

# Cyclistic Case Study



Google Data Analytics  
Capstone Project  
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# Our Problem:

Look how do annual members and casual riders use Cyclistic bikes differently?

# Key Task:

Convert casual riders into annual membership riders.

# About the company:

In 2016, **Cyclistic** launched a successful bike-share offering. Since then, the program has grown to a fleet of 5,824 bicycles that are geotracked and locked into a network of 692 stations across Chicago. The bikes can be unlocked and returned to any station in the system anytime.

The company offers the following pricing plans: single-ride passes, full-day passes, and annual memberships. Customers who purchase single-ride or full-day passes are referred to as **Casual Riders**. Customers who purchase annual memberships are **Cyclistic Members**.

Cyclistic's finance analysts have concluded that annual members are much more profitable than casual riders.

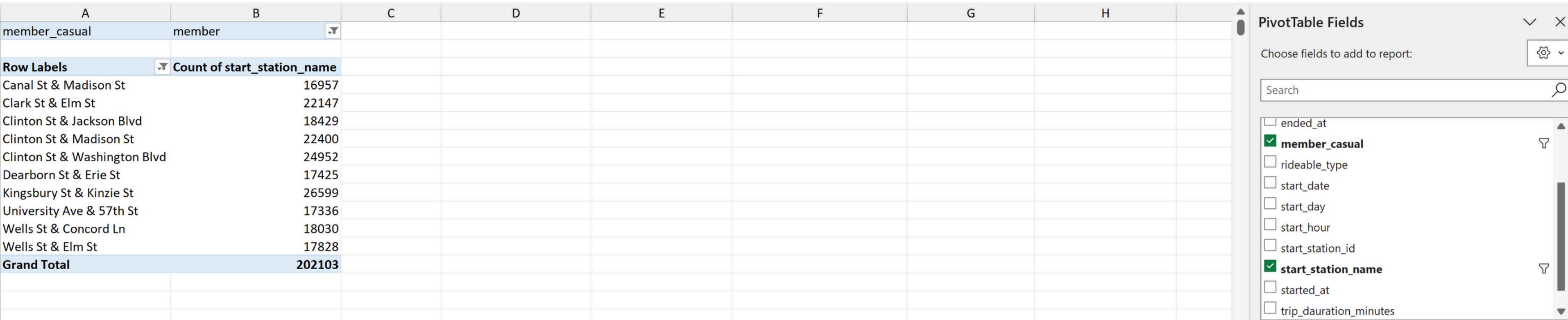
# Our Data:

The data has been made available by Motivate International Inc. under Data License Agreement and provided by The City of Chicago and DiVVY.

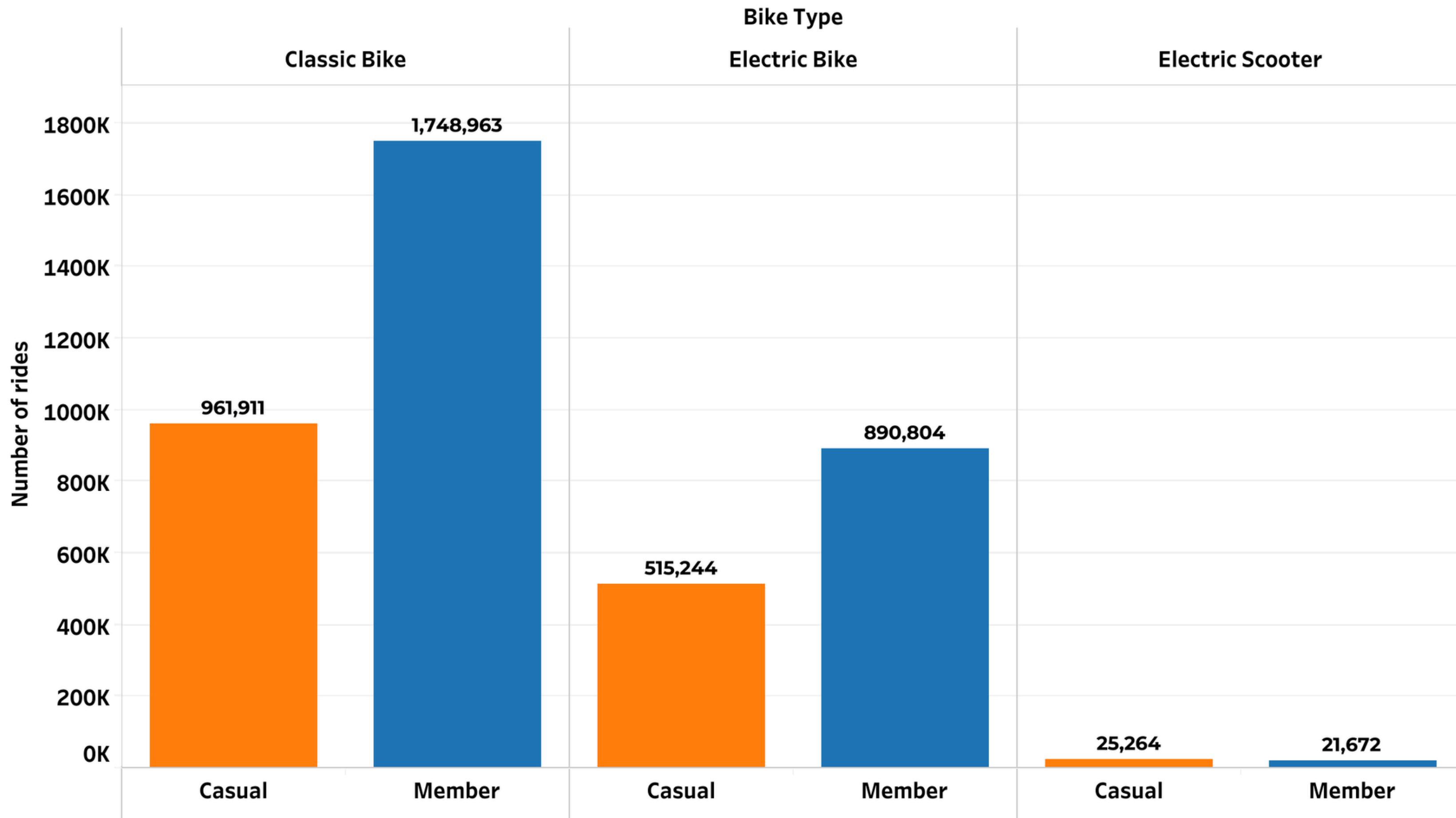
Contains trip-data of Cyclistic users from 01/01/2024 to 01/31/2024.

# The Process:

The data was cleaned, transformed and analyzed using **Excel + Power Query**. Nulls and data with errors were removed. Insights were obtained by **Pivot tables** in Excel. Graphs and maps were made using **Tableau**.

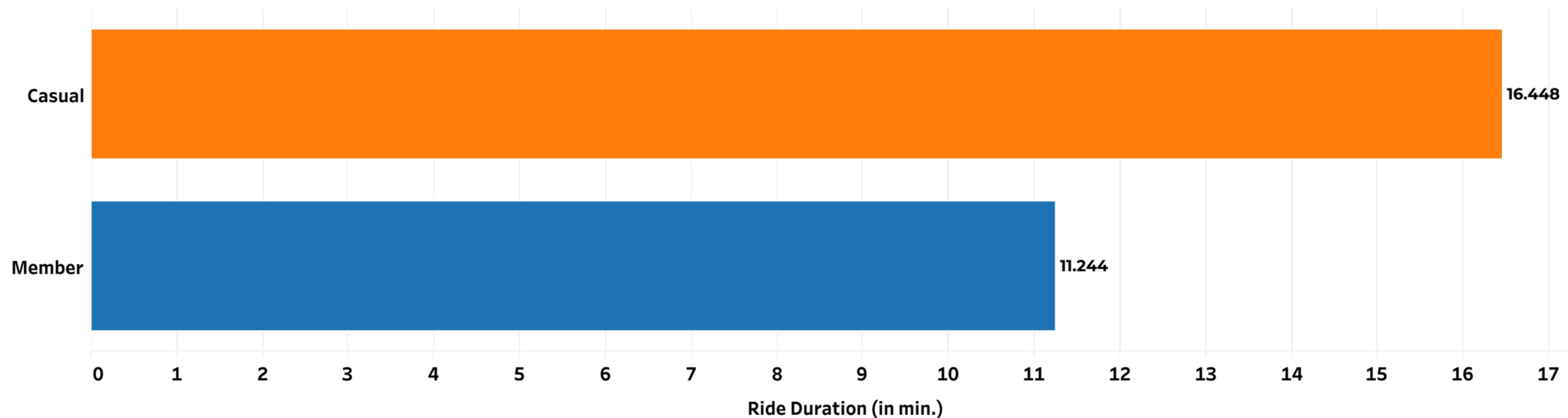


## Bike preferences: Casual Riders vs. Members



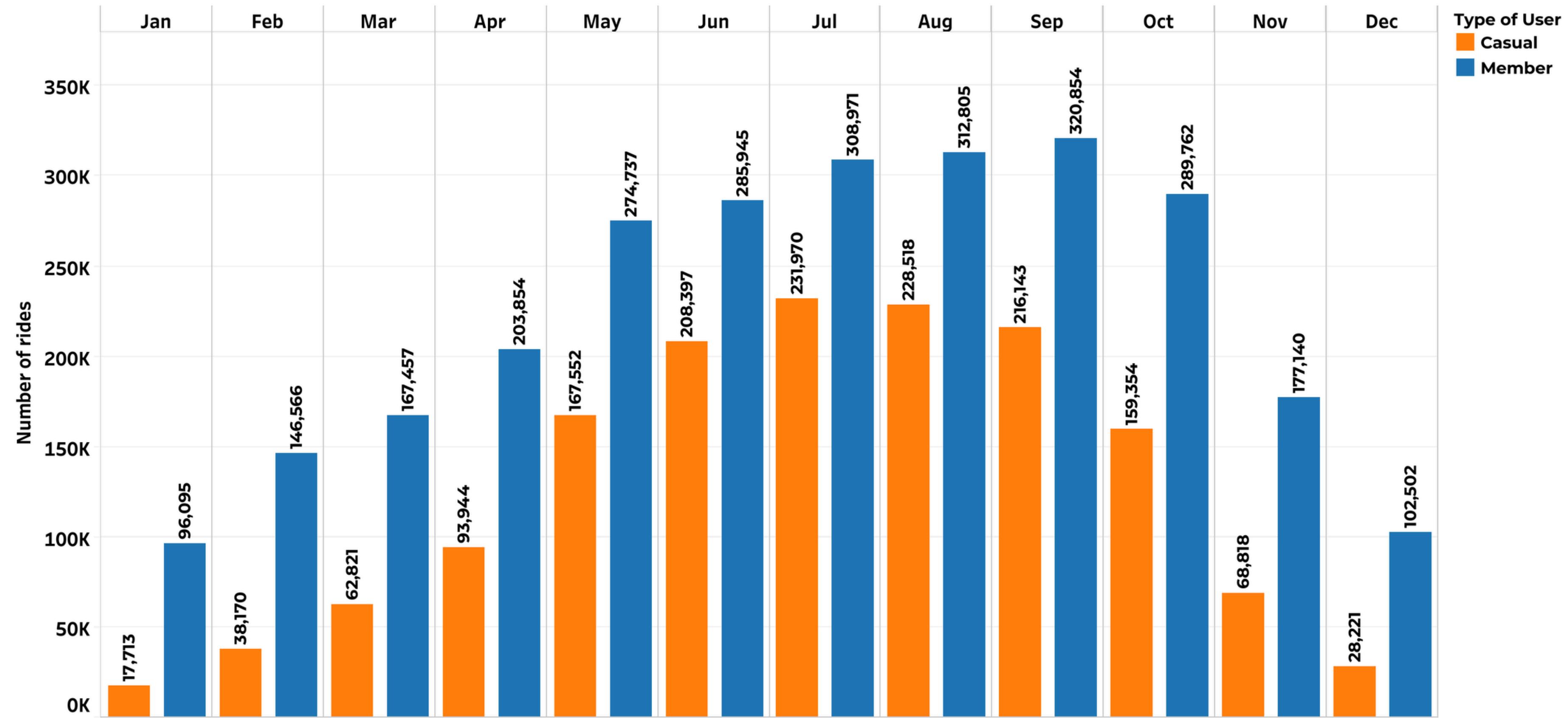
Both user types show a preference for classic bikes, whereas scooters had the lowest usage. Additionally, in 2024, **Members** made more trips than **Casual Riders** at Cyclistic.

## Average ride duration: Casual Riders vs. Members



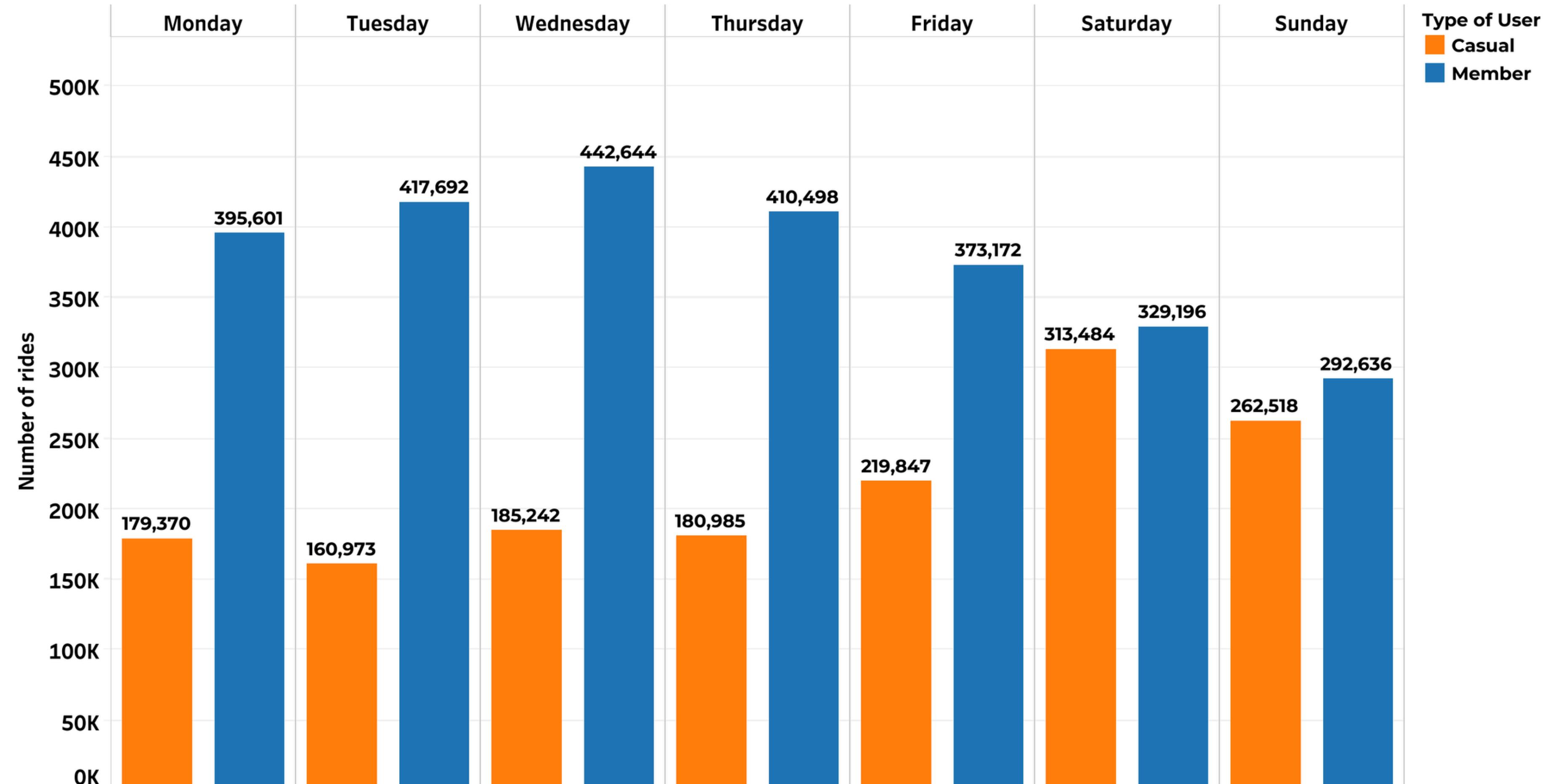
As shown here **Members** spend less time on travel on average than **Casual Riders**, and this difference is considerable.

## Number of rides depending on the month of the year: Casual Riders vs. Members



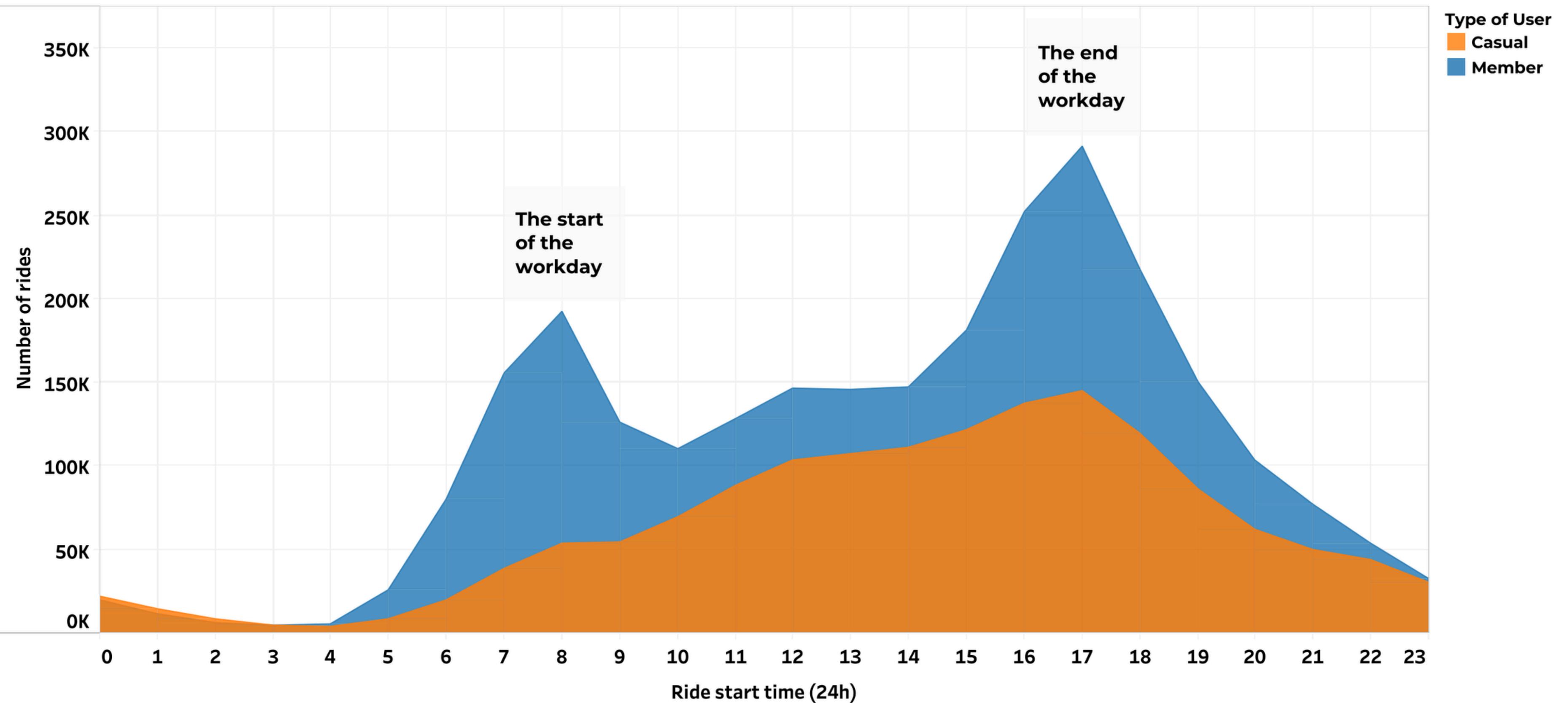
**Casual Riders** rode mostly in warmer months and rarely in winter, while **Members'** winter trips declined less sharply.

# Number of rides depending on the day of the week: Casual Riders vs. Members



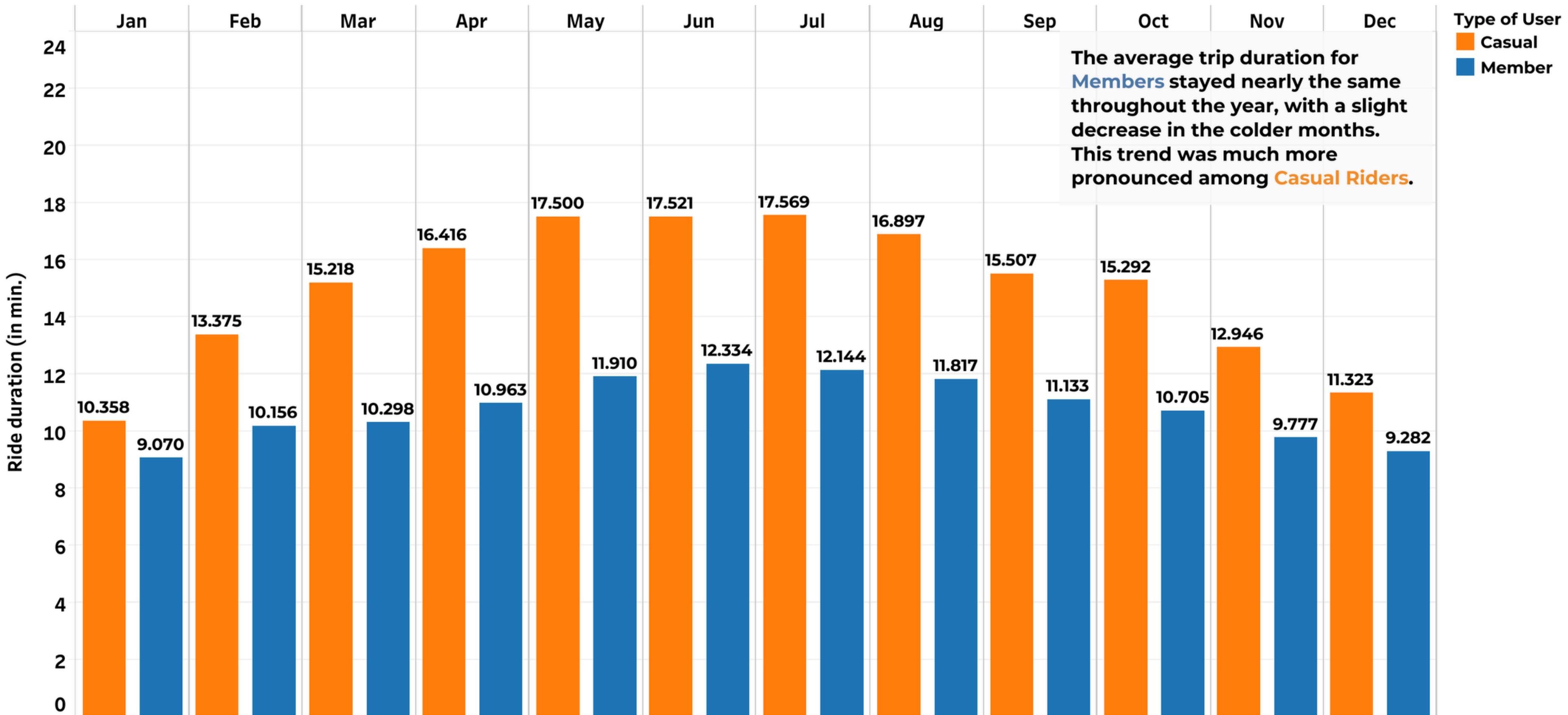
Members rode more often on weekdays, while Casual Riders preferred weekends, with Members activity dropping on weekends.

## Number of rides depending on the hour of the day: Casual Riders vs. Members

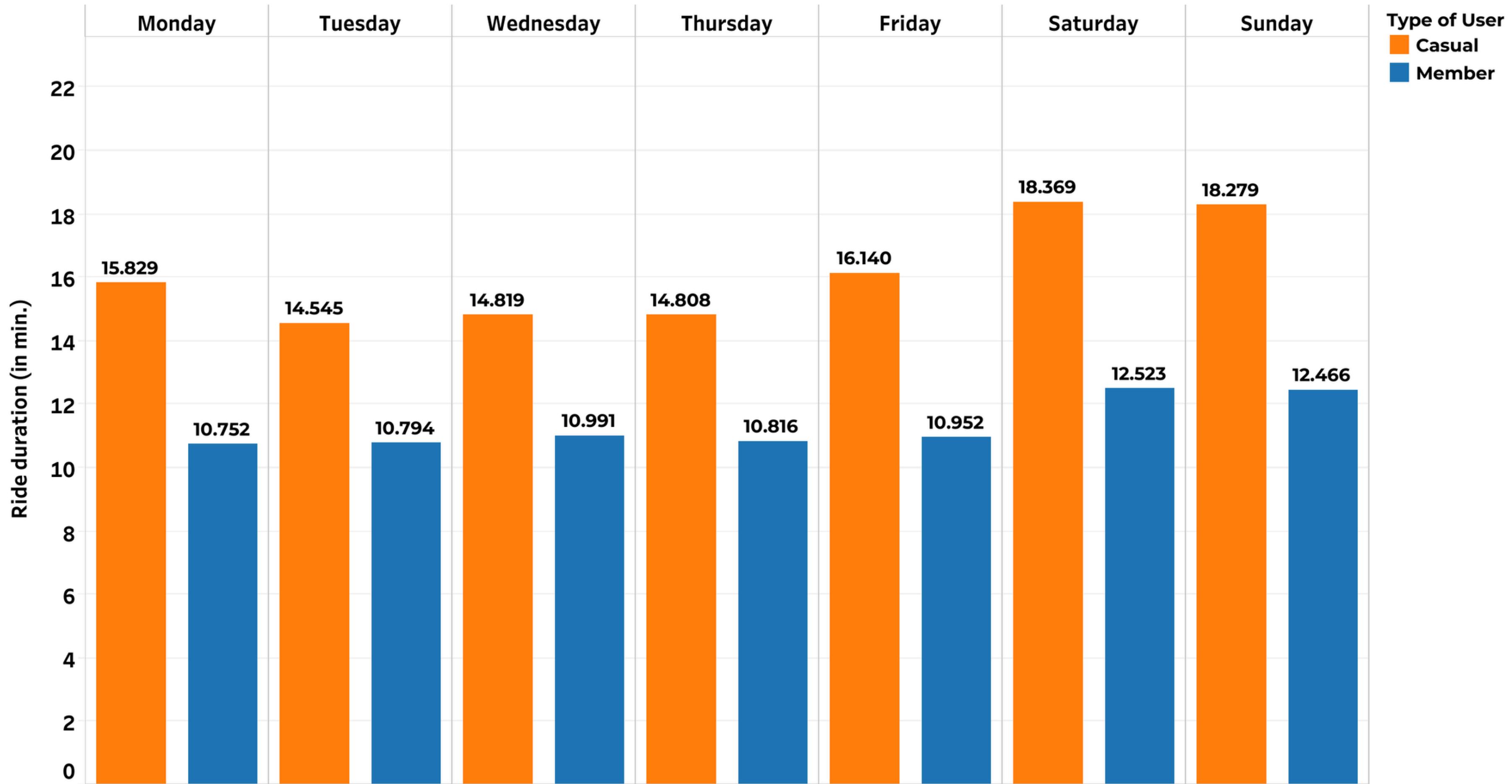


Members make the most trips at the beginning and end of the working day, while Casual Riders prefer to ride in the evening.

## Average ride duration depending on the month of the year: Casual Riders vs. Members

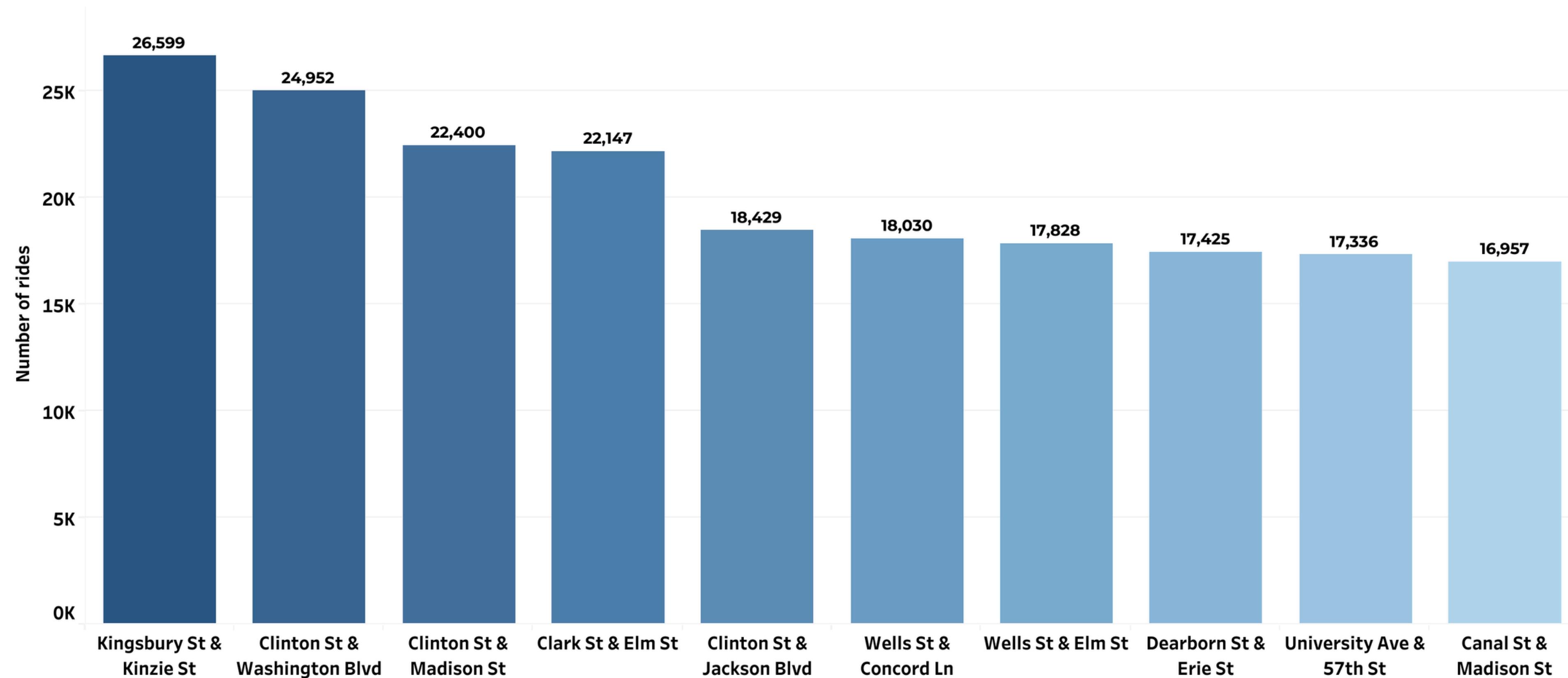


## Average ride duration depending on the day of the week: Casual Riders vs. Members



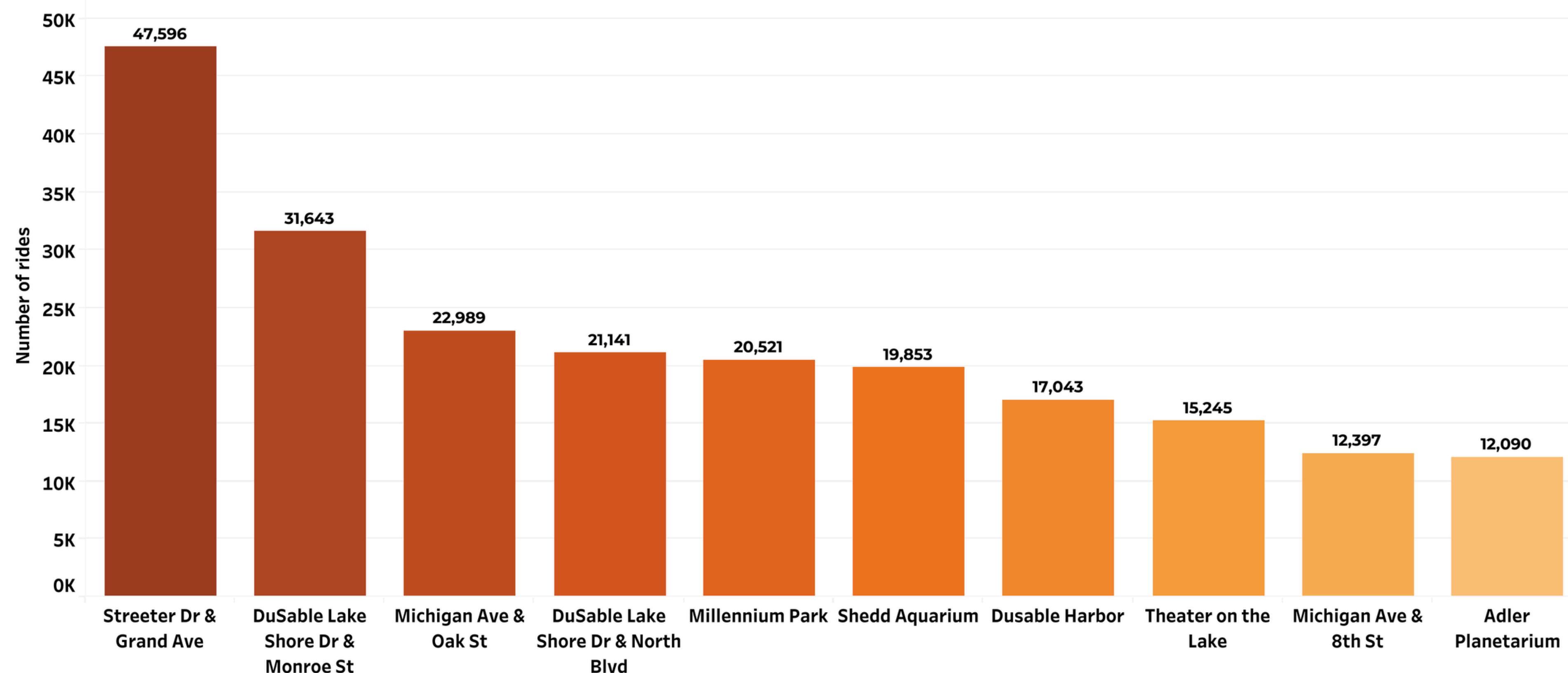
Members' average trip duration stays consistent (~11 min), rising slightly on weekends (~12.5 min). Casual Riders, however, see a significant increase on weekends (~15 min on weekdays versus ~18 min on weekends).

## Top 10 starting stations: Members



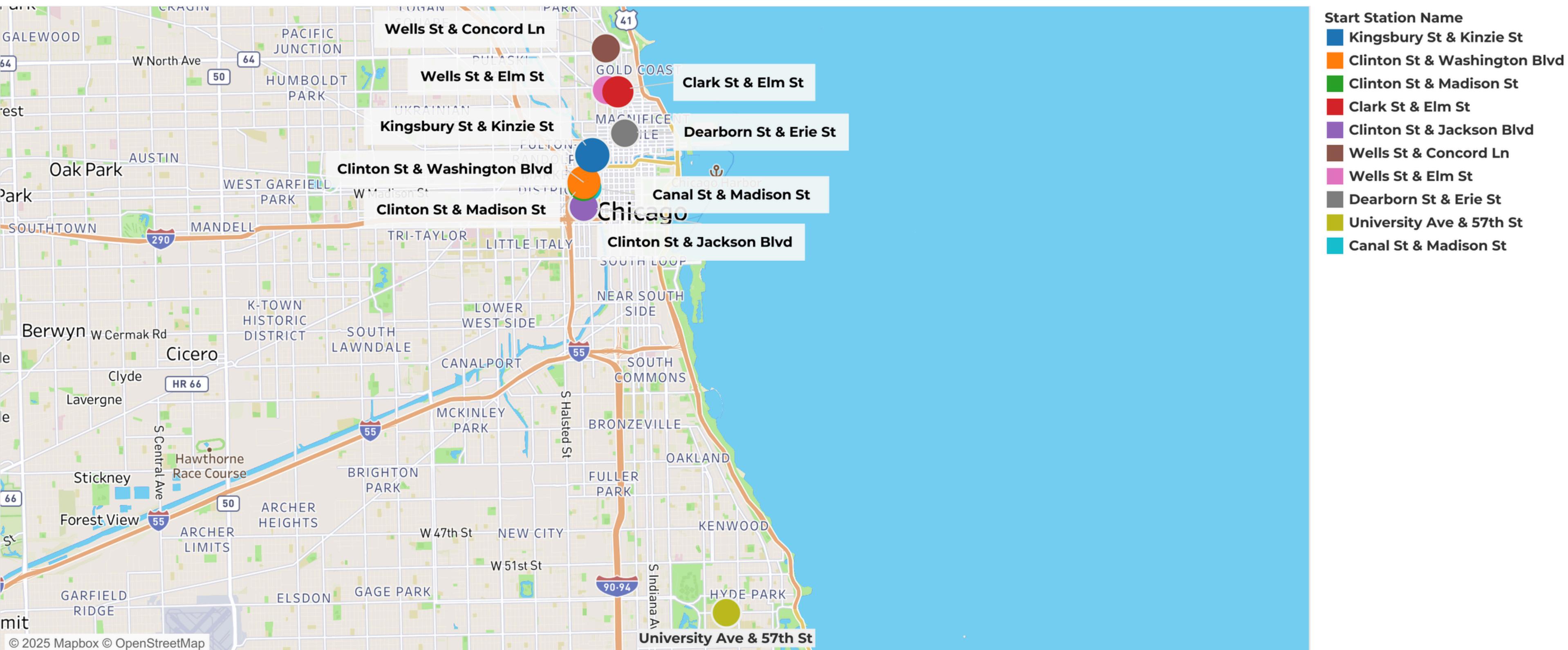
The graph displays the top 10 starting stations most frequently used by [Members](#). The *Kingsbury St & Kinzie St* station is surrounded by a large number of office and commercial buildings.

## Top 10 starting stations: Casual Riders



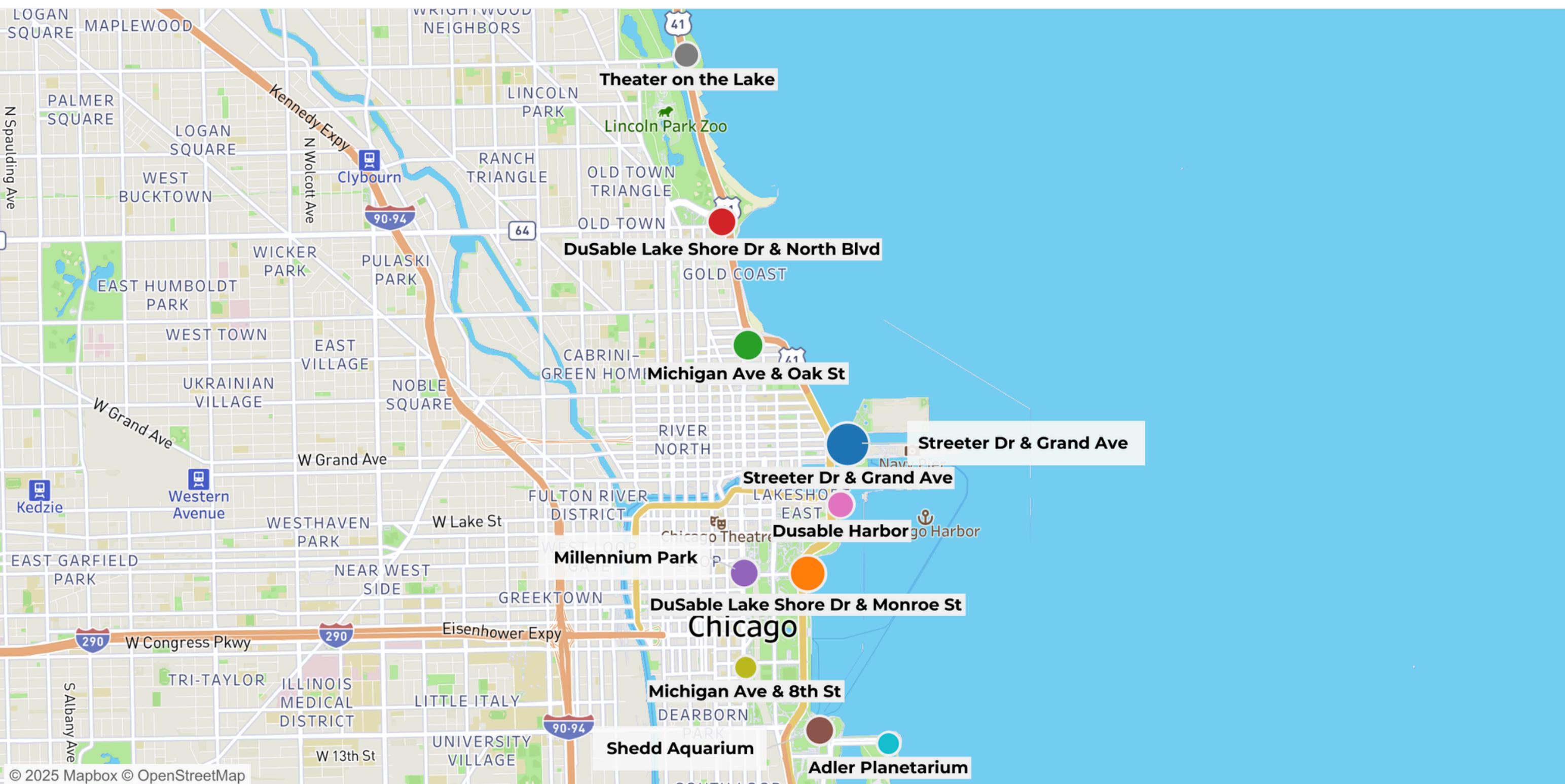
This chart shows the top 10 stations where **Casual Riders** most frequently start their trips. The station at **Streeter Dr & Grand Ave** was used much more frequently than others, with the surrounding area being one of the most touristic in the city.

## Top 10 starting stations on the map of Chicago: Members



This map displays the top 10 starting stations most frequently used by Members in Chicago, with circle size representing route frequency. \* Some stations are positioned closely together, making them harder to distinguish.

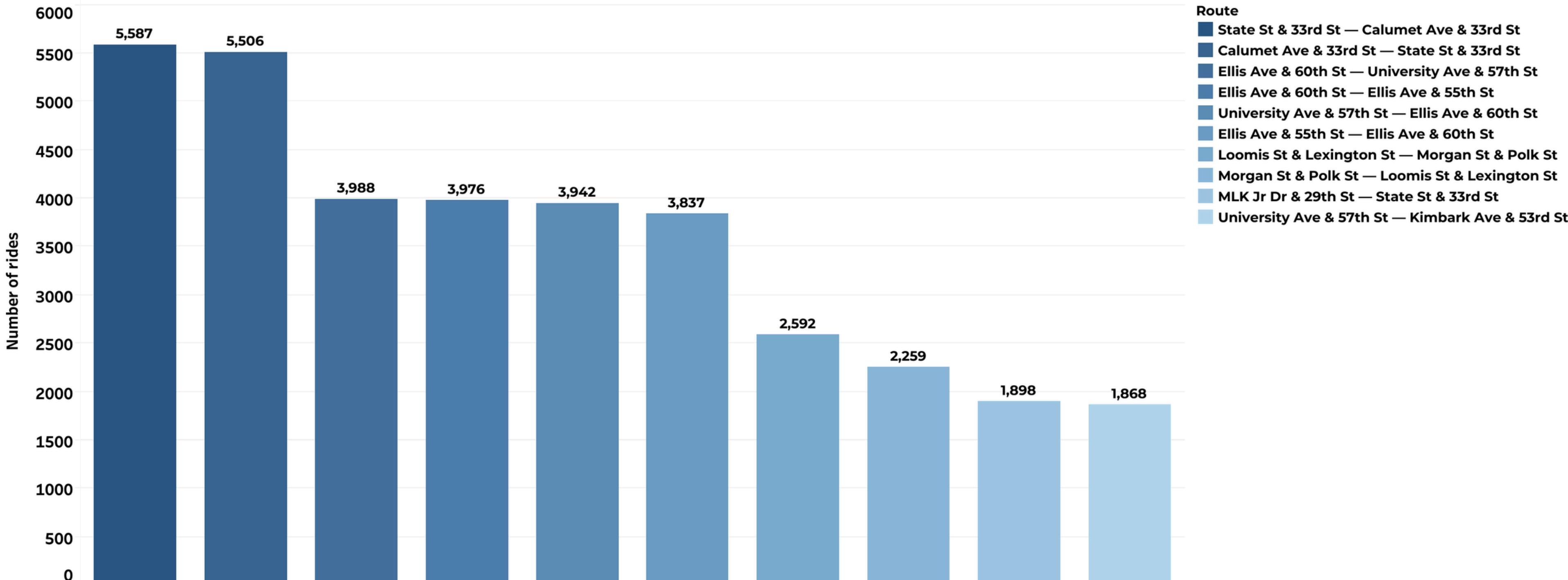
## Top 10 starting stations on the map of Chicago: Casual Riders



Start Station Name
Streeter Dr & Grand Ave
Dusable Lake Shore Dr & Monroe St
Michigan Ave & Oak St
Dusable Lake Shore Dr & North Blvd
Millennium Park
Shedd Aquarium
Dusable Harbor
Theater on the Lake
Michigan Ave & 8th St
Adler Planetarium

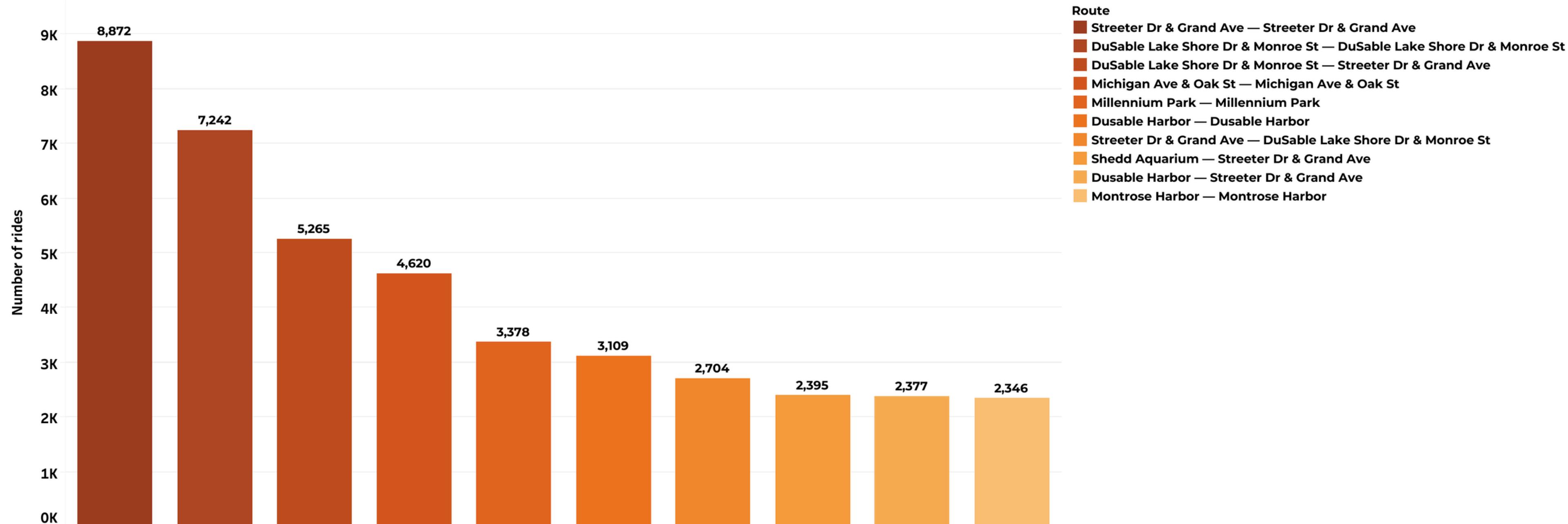
This map displays the top 10 starting stations most frequently used by **Casual Riders** in Chicago, with circle size representing route frequency.

## Top 10 most traveled routes: Members



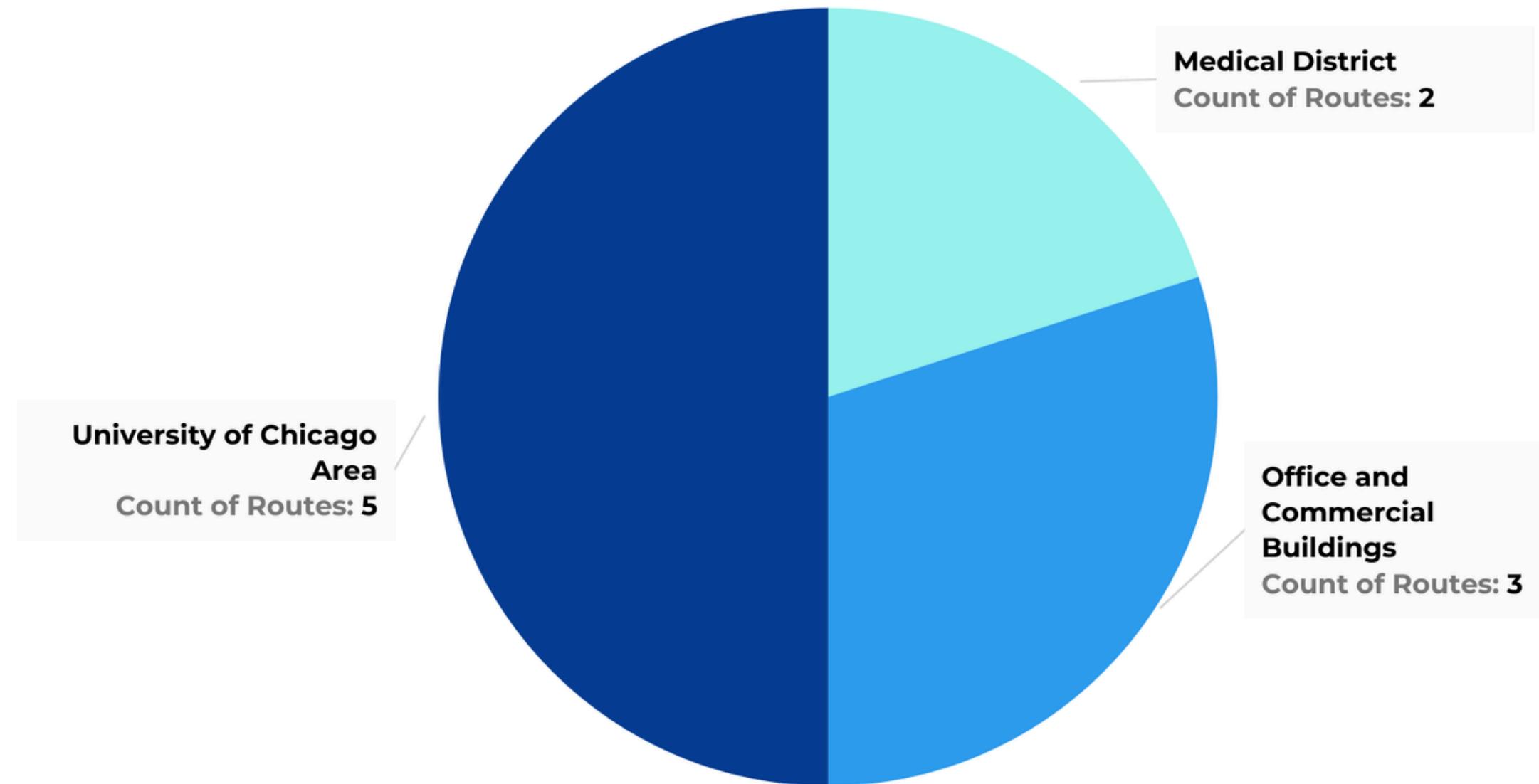
The graph shows the top 10 routes, mostly passing through office and educational areas, with many stations appearing as both start and end points.

## Top 10 most traveled routes: Casual Riders



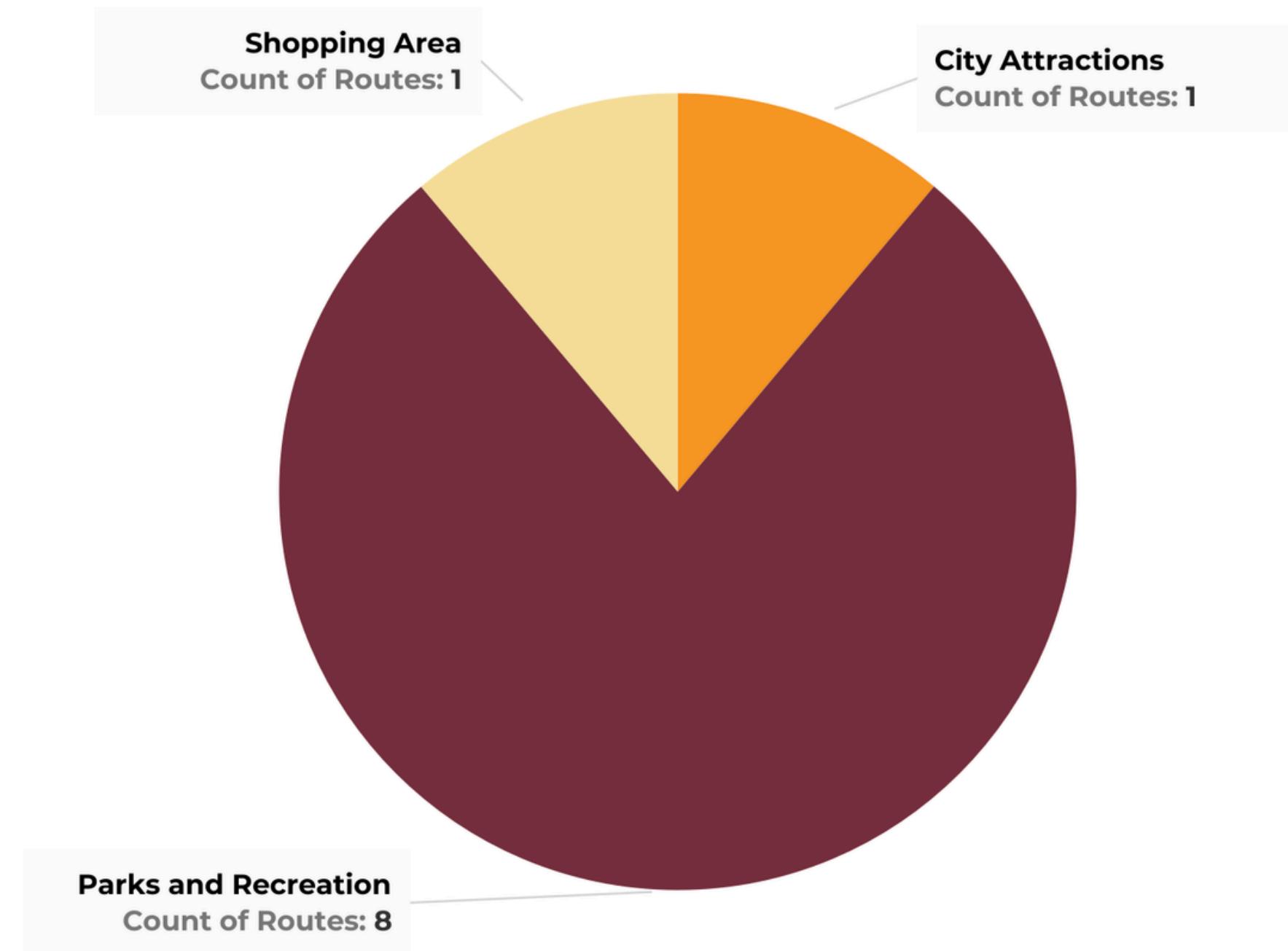
The graph shows the top 10 routes, mainly through tourist and entertainment areas, with many stations serving as both start and destination points.

## Distribution of the Top 10 bike routes by nearby areas: Members



The top 10 routes were analyzed, specifically focusing on the areas they pass through. Members' top 10 routes were primarily connected to educational and working areas.

## Distribution of the Top 10 bike routes by nearby areas: Casual Riders



The top 10 routes of **Casual Riders** were located near tourist and entertainment areas, such as Chicago Harbor, parks, and other attractions.

# Insights:

- On average, **Casual Riders'** trips lasted around 15 minutes. They preferred riding in the summer months, on weekends, in the afternoon and evening, mainly in tourist and recreational areas.
- **Members'** rides were about 5 minutes shorter on average. They mostly rode in warm weather at the beginning and end of the workday on weekdays, in areas dominated by offices and educational institutions.
- Both types of users preferred classic bicycles, largely ignoring electric scooters.

# Proposals:

- I. Expand user insights** – collect more data (e.g., gender, age, profession, place of study) to uncover trends and refine promotional strategies.
- 2. Tourism partnerships** – collaborate with popular tourist and recreational spots in the Chicago Harbor area to promote biking as a preferred way to reach these destinations.
- 3. Corporate & educational programs** – partner with companies and educational institutions to encourage bike commuting, ensuring bike availability during peak hours.

# Proposals:

4. **Seasonal incentives** – encourage ridership in summer, on weekends, and in the evenings by offering discounts for annual members.
5. **Targeted marketing** – use personalized email campaigns and in-app promotions to showcase annual subscription benefits, emphasizing cost savings, convenience, and exclusive perks. Focus marketing on high-traffic areas and peak months.
6. **Hypothesis:** Casual Riders likely ride with family and children on weekends — consider adding family-friendly plans and bikes.

Data Source:

DiVVY Trip Data