

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.

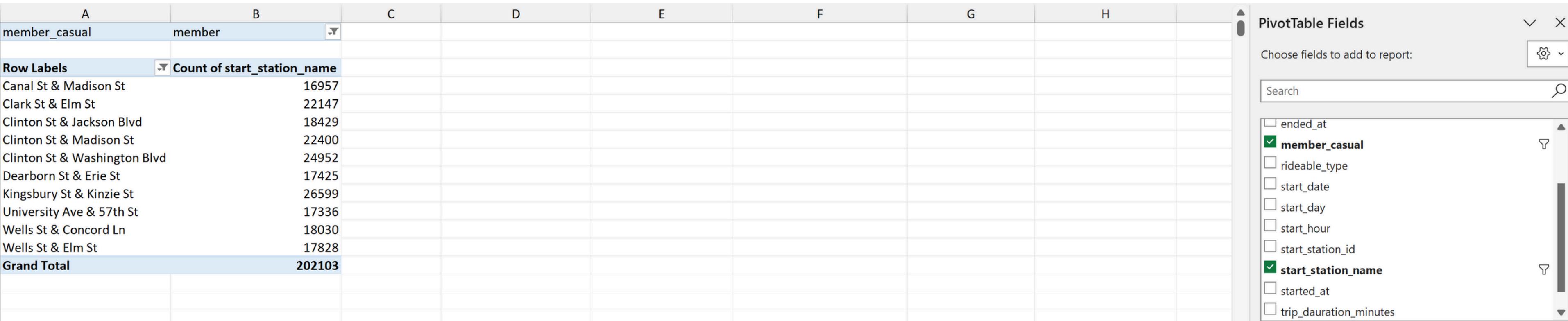
Our Data:

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

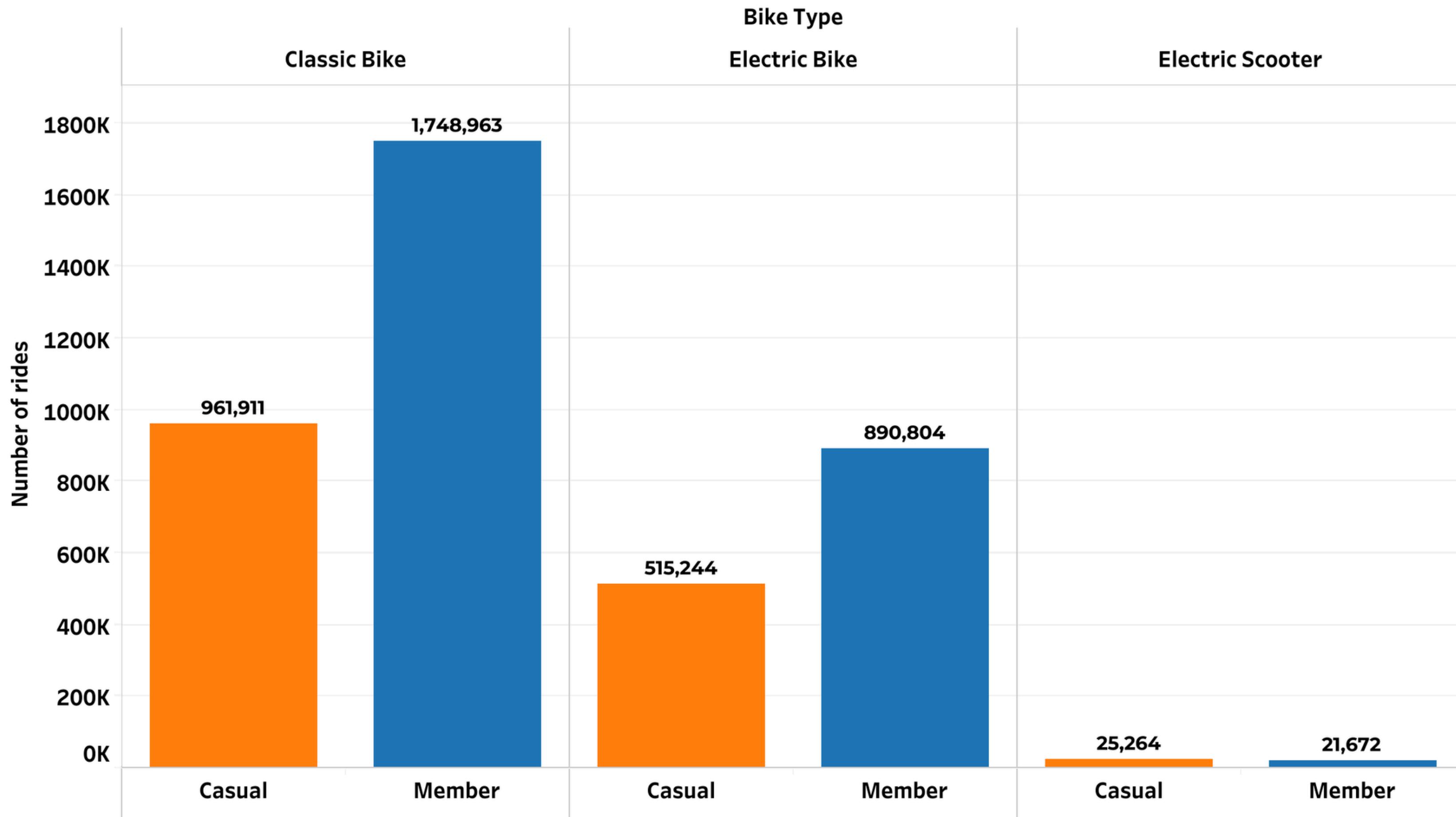
Contains trip-data of Cyclistic users from 01/01/2024 to 01/31/2024.

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**.

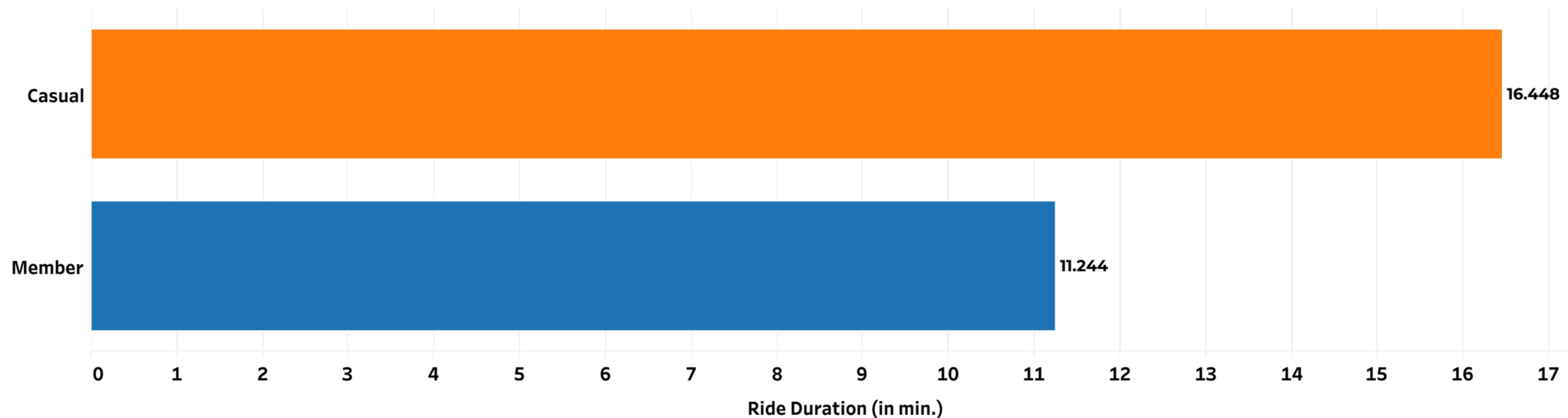


Bike preferences: Casual Riders vs. Members



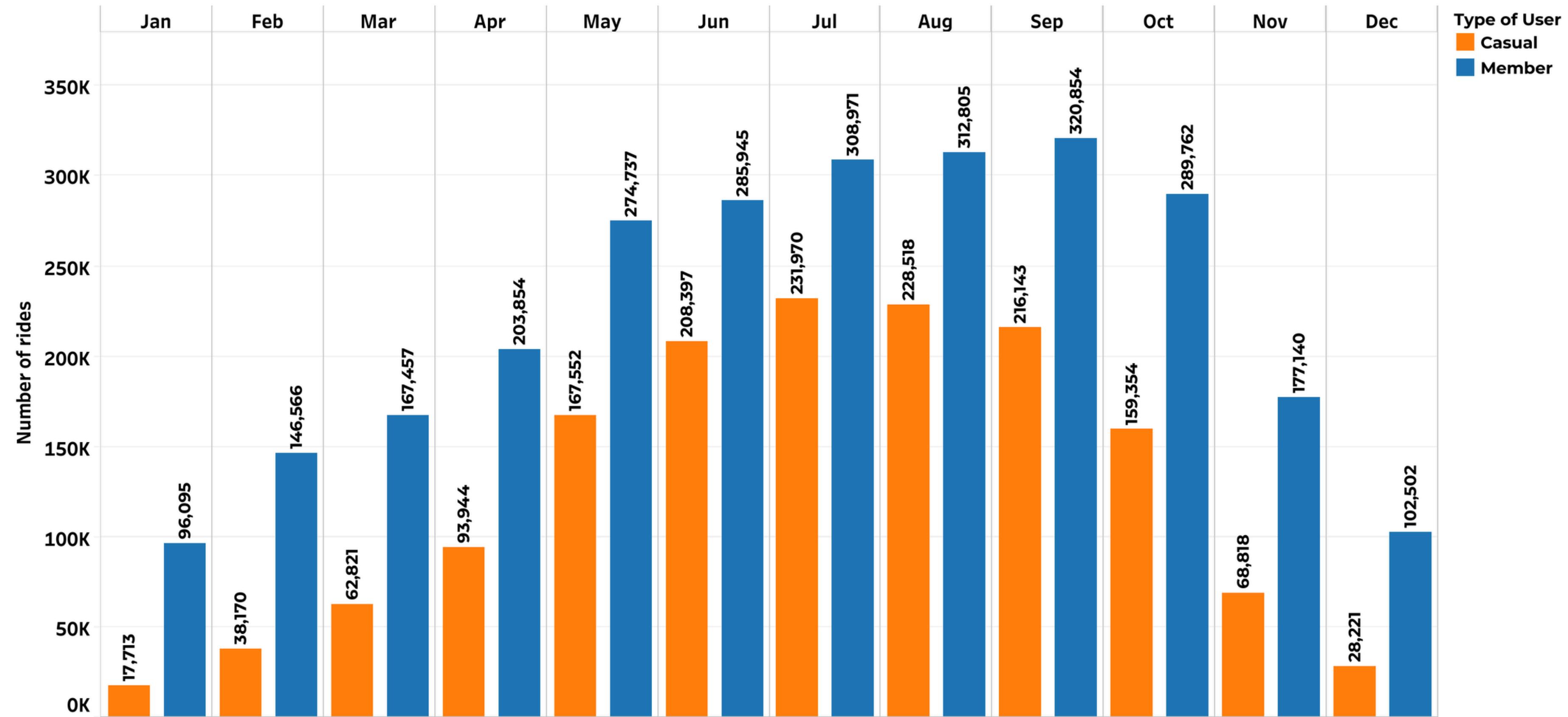
Both user types show a preference for classic bikes, whereas scooters had the lowest usage. Additionally, in 2024, **Members** made more trips than **Casual Riders** at Cyclistic.

Average ride duration: Casual Riders vs. Members



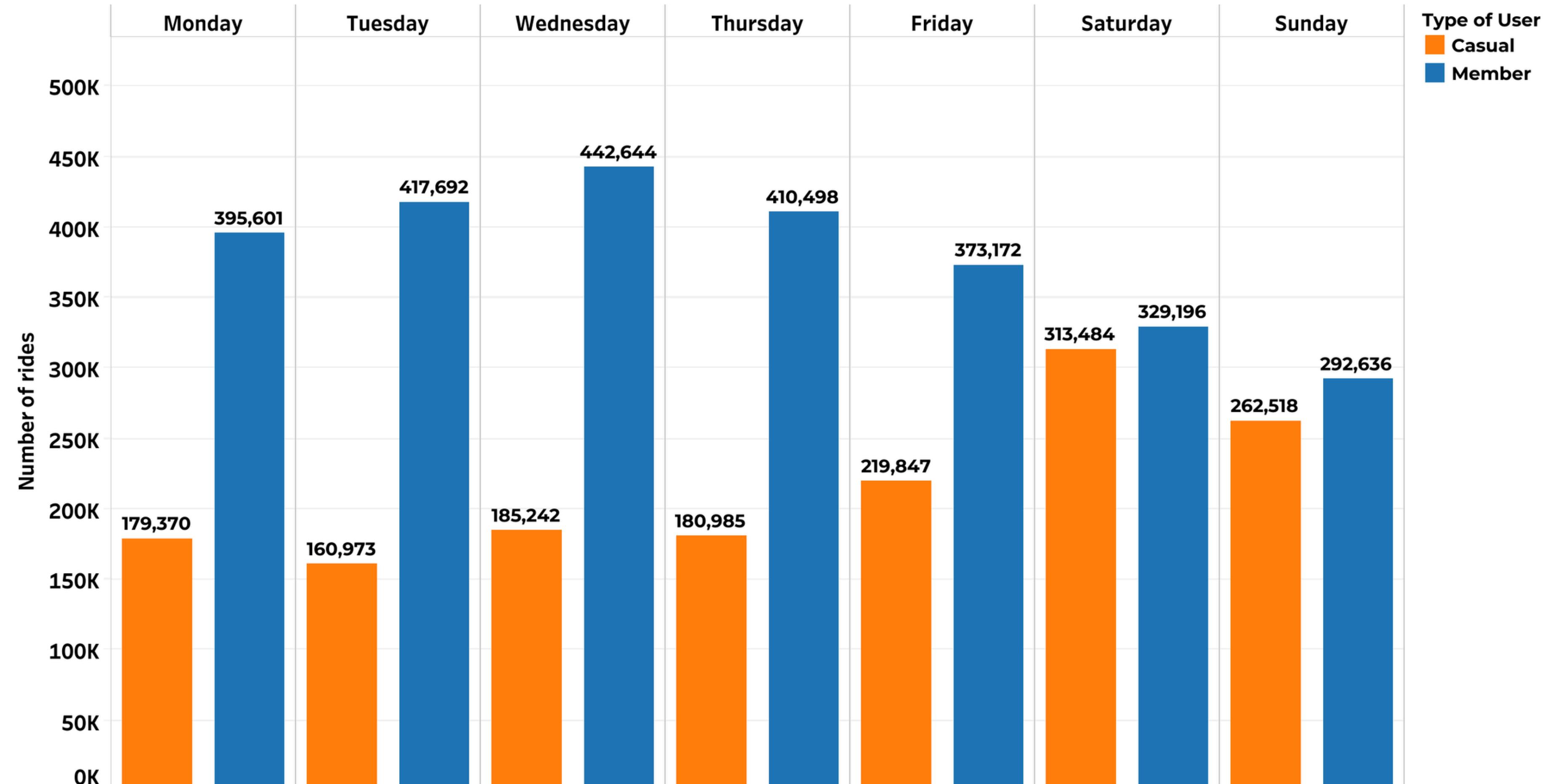
As shown here **Members** spend less time on travel on average than **Casual Riders**, and this difference is considerable.

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



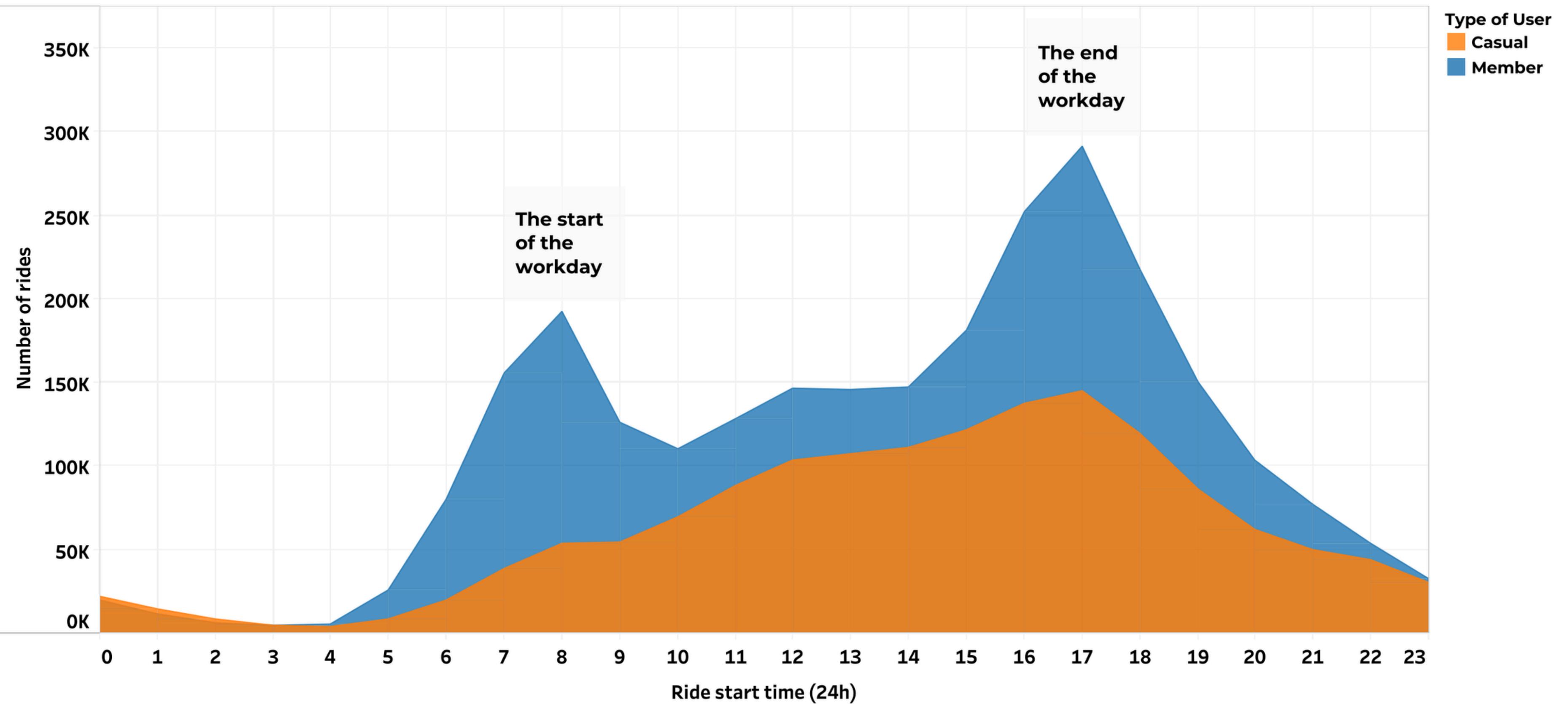
Casual Riders rode mostly in warmer months and rarely in winter, while **Members'** winter trips declined less sharply.

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



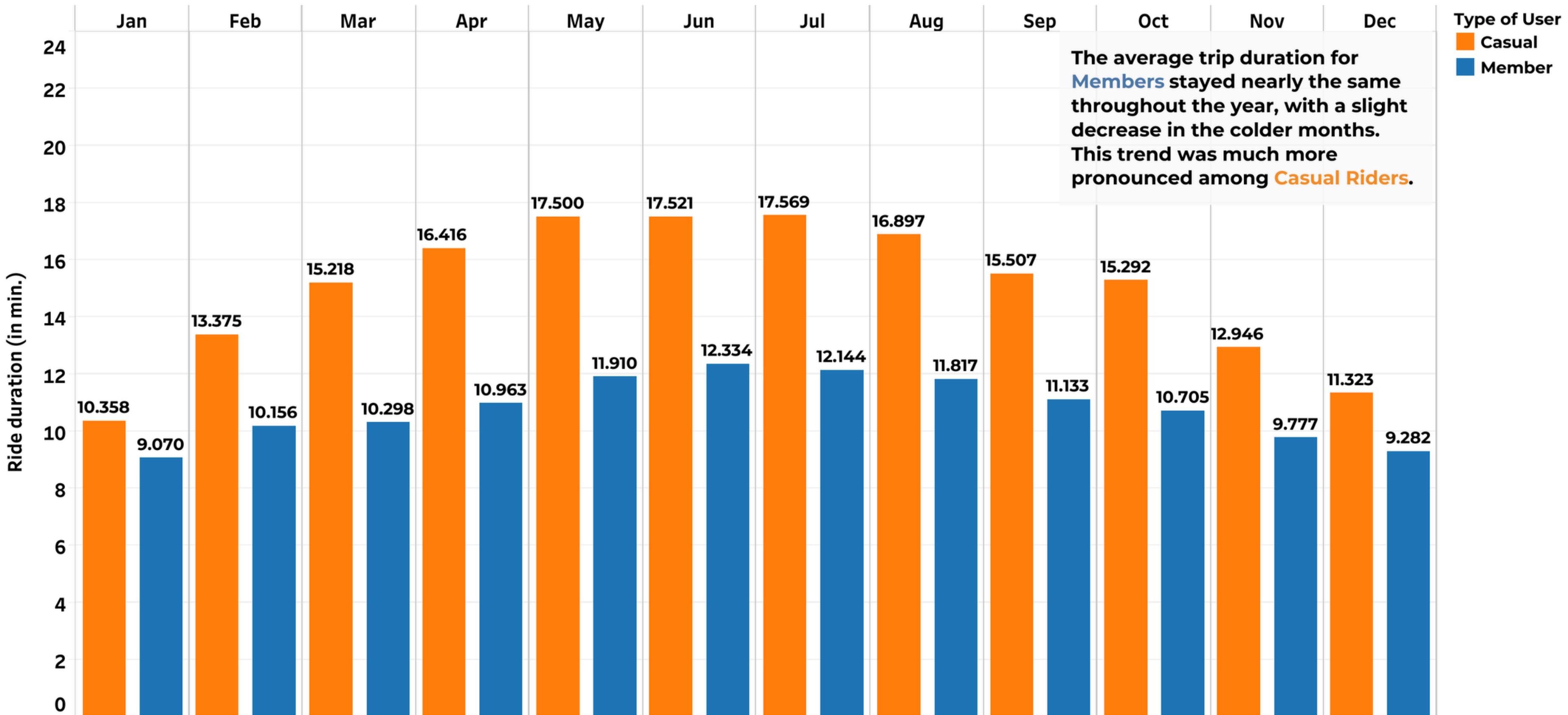
Members rode more often on weekdays, while Casual Riders preferred weekends, with Members activity dropping on weekends.

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

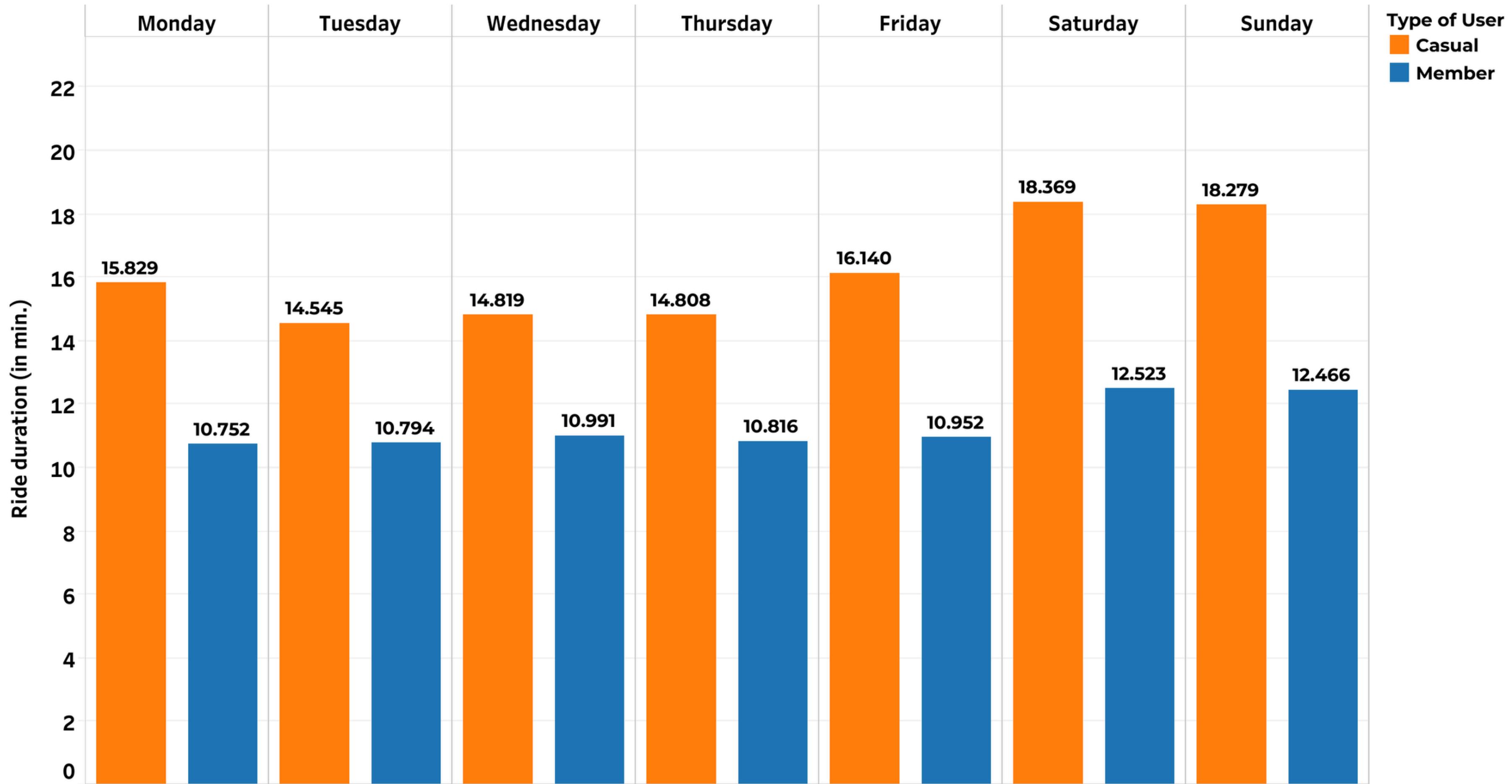


Members make the most trips at the beginning and end of the working day, while Casual Riders prefer to ride in the evening.

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

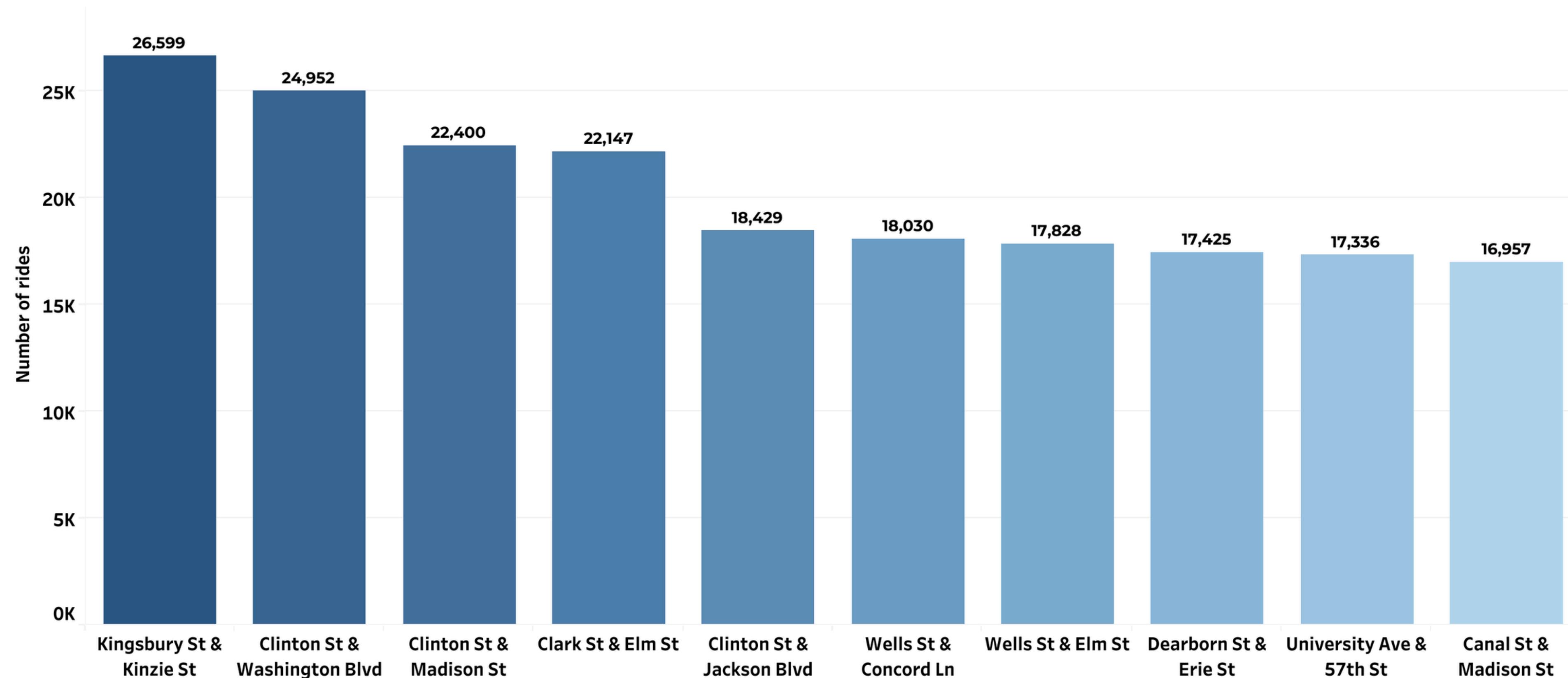


Average ride duration depending on the day of the week: Casual Riders vs. Members



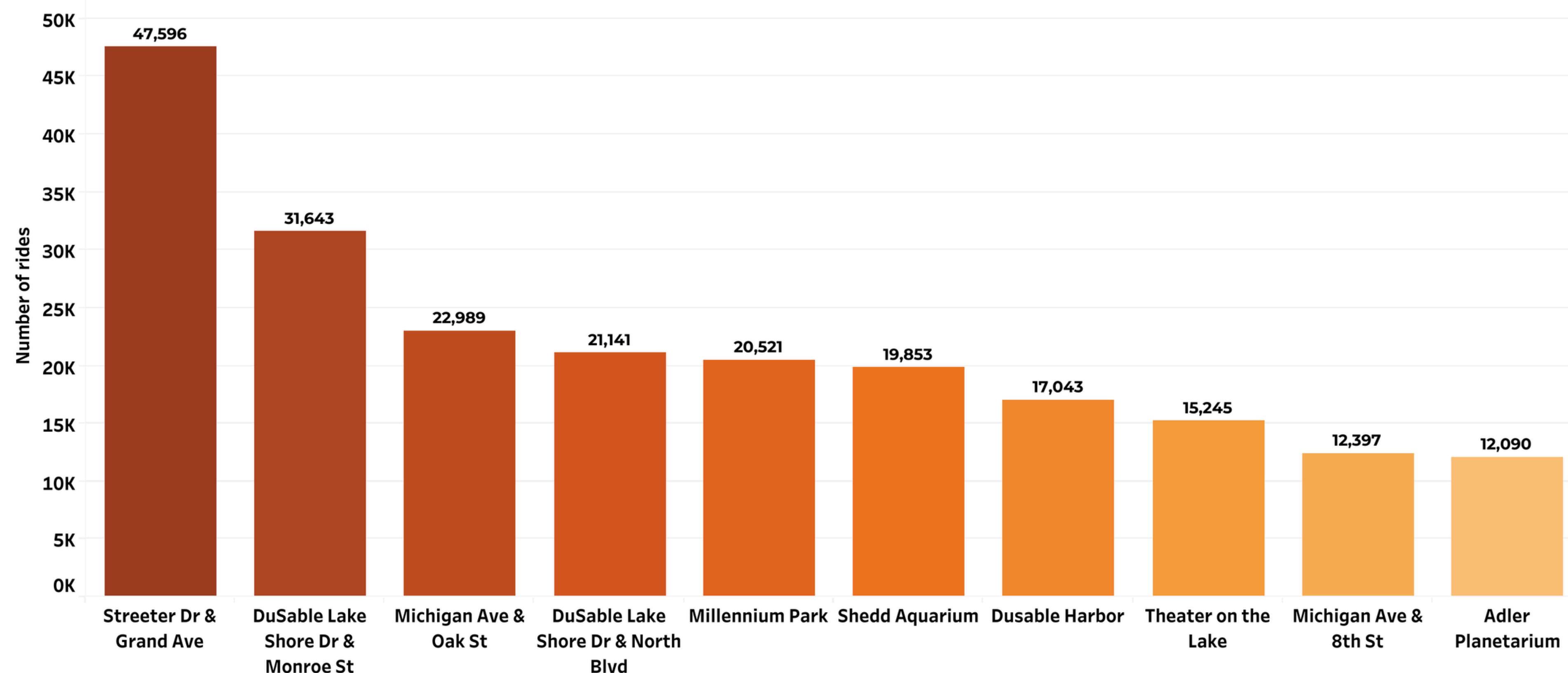
Members' average trip duration stays consistent (~11 min), rising slightly on weekends (~12.5 min). Casual Riders, however, see a significant increase on weekends (~15 min on weekdays versus ~18 min on weekends).

Top 10 starting stations: Members



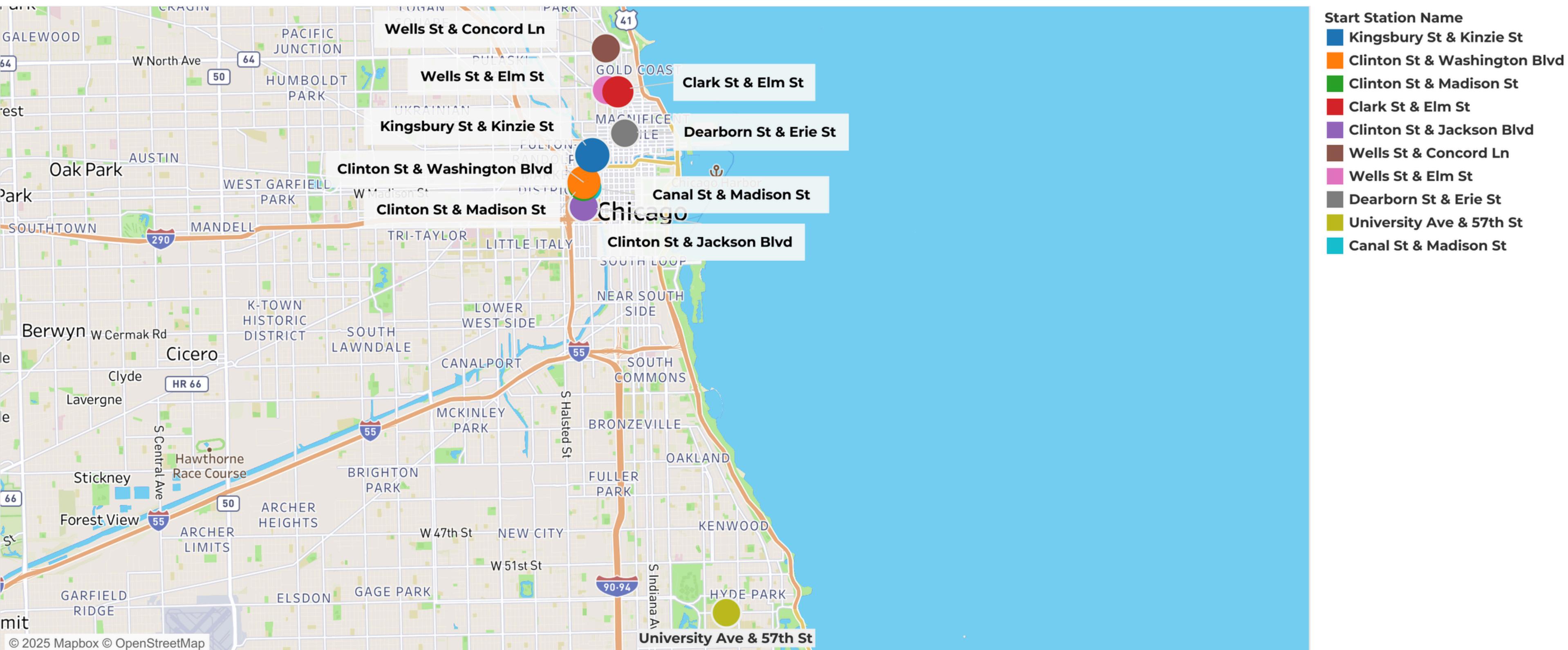
The graph displays the top 10 starting stations most frequently used by [Members](#). The *Kingsbury St & Kinzie St* station is surrounded by a large number of office and commercial buildings.

Top 10 starting stations: Casual Riders



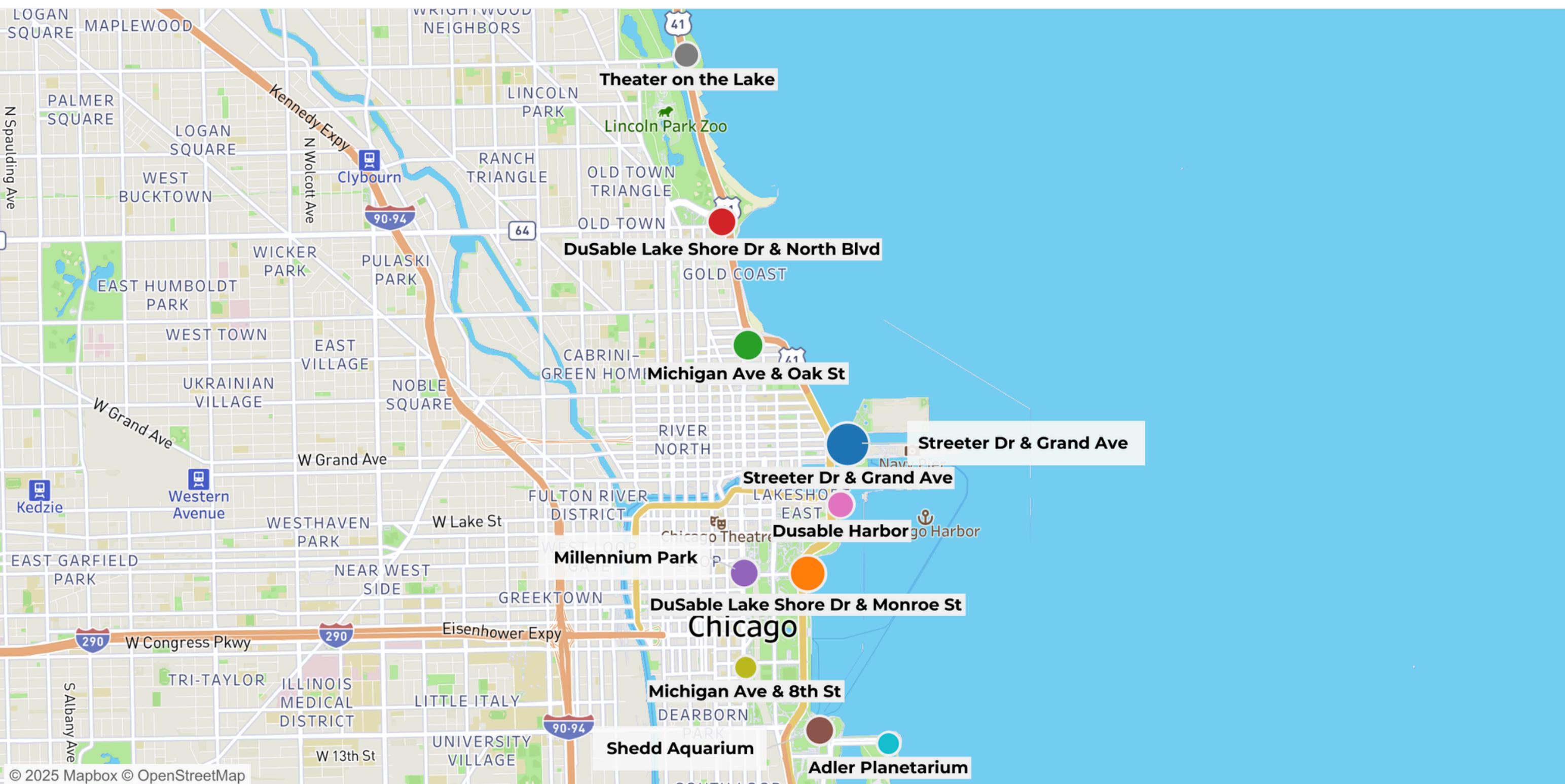
This chart shows the top 10 stations where **Casual Riders** most frequently start their trips. The station at **Streeter Dr & Grand Ave** was used much more frequently than others, with the surrounding area being one of the most touristic in the city.

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.

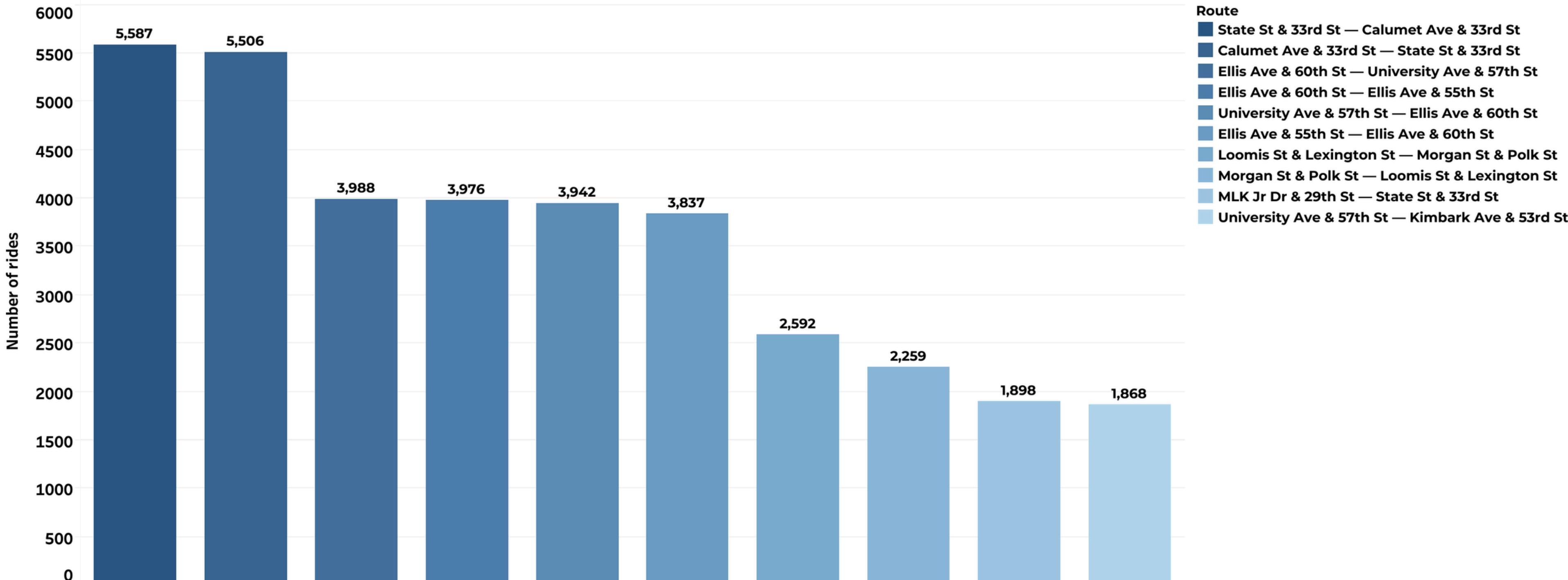
Top 10 starting stations on the map of Chicago: Casual Riders



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

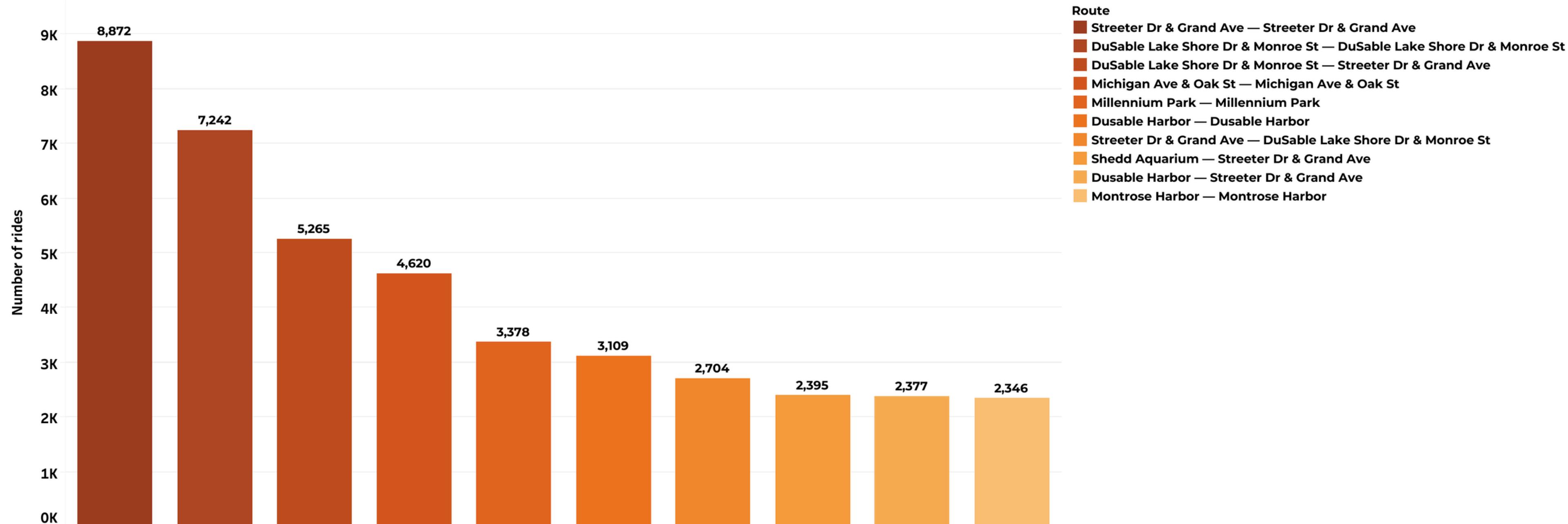
This map displays the top 10 starting stations most frequently used by **Casual Riders** in Chicago, with circle size representing route frequency.

Top 10 most traveled routes: Members



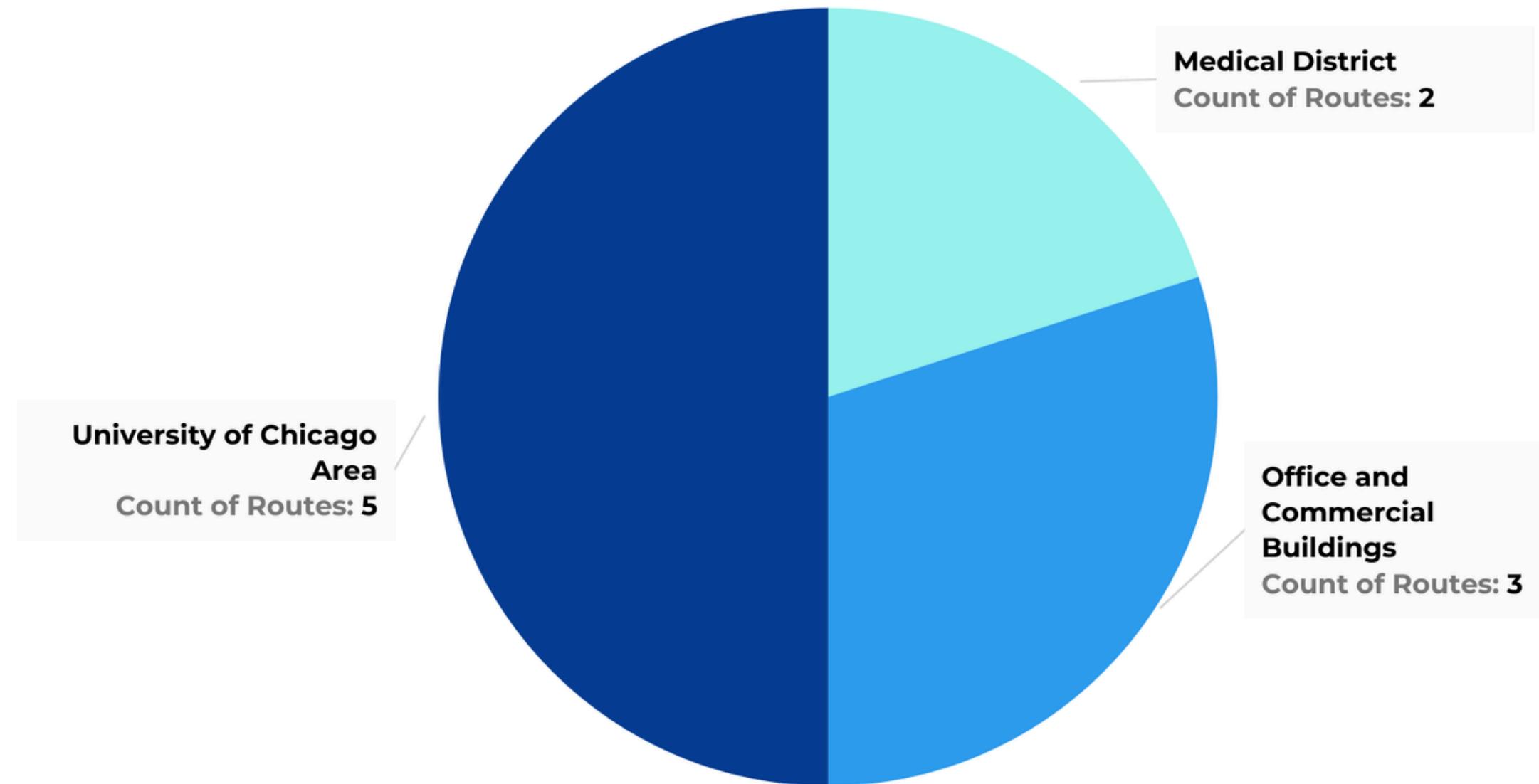
The graph shows the top 10 routes, mostly passing through office and educational areas, with many stations appearing as both start and end points.

Top 10 most traveled routes: Casual Riders



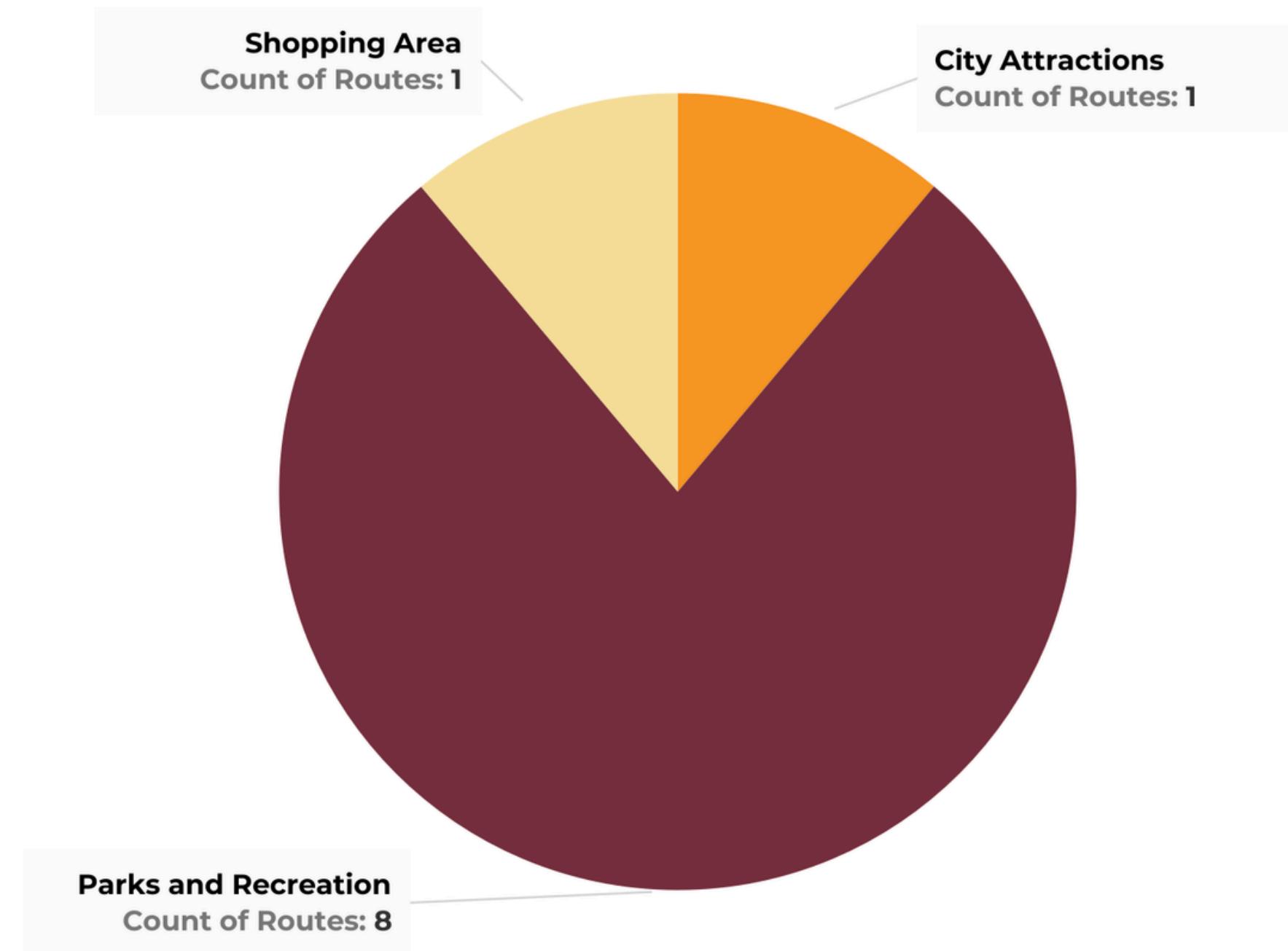
The graph shows the top 10 routes, mainly through tourist and entertainment areas, with many stations serving as both start and destination points.

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