# Cyclistic Case Study: Analyzing Rider Behavior to Drive Membership Growth

## A data-driven strategy to convert casual riders into annual members


**Ben Collen 2/7/2025**

# 🔍 Business Task

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

- **Cyclistic’s marketing team wants to convert casual riders into annual members**
- **To support this goal, we need to understand how the two user groups ride differently?**

# 🧹 Prepare

**Data Sources**

- Divvy_Trips_2019_Q1.csv
- Divvy_Trips_2020_Q1.csv

(Both provided by Motivate international inc.)

**Tools Used**

- **R** for data cleaning and analysis (dplyr, ggplot2)
- **GitHub** for version control

**Initial Observations**

- Column names were inconsistent between files
- Ride IDs had mismatched data types (double vs character)

# 🛠️ Process

## Steps Taken

- Renamed columns to match across datasets
- Converted data types for consistency (e.g, ride_id)
- Merged both datasets into single file
- Removed null values and invalid ride durations
- Created new variables:

    ride_length (in minutes)

    da_of_week, month

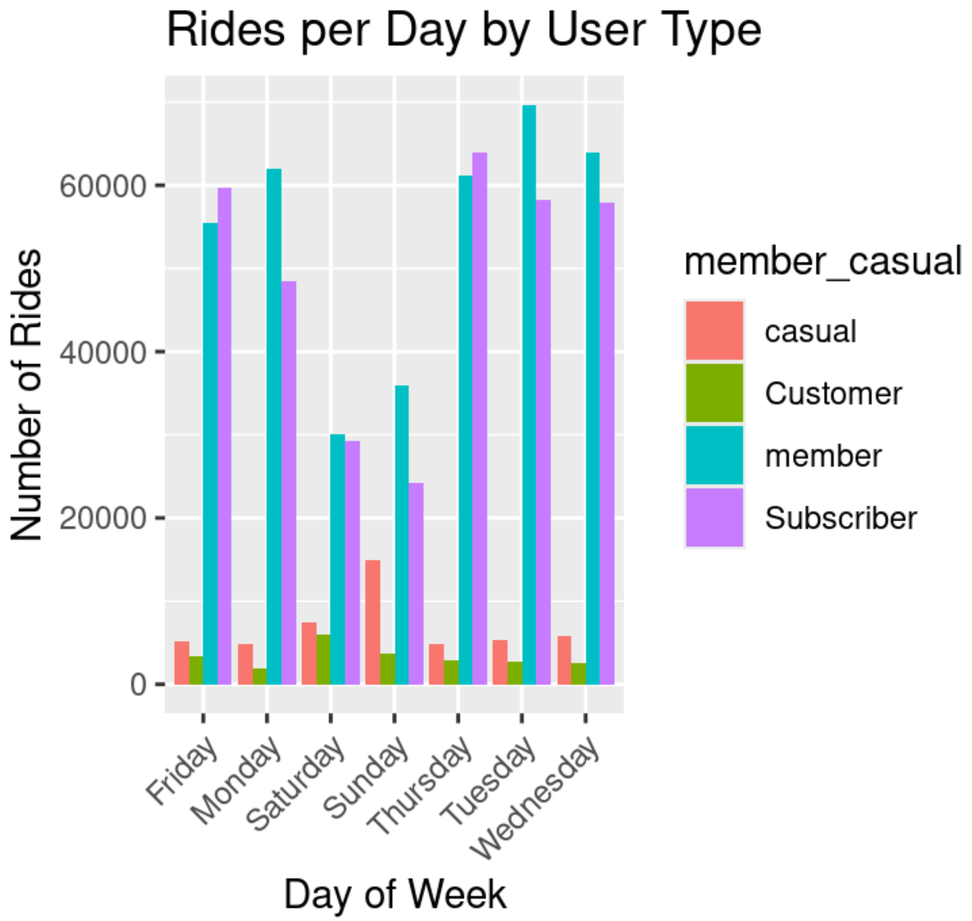
**Final Dataset:**

Over **800,000 rides** analyzed from Q1 2019 and 2020

# 📊 Analyze (chart 1)

## Rides per day of the week by user type

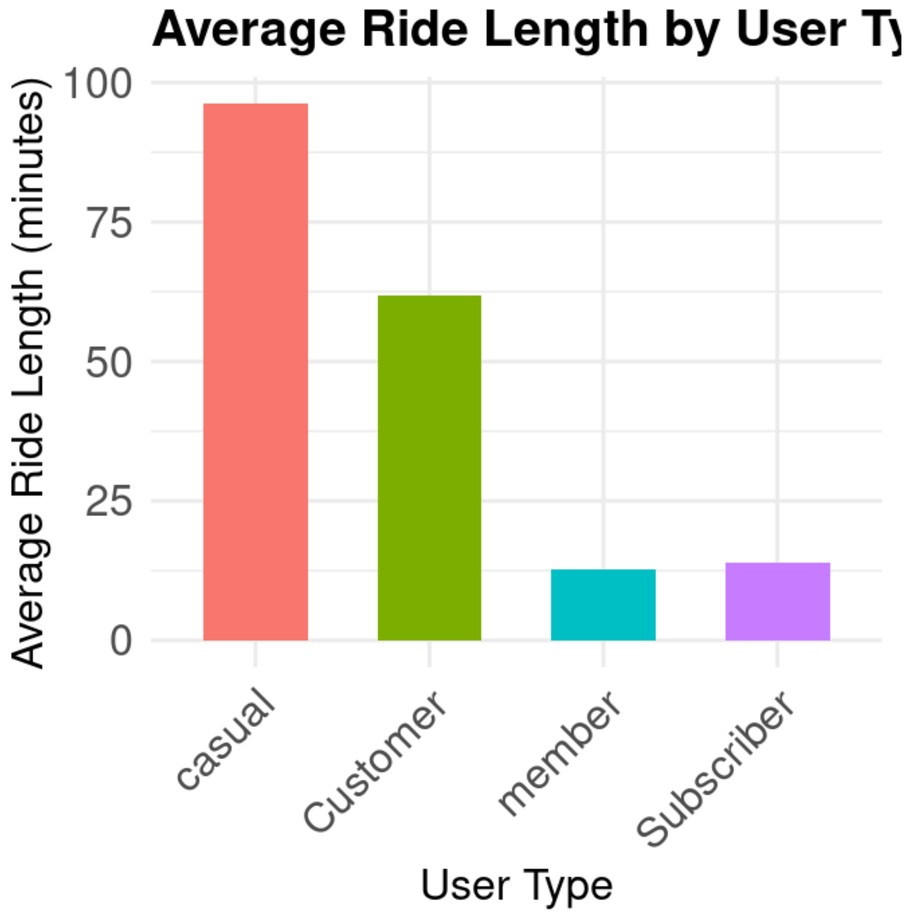
- Members ride more during **weekdays** (suggesting commuting habits)
- Casual riders ride mostly on **weekdays** (likely leisure use)



# 📊 Analyze (Chart 2)

## Average Ride Length by User Type

- Casual riders average **longer rides** than members
- Members ride **more often** but **shorter durations**



# Share

.

**Script + code Repository:**
github.com/irons28/cyclistic_capstone

Analysis Performed In:
RStudio (Posit Cloud)
Clean and reproducible code in a*nalysis.R* file

File format:
Data was saved locally and uploaded to GitHub for transparency and reuse

# Act

## Insights-Based Recommendations:

- **Casual riders** are already using the service in a leisure-focused way (mostly on weekends, longer rides)
- 💡 Target casuals with promotions like:
  - “Weekend Warior Membership”
  - “Ride More, Pay Less” loyalty deals
- 📆 Use seasonal ads for spring/summer weekend riders
- 📈 Show cost savings of becoming a member after 3-4 rides/month
- 🎯 **Goal:** Convert high-frequency casual riders into annual members

# Thank You

Ben Collen

Aspiring Data Analyst | SQL - Python - R - Tableau

GitHub | Linkedin