

Cyclistic Bike-Share Case Study:

**How annual members and casual
riders use bikes differently**

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Agenda

Introduction & Business Task

Data Overview, Preparation & Cleaning

Analysis & Key Insights

Summary and Recommendations

Documentation & Tools Used





Introduction

- Cyclistic is a Chicago-based bike-share company offering flexible bike rentals across the city, inspired by Divvy.
- Riders can choose between **casual passes** (single-ride or day passes) and **annual memberships** for frequent use.



Business Task

- **Business Goal:**

Increase profitability by converting casual riders into annual members.

- **Objective:**

Identify key differences in how casual riders and annual members use Cyclistic bikes to support smarter marketing decisions.



Data Overview

- Source: [Cyclistic trip data 2025](#)
- [License about the usage of the data](#)

Data Type:

- Historical bike trip records of 2025, stored as monthly raw csv files

Credibility:

- Reliable, first-party

Limitations:

- No demographic data
- No pricing or revenue info



Data Cleaning & Preparation

I've combined 12 months of separate data into a single dataset using the R programming language.

- Combined dataset has over 5.5 million rows
- Checked and standardized data types, column names
- Removed null values, duplicates
- Created: ride duration, date, weekday, hour calculated columns
- Removed trips with negative or zero durations, or trips lasting over 24 hours

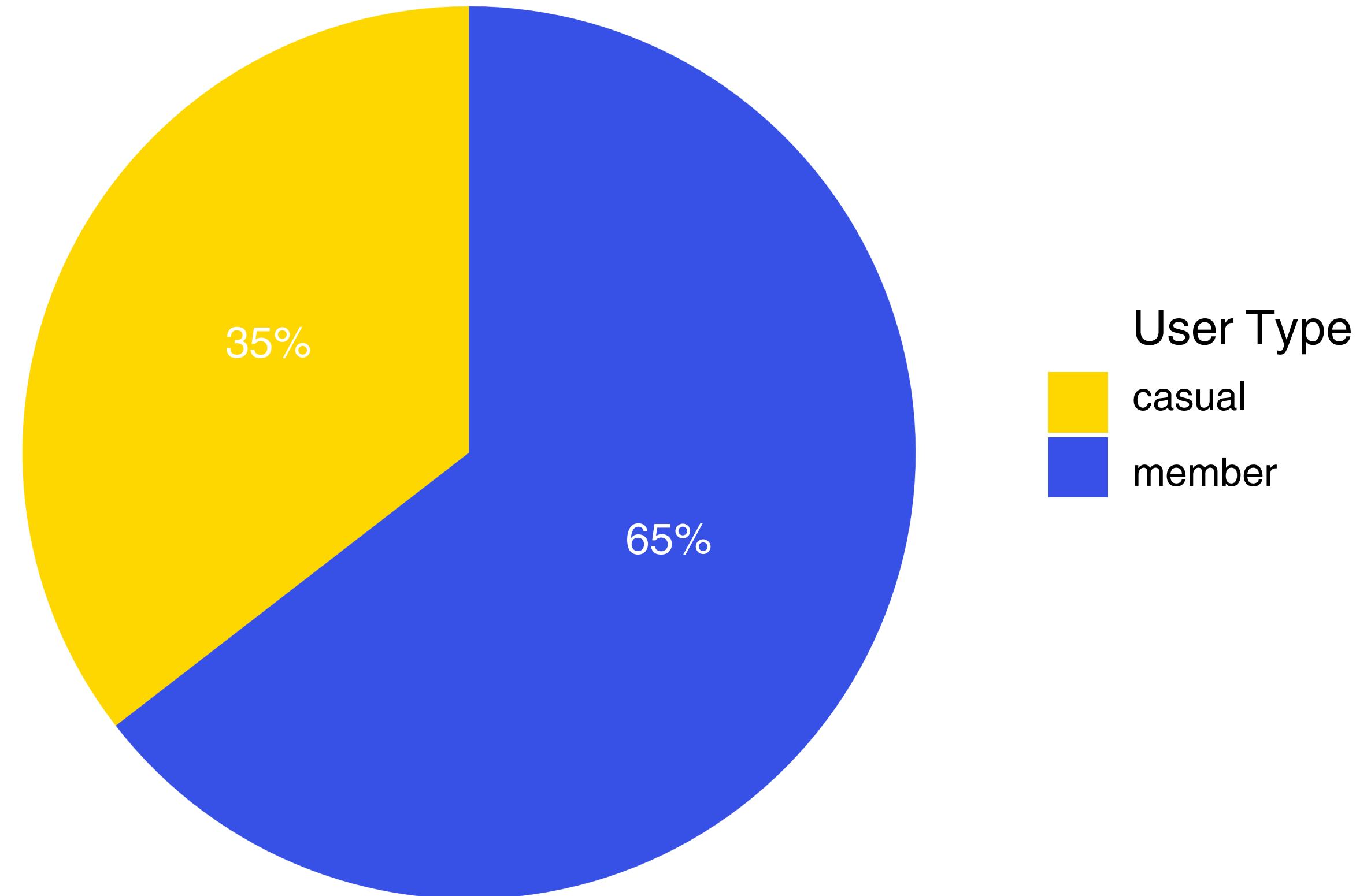


Analysis

I compared casual riders vs annual members by:

- Overall distribution
- Seasonal trends
- Type of bike used
- Weekly activity patterns
- Daily activity patterns
- Ride duration

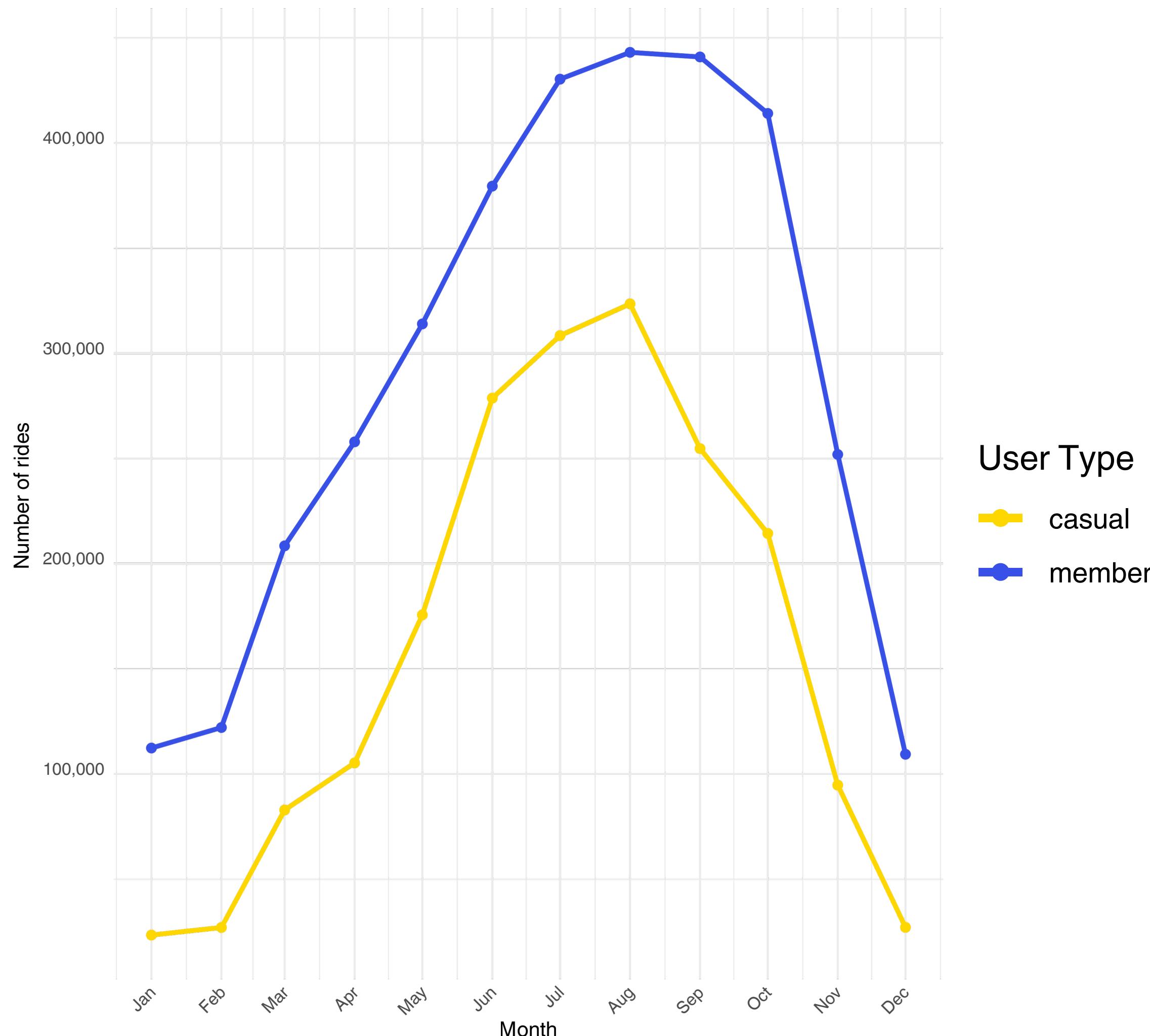
Who uses the bike-sharing service more: members or casual riders?



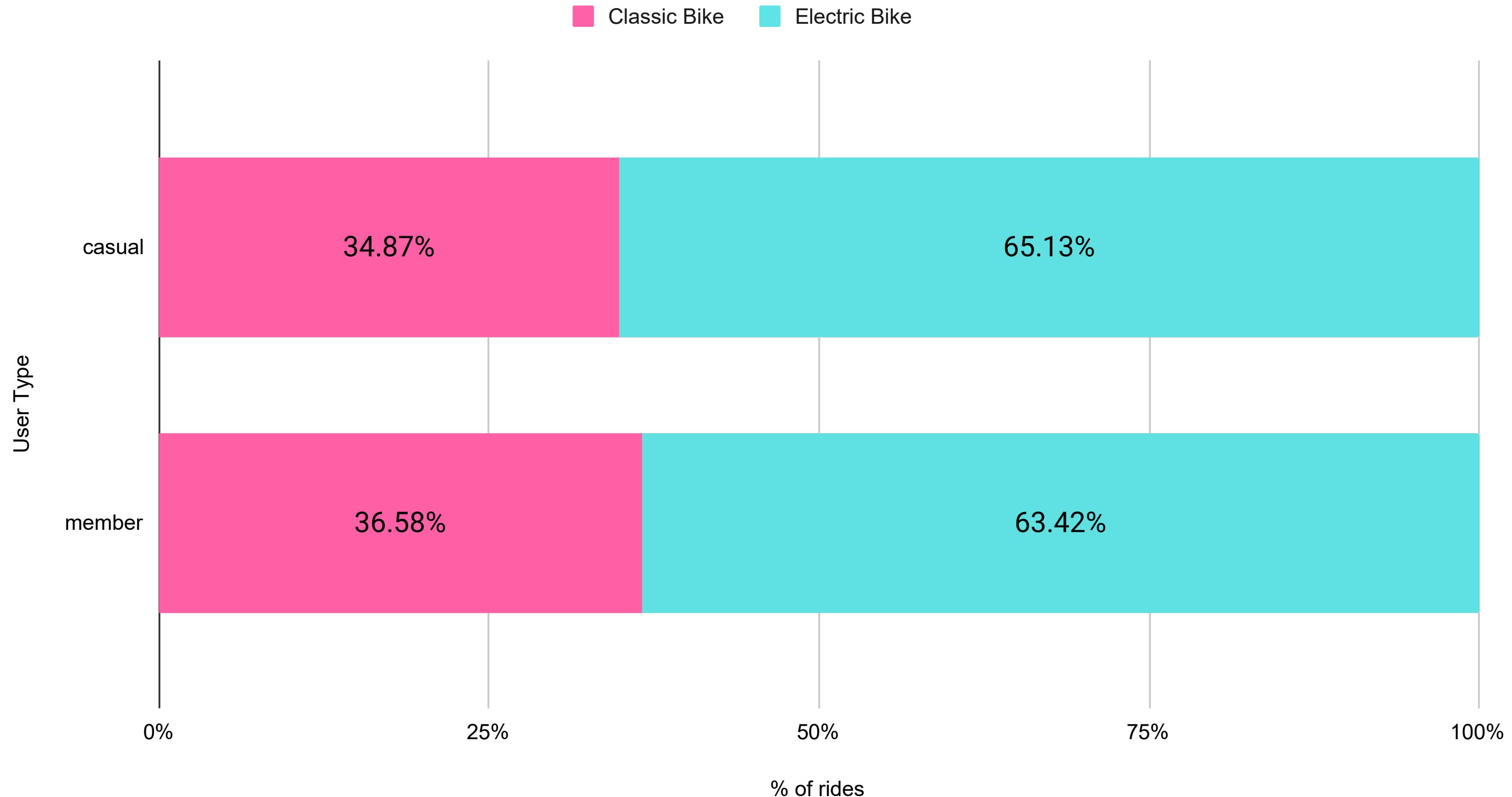
What seasonal trends appear in member vs casual riding?

Casual riders respond heavily to weather conditions, suggesting recreational use, whereas members ride more out of necessity.

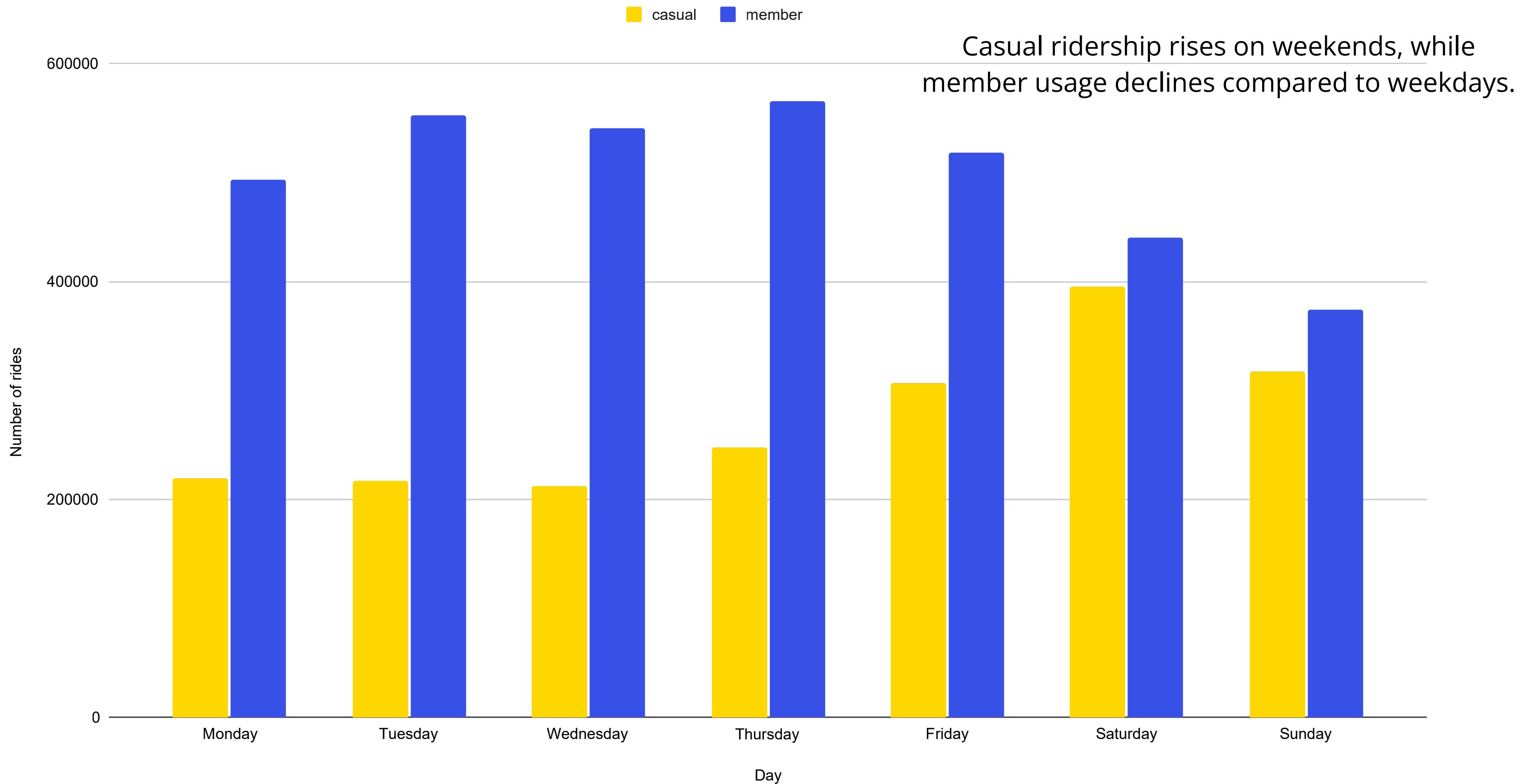
- Casual summer rides: 11.75× winter level
- Member summer rides: 3.64× winter level



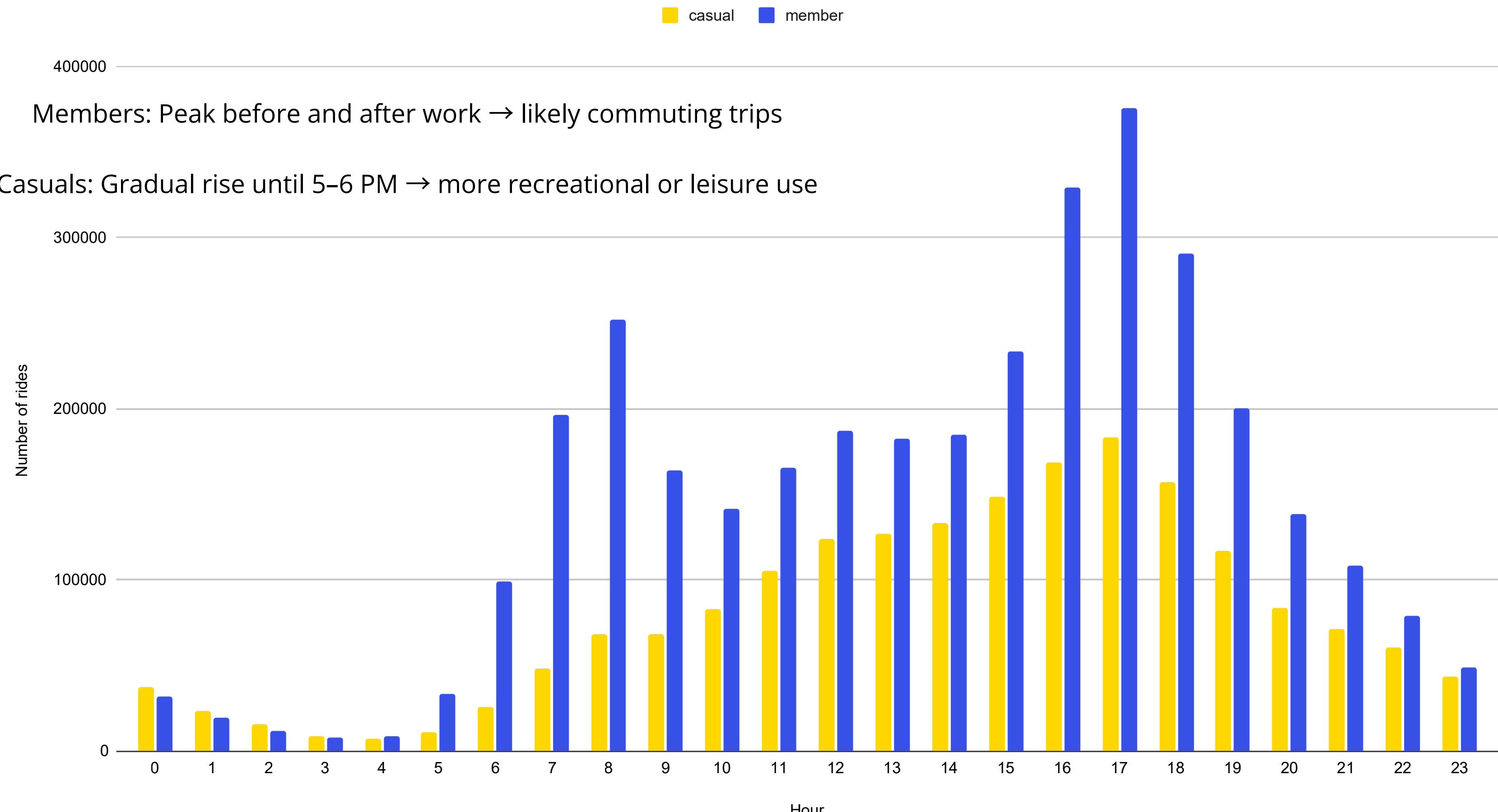
Do Casual and Member Riders Prefer Different Bike Types?



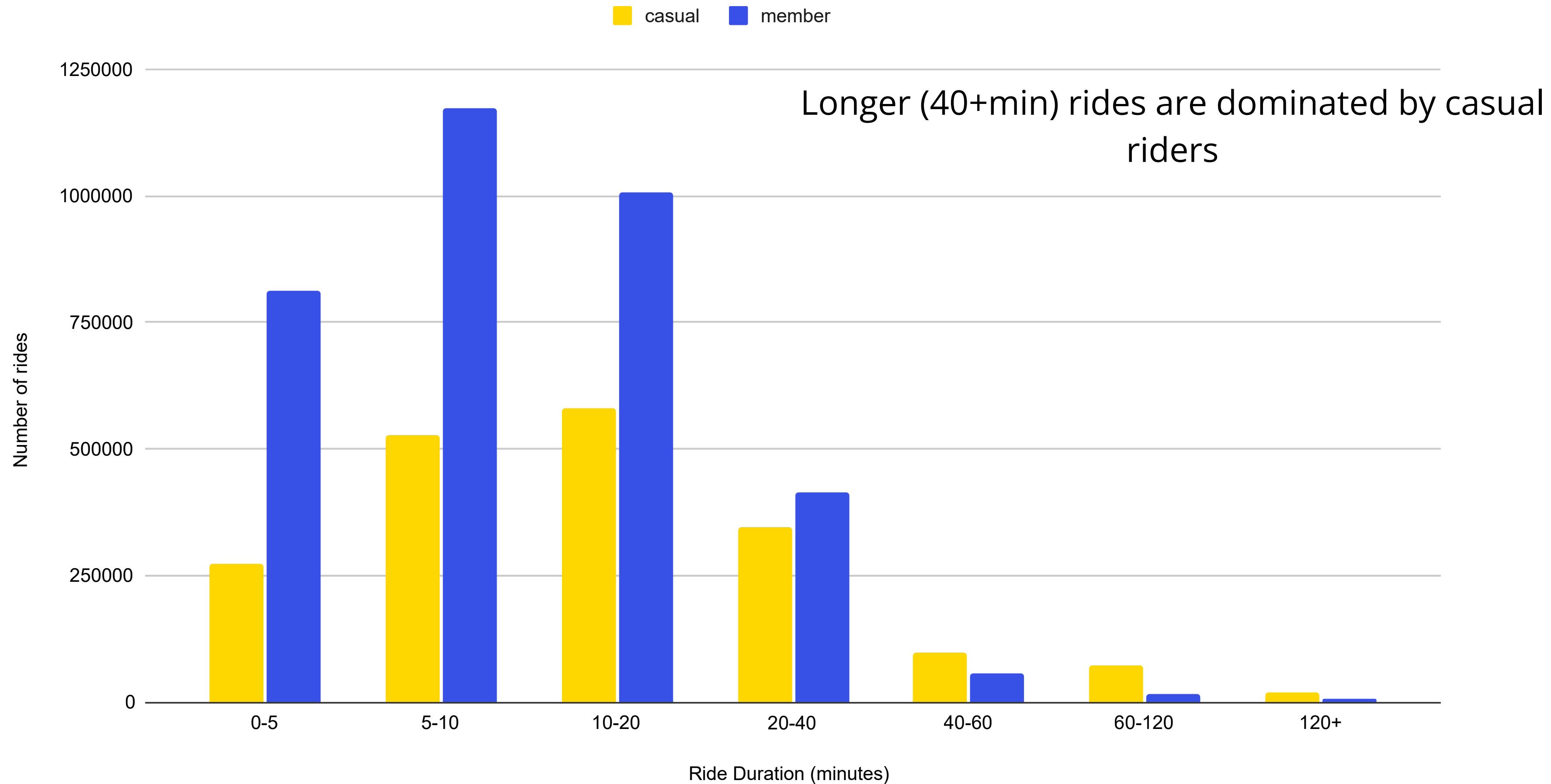
Do members and casual riders use bikes differently across the week?



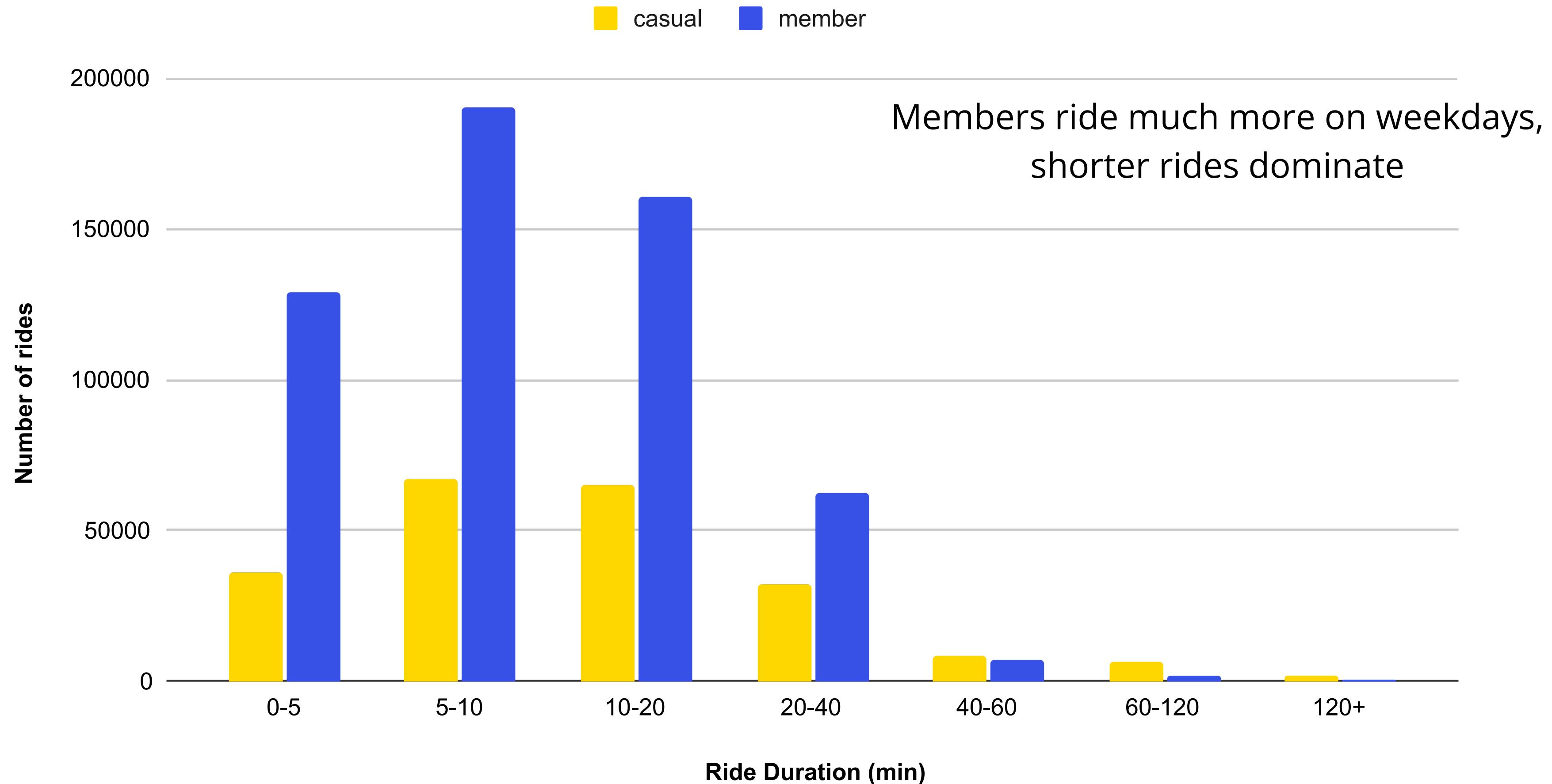
How does bike usage vary throughout the day?



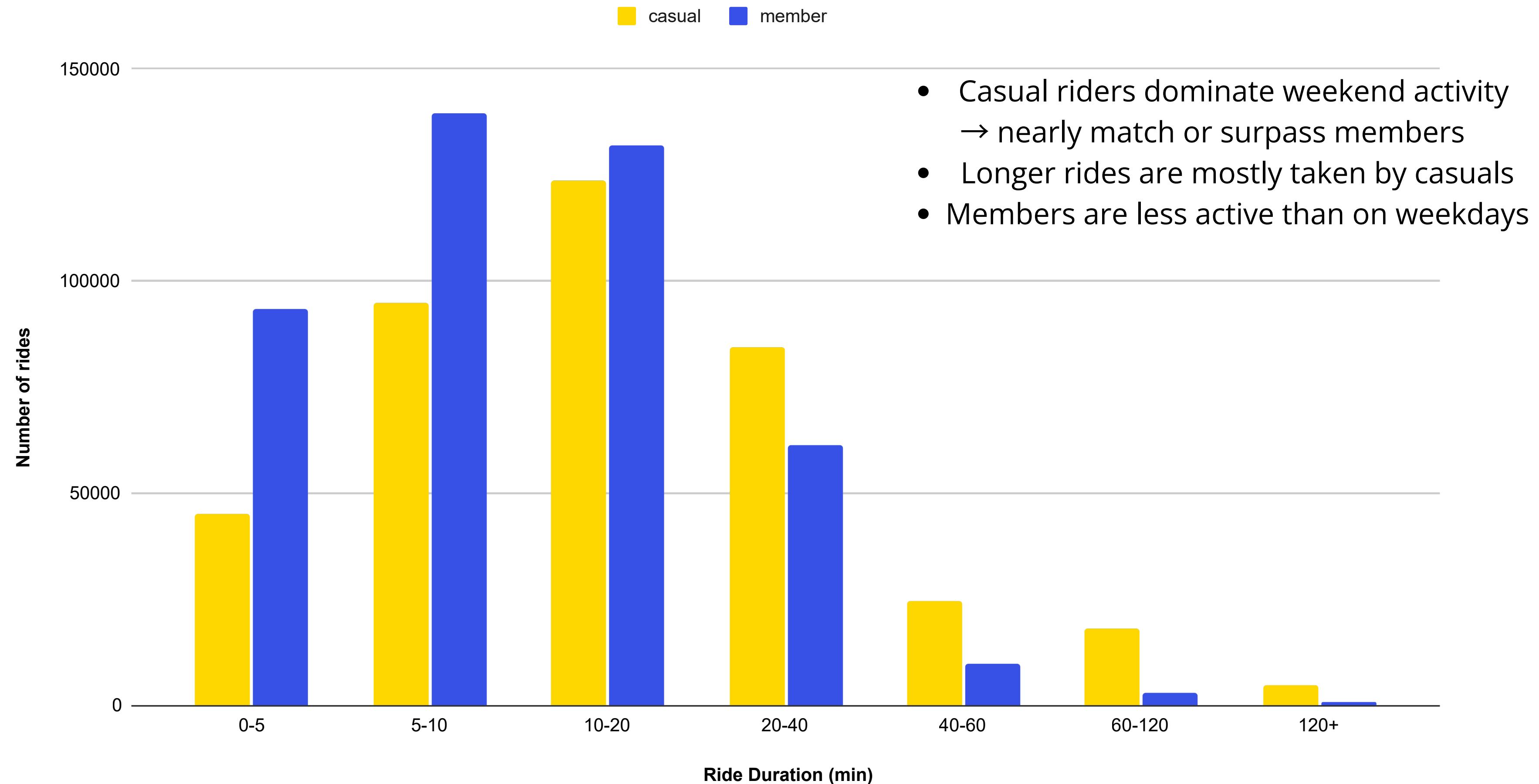
Are casual riders taking longer trips than members?



How long are rides on a typical weekday (Tuesday)?



How long are rides on a typical weekend day (Saturday)?





Summary

Casual Riders:

- Seasonal (much higher activity during summer)
- Prefer e-bikes a bit more than members
- Weekend focused
- Trending towards medium / longer rides (20/40+ min)
- Adventure, Tourism, Bike Trips



Summary

Member Riders:

- More consistent year-round
- A bit higher usage of classic bikes compared to casual riders
- Active mostly during weekdays
- Shorter rides (>20min)
- Mainly use the bikes for commuting and transportation



Recommendations

- Focus marketing on casual riders in the summer, during peak usage

Action:

- Offer discounted annual memberships to encourage sign-ups



Happy Weekend
Have a great day

Recommendations

- Use weekend pricing to encourage casual riders to switch to memberships

Action:

- Introduce higher weekend prices for casual riders, while keeping member pricing unchanged to highlight the value of an annual membership



Recommendations

Leverage strong casual demand for e-bikes to drive revenue and memberships

Actions:

- Introduce premium pricing for casual e-bike rides
- AND / OR
- Offer discounted e-bike access as a member benefit



Documentation

Access the complete analysis:
[On My GitHub](#)

Tools & Technologies:

- R (tidyverse, lubridate, ggplot2, dplyr, skimr, readr)
- RStudio (IDE)
- Excel / Google Sheets
- Canva

Feel free to contact me [on LinkedIn](#)



Thank you for your time!



Here's a reward of cute animals for your attention :)

