



# Identifying trends between members casual riders

Analysis on bike-sharing program by a bike-sharing company

PRESENTED BY  
Benjamin Mak

Links:  
[Full report](#)  
[Tableau dashboard](#)



# Agenda

- 01 Background information
- 02 Business objectives
- 03 Data source and information
- 04 Analysis and visualisations
- 05 Summary of key findings
- 06 Recommendations



# Company information

- Cyclistic: Bike-sharing company which launched a successful program in 2016
- Main features:
  - Fleet of 5824 bicycles
  - Cater to people with disabilities
- Pricing plans:
  - Single-ride pass, full-day pass (Casual riders)
  - Annual membership (Members)



[BACK TO AGENDA](#)



# Business objectives

- Initial analysis by other departments
  - Annual memberships are more profitable than causal riders
  - Focusing on increasing the number of members is key to future growth and increased revenue
  - Marketing team wants to convert current non-members instead of targeting and getting new sign ups
  
- Problem to solve
  - Marketing team wants to design a new strategy to convert casual riders to members.
  - Need to understand dynamics between both groups

[BACK TO AGENDA](#)

# Business task

**Identify how annual members and casual riders differ in the usage of Cyclistic bikes and reasons why single/day pass customers will buy annual memberships.**

## Key stakeholders

- Director of marketing
- Executive team
- Marketing analytics team

## How the insights can drive business decisions

- Recommendations will assist marketing team to come up with the best strategy

# Dataset

- Summary of dataset
  - Contains trip and station details for the period of 2018-2021
  - Information of start and end stations, timings of bike trips, customer type
- Data organisation and licensing
  - Data provided is kept in CSV files
  - Data made publically available by Motivate International Inc.
- Limitations of the dataset
  - Some inconsistencies between the years
  - Missing and incomplete data which need to be cleaned
  - Types of bikes used are not available, unable to analyse assistive options

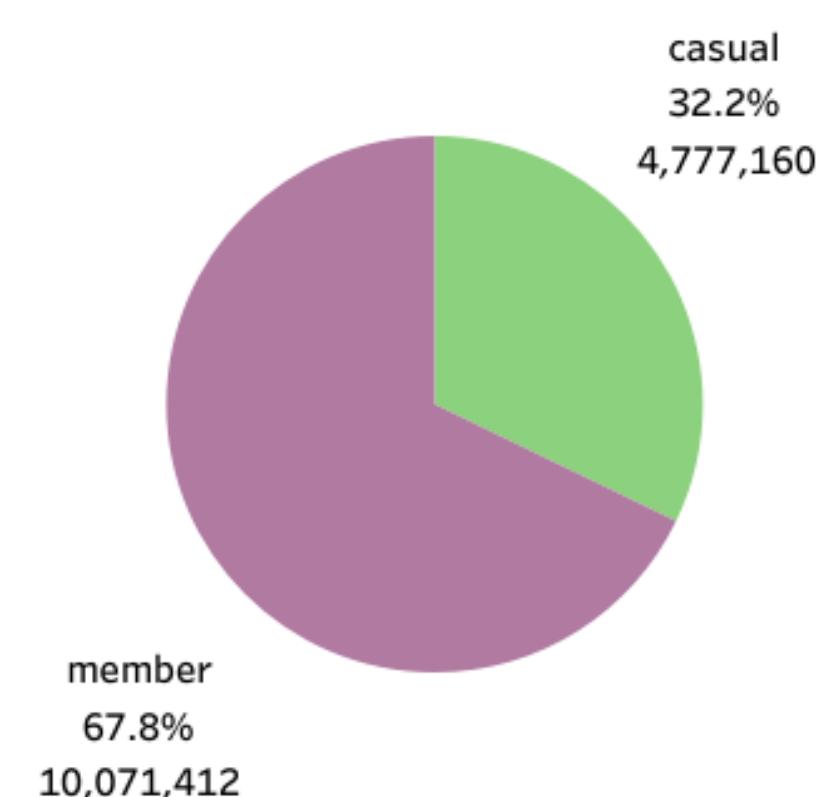
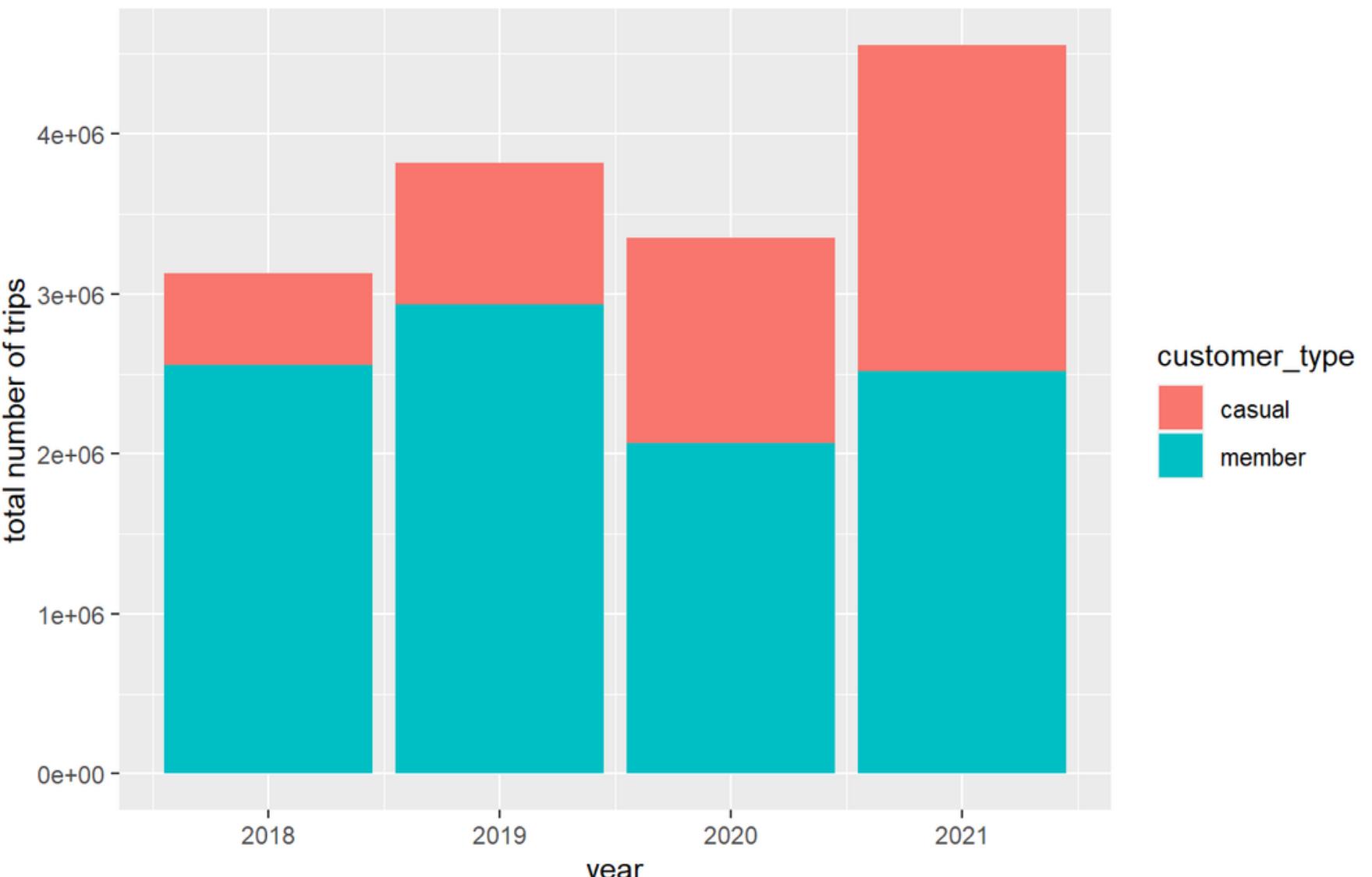
# Analysis and findings



# Total number of trips for casual riders and members

- 14,848,572 trips were made from 2018-2021
- Casual rides accounted for 32.2% of the total number of trips
- Large enough market of casual customers that can be targeted
- Total number of trips has generally been increasing over the years

Total number of trips for each year  
Figure 1



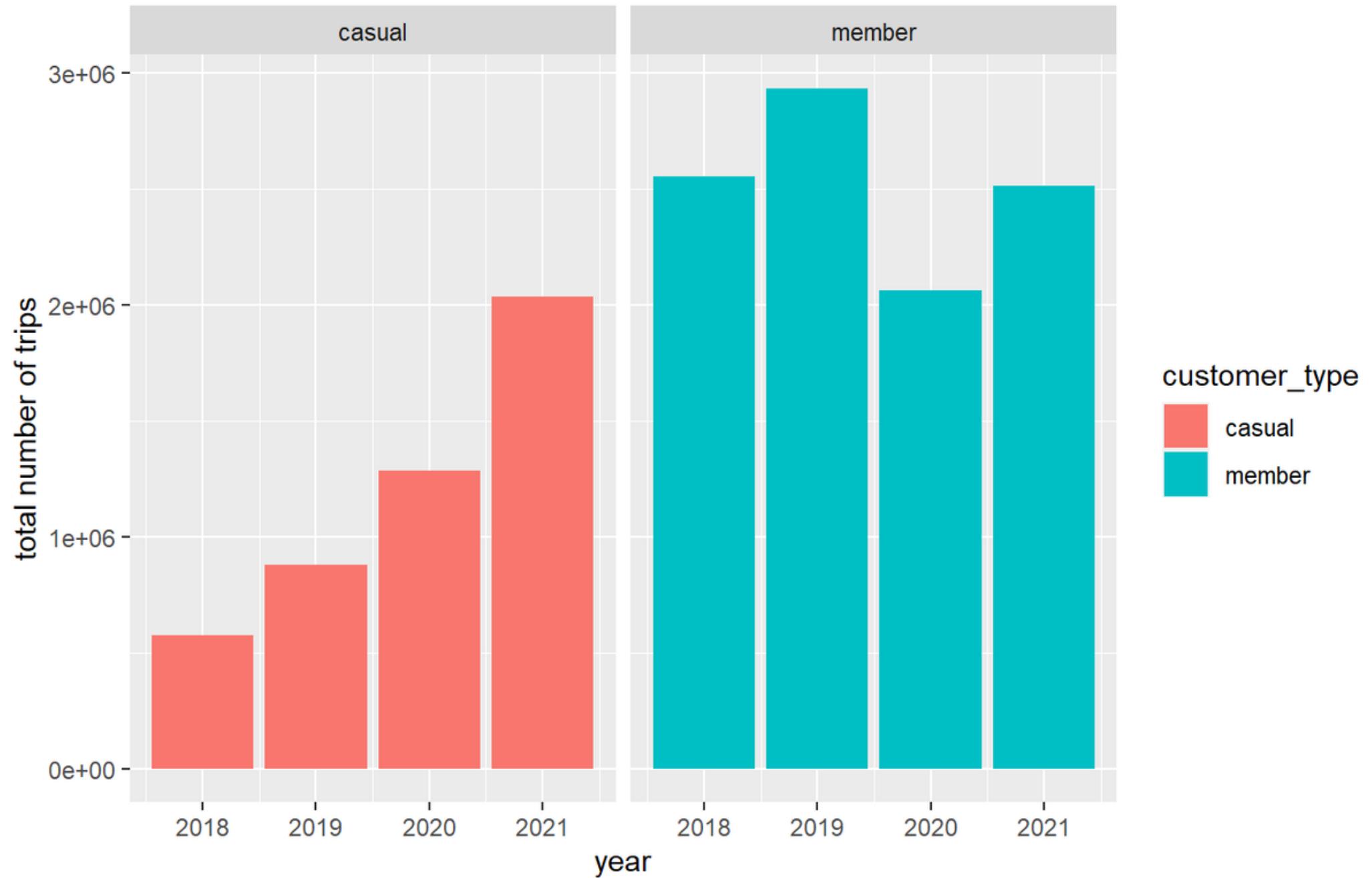
[BACK TO AGENDA](#)

# Number of trips for casual riders and members each year

- Number of trips by casual riders has been increasing over the years
- Growth rate of an average of 52.6% a year

Total number of trips by customer type

Figure 2



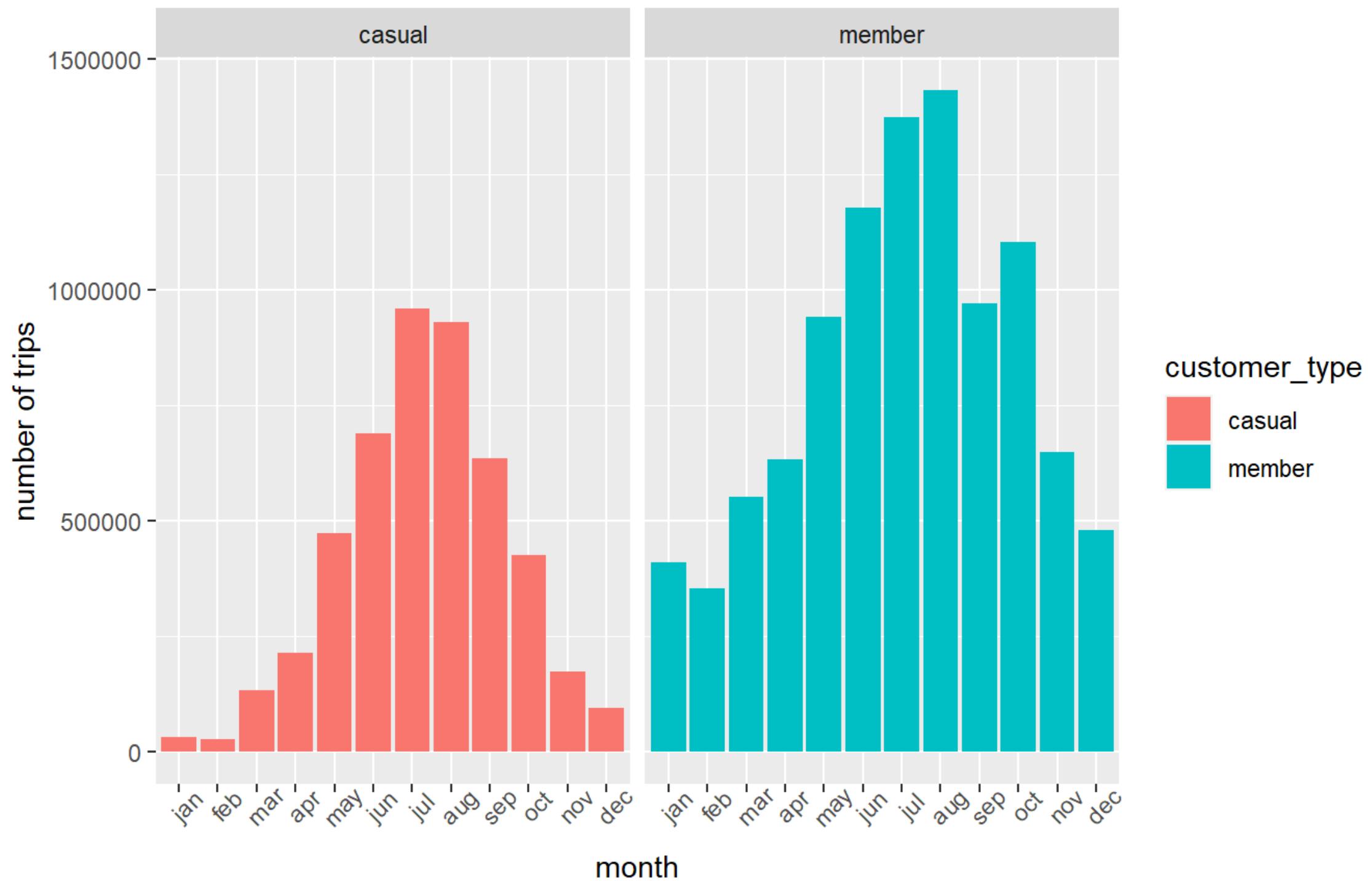
[BACK TO AGENDA](#)

# Number of trips for each month

- Bulk of trips for casual riders fall within May to October
- July and August are the highest months
- Very few rides from December to February (winter season)

Total number of trips each month

Figure 3



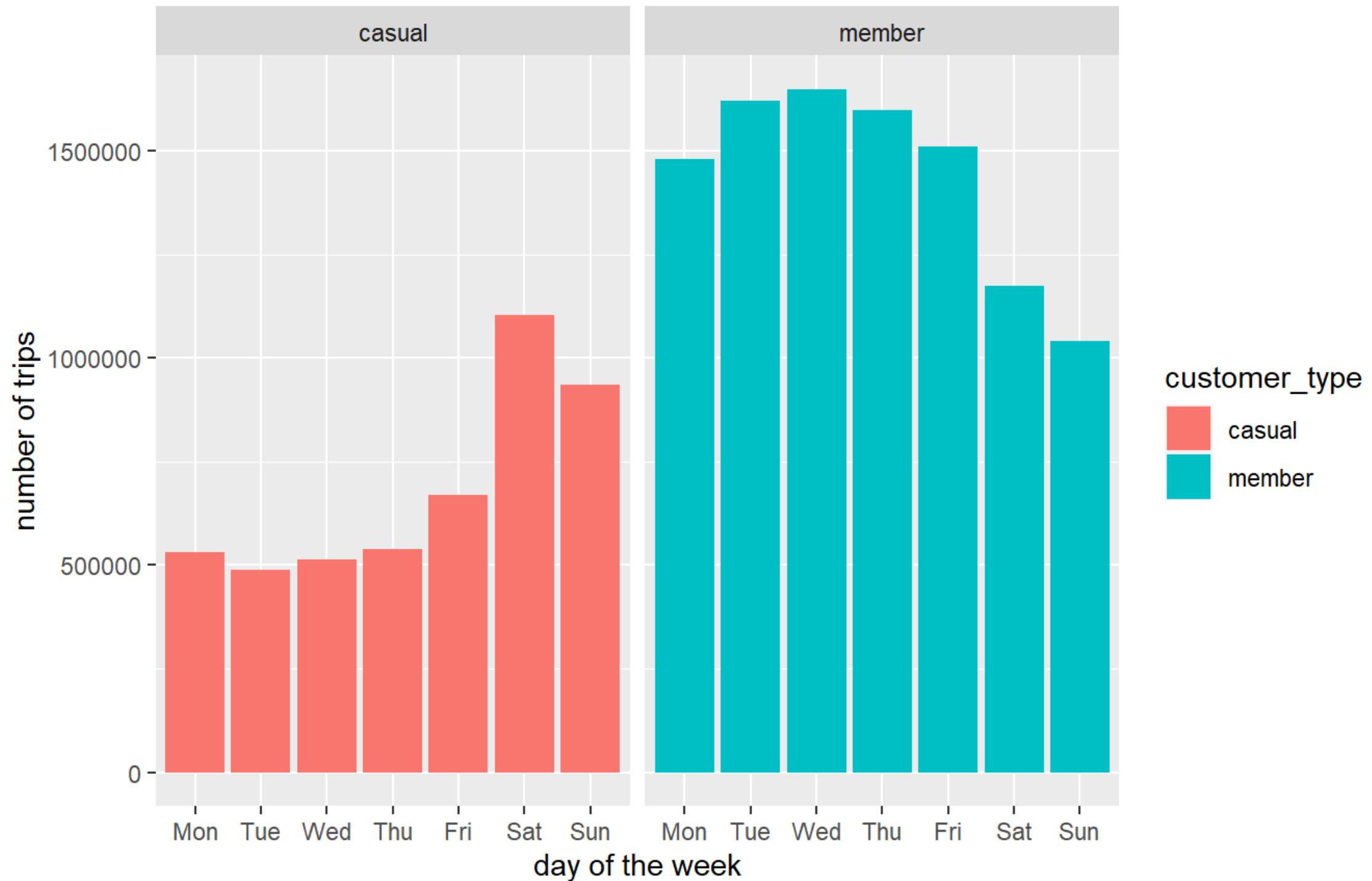
[BACK TO AGENDA](#)

## Number of trips for each day of the week

- More than 40% of total trips for casual riders were on weekends
- Only 22% of total trips for members were on weekends

Total number of trips for each day of the week

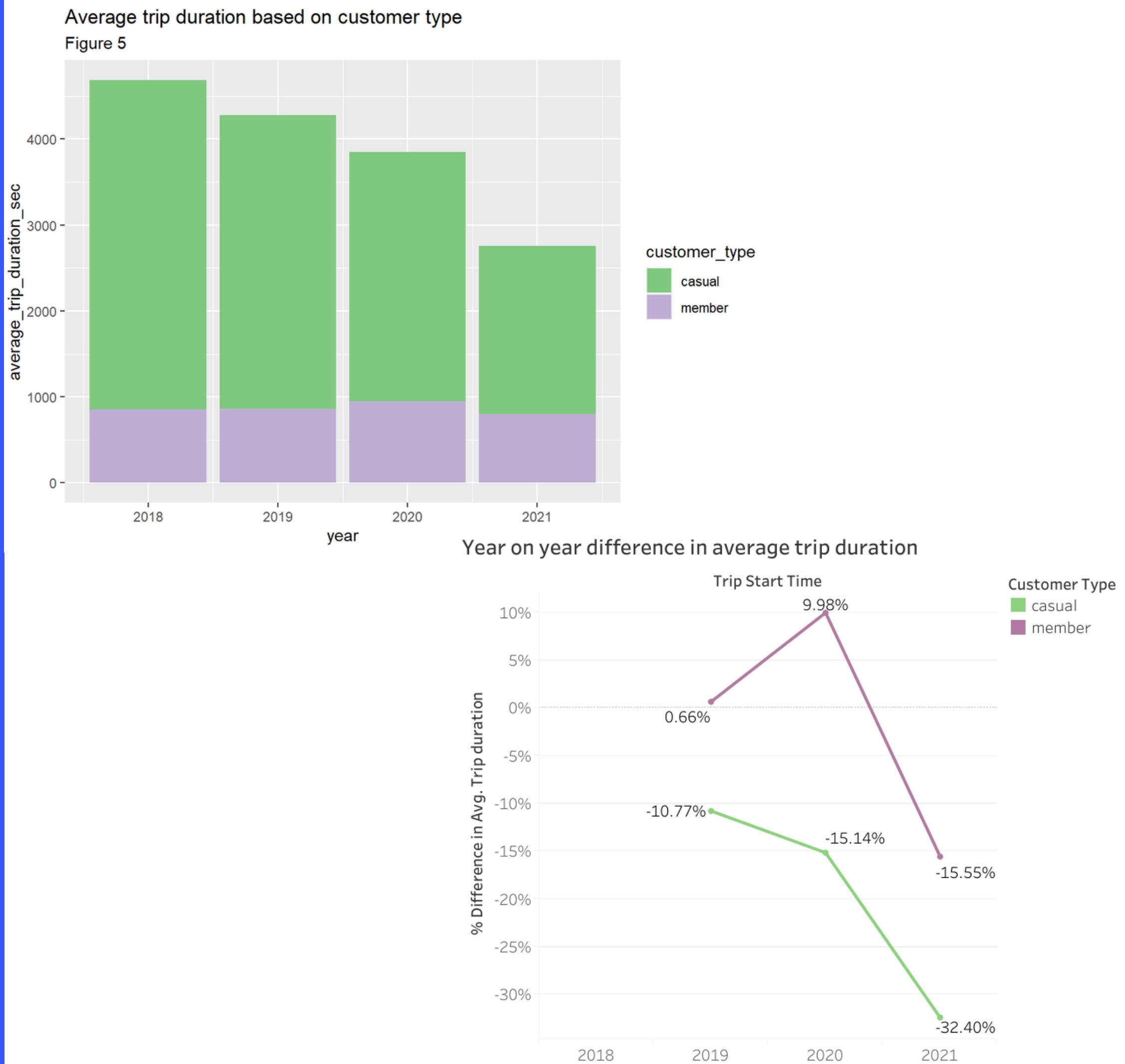
Figure 4



[BACK TO AGENDA](#)

# Ride duration

- Average trip duration for casual riders is 45.1 minutes
- Average trip duration for members is 14.3 minutes
- Average trip duration for casual riders has been decreasing over the years at an increasing rate
- Casual riders are taking more frequent shorter trips, which might make a membership more beneficial to them



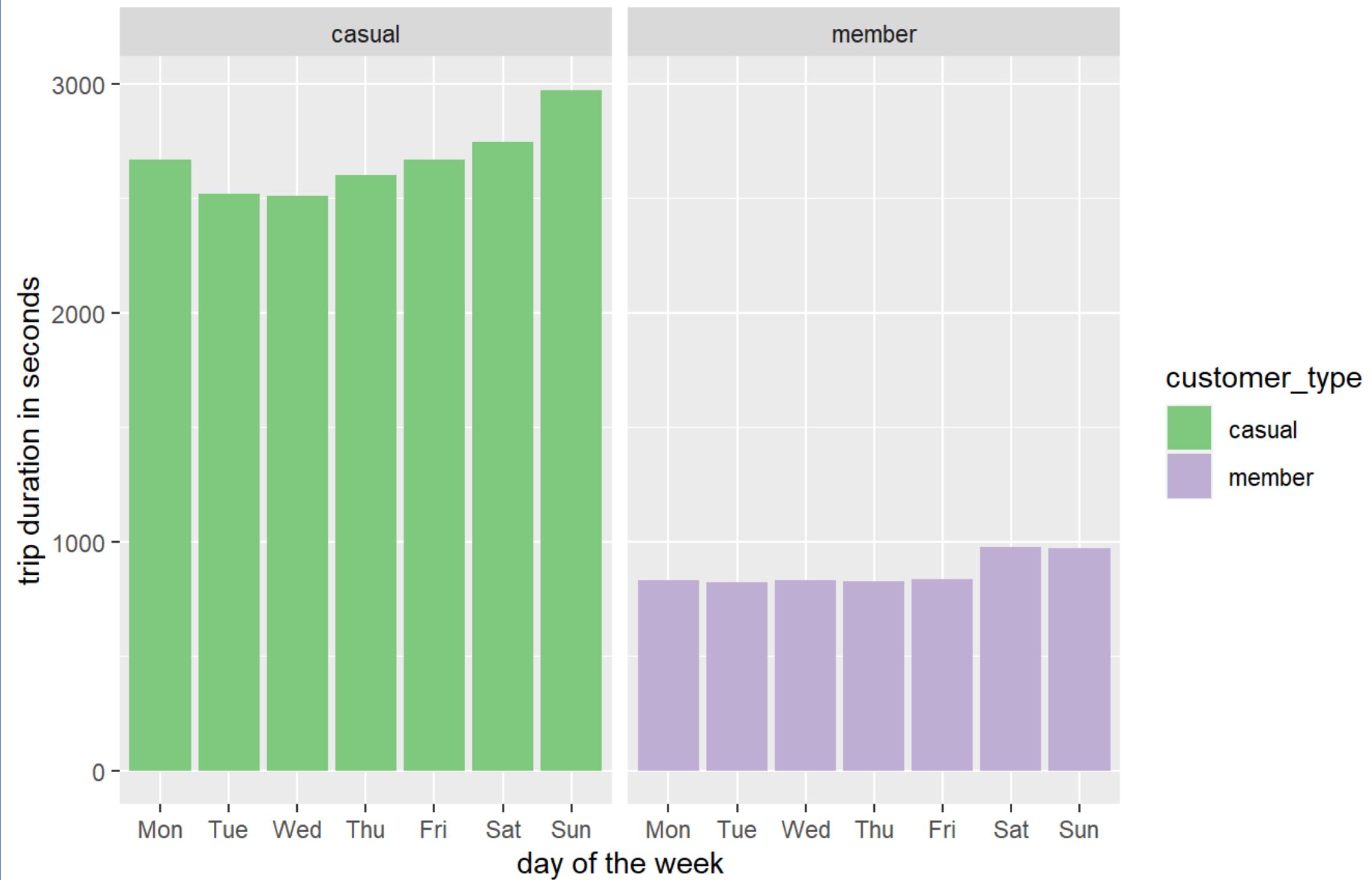
[BACK TO AGENDA](#)

## Ride duration for each day of the week

- Ride duration for casual riders is highest from Saturday to Monday
- Ride duration for annual members is fairly constant on weekdays suggesting that the routes they take are similar each day

Average trip duration each day of the week

Figure 6

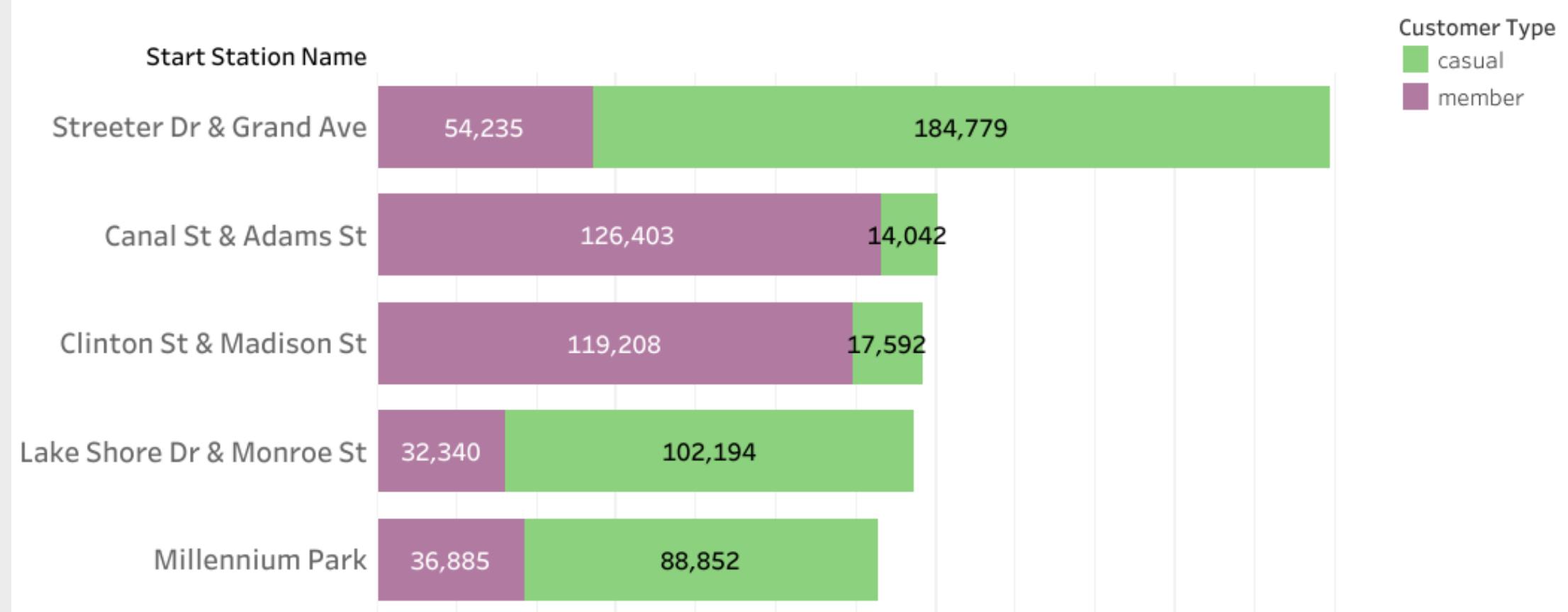


[BACK TO AGENDA](#)

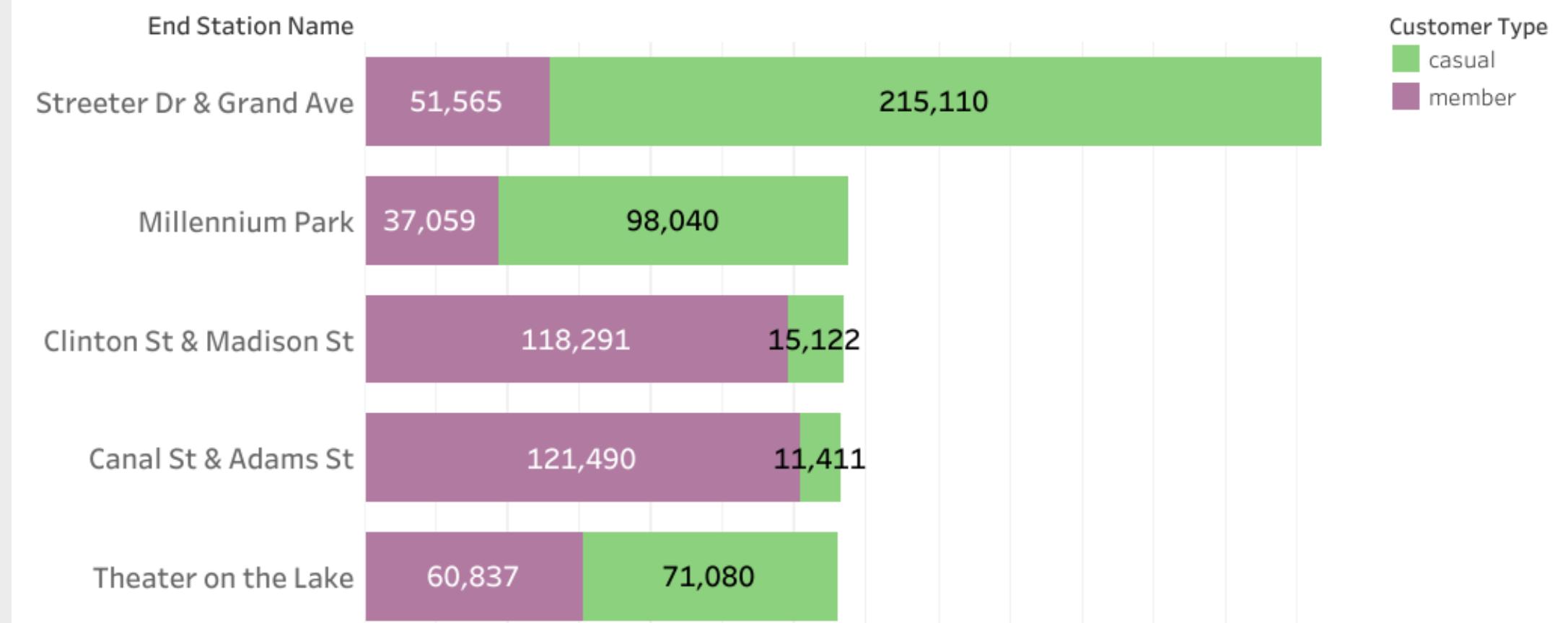
## Most visited stations

- **Street Dr & Grand Ave** - In the vicinity of a nature park, street beach and pier
- **Millenium Park** - Green space with art, theater and ice rink
- **Canal St & Adams St, Clinton St & Madison St** - Near the city centre

### Most popular starting stations



### Most popular ending stations



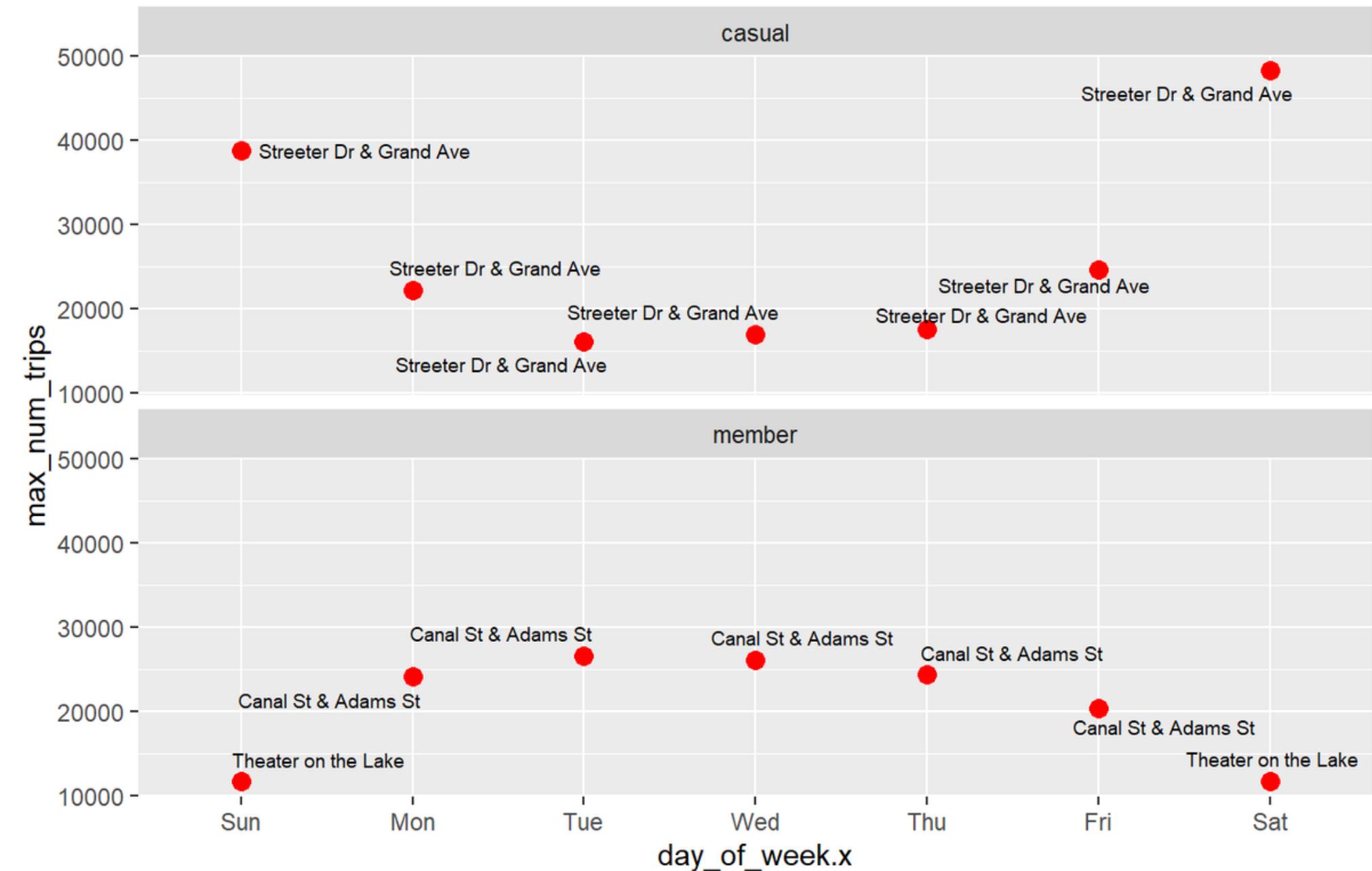
[BACK TO AGENDA](#)

# Most visited stations each day of the week

- Street Dr & Grand Ave is the most visited station all days of the week for casual riders
- For members, Canal St & Adams St is the most visited station on weekdays while Theater on the Lake on weekends

Most visited start station by customer type

Figure 8



[BACK TO AGENDA](#)

# Key findings

1

## LARGE POOL OF CUSTOMERS

- Number of trips by casual riders has been increasing over the years, might be beneficial to them to sign up for a membership
- Need to cross-check with the customer ID, to see if it correlates with the actual number of customers

2

## PEAK PERIOD OF RIDES

- Spring/Summer period is from April to September, which explains the high number of trips during this time
- From November to March, there were very few trips by casual riders while members still had a sizeable amount

3

## PURPOSE OF USAGE OF BIKES

- Casual riders use the bikes more on weekends than on weekdays
- They also spend more time on their trips than annual members
- Suggests that casual riders use the bikes for leisure purposes
- Top destinations also suggest that annual members use the bikes for work

[BACK TO AGENDA](#)

# RECOMMENDATIONS

## 1. CREATE ALTERNATIVE MEMBERSHIPS

- Could explore having different membership types for example a 6-month membership covering the peak periods
- Could have an annual membership just for weekends

## 2. RUN PROMOTIONS

- Run promotions with other companies at the popular attractions

## 3. COMPARE ALTERNATIVE MODES OF TRANSPORTATION

- Some further research to be done on the substitute modes of transportation especially at the popular destinations