides except for weekends



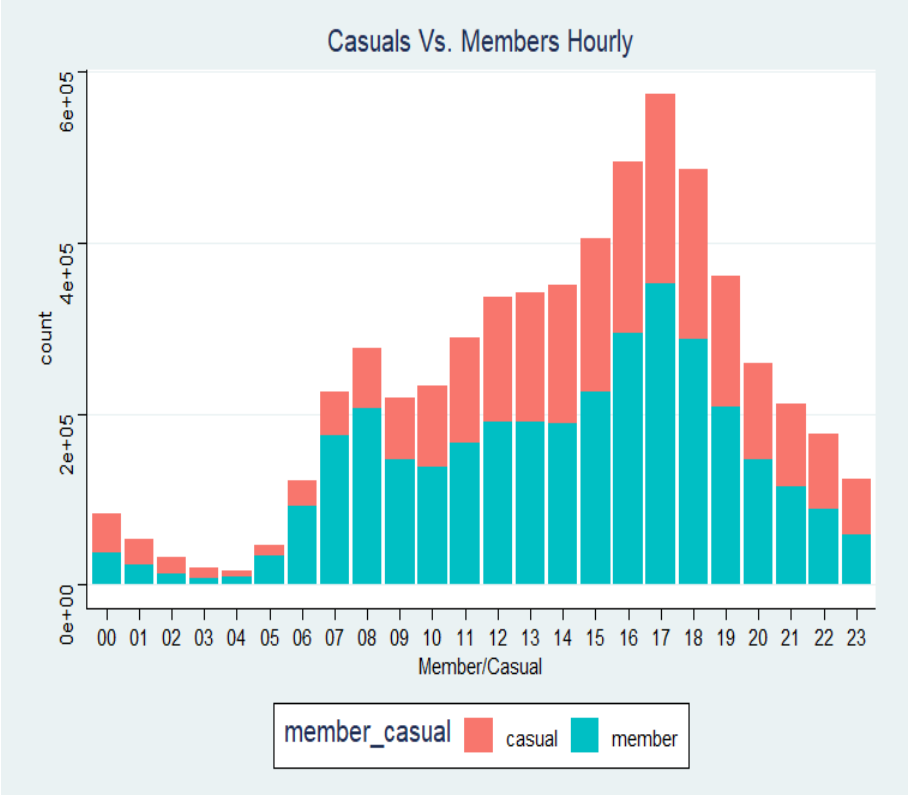
# Hourly Summary

- We can see that **rush hours** are from 15:00 -> 18:00
- This due to many people returning to their homes
- This also will be useful if we wanted to use digital ads popping on bikes



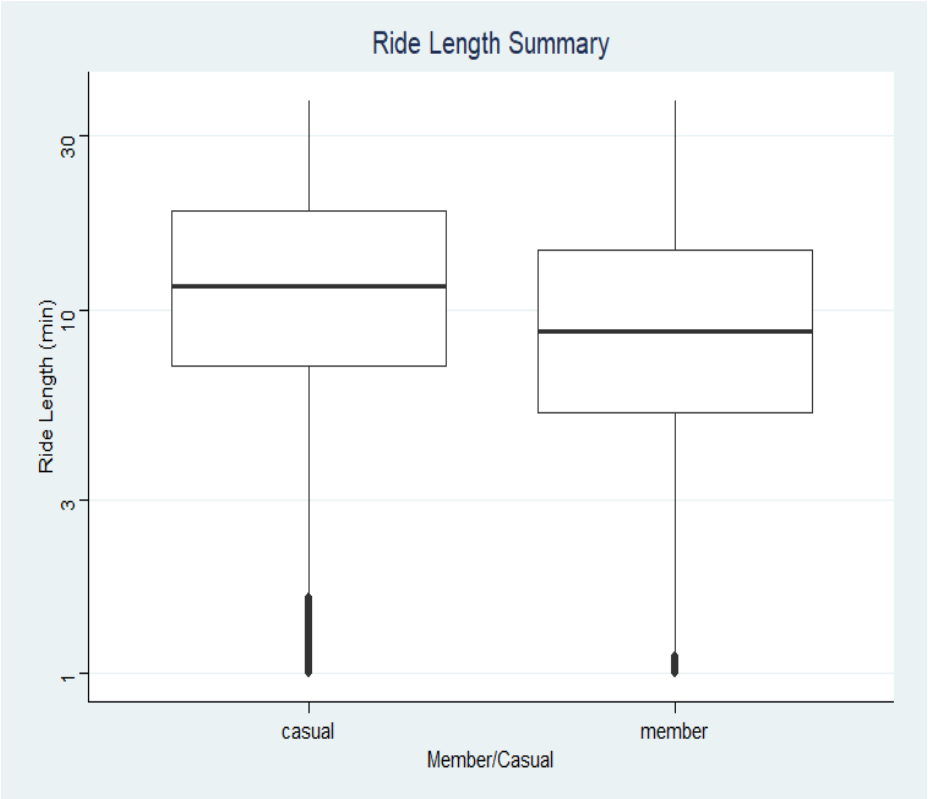
# Sleep Summary (Cont'd)

- Usually there is **no big difference** in rides among members and casuals except in morning this due to **members use bikes when they going to their work**

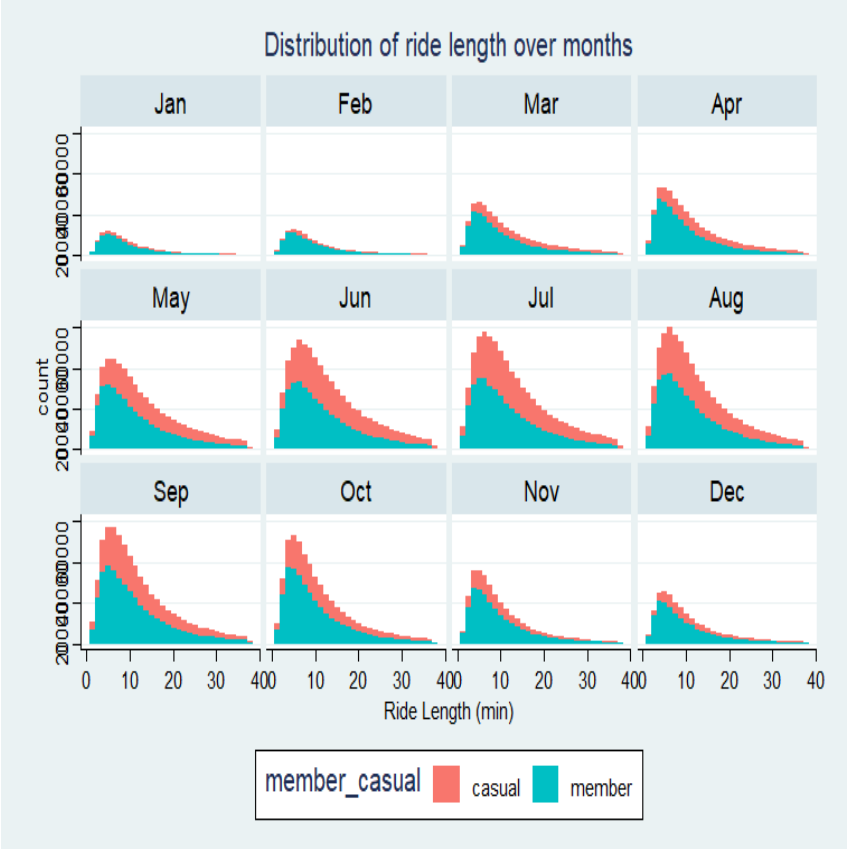


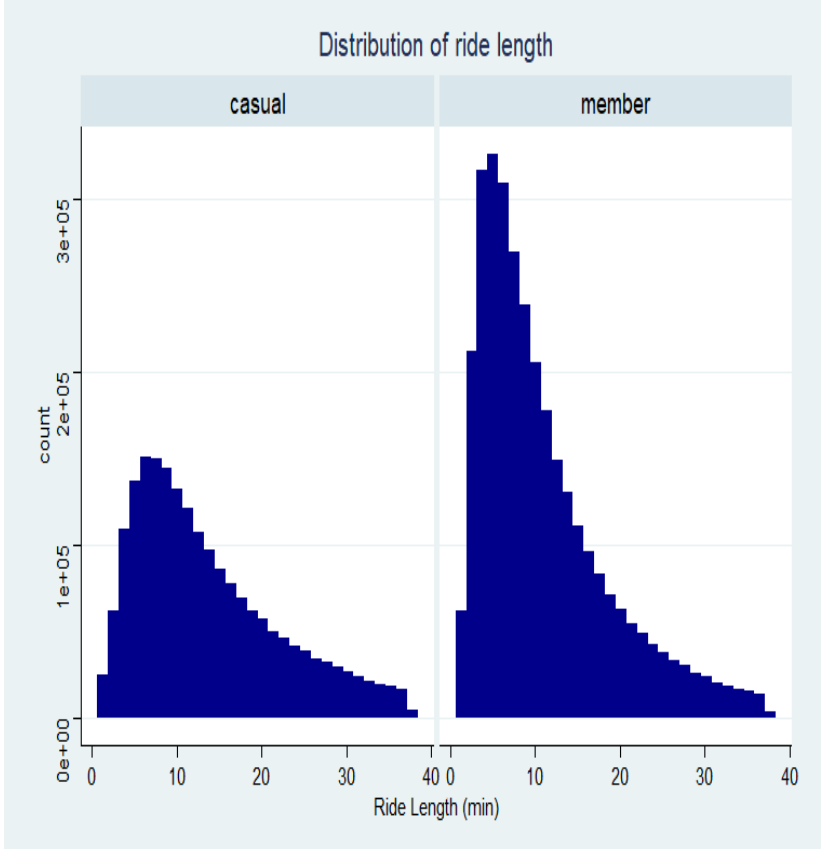
# Ride Length Summary

- After removing some outliers that may cause due to some break down in bikes
- It seems that casual ride length have a higher mean
- This can encourage casual riders to be Members



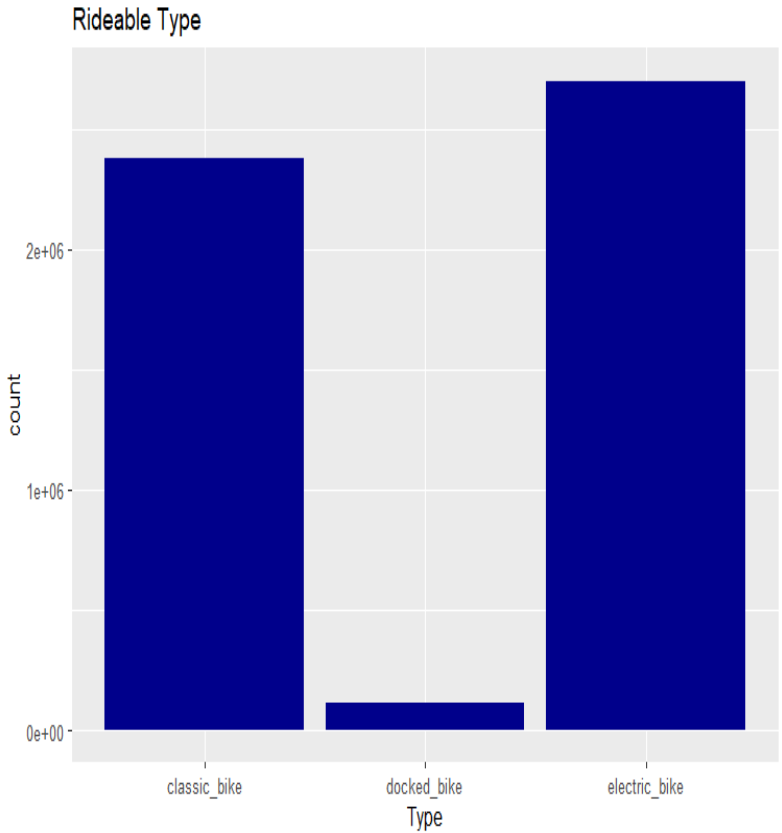
# Ride Length Summary



# Rideable Type Summary

- There is no great difference between docked bikes and electric bikes contributing both by about **97%**
- This gives us idea about what types of bikes needed in the future in case of **scaling**



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# ACT PHASE

High-level insights based on analysis

# High-level Recommendations

## Daily Activity

- Create offers for membership on the days where's there is no service
- This mean in low temperature days

## Sleep

- Always reference sports in campaigns
- Make some campaigns that support being fit with focus on **Cycling**

## General

- Make **surveys** to see if customers need more stations
- Add some stations and bikes on the most common

# Thanks

Do you have any questions?

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