

# Cyclistic Business Report

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## Cyclistic Business Report: Understanding Member vs. Casual Riders

### Background

Cyclistic, a fictional bike-share company (whose data is conveniently identical to that published by the real-world company Divvy), has identified that annual members are more profitable than casual riders who purchase single rides or day passes. To inform a marketing strategy that converts more casual riders into members, I examined ride data from July 2024 to July 2025.

Because the dataset included more than 5.5 million rides, I downsampled to a manageable 100,000 rides. Membership rides are more prevalent in the data, outnumbering casual rides by about 2:1. When visualizing count data across groups, this imbalance sometimes made spotting patterns difficult, so I also created two equal groups of 100,000 rides each (members and casuals) using random sampling with replacement (these equalized samples are explicitly indicated in the plot titles when used.)

### Key Findings

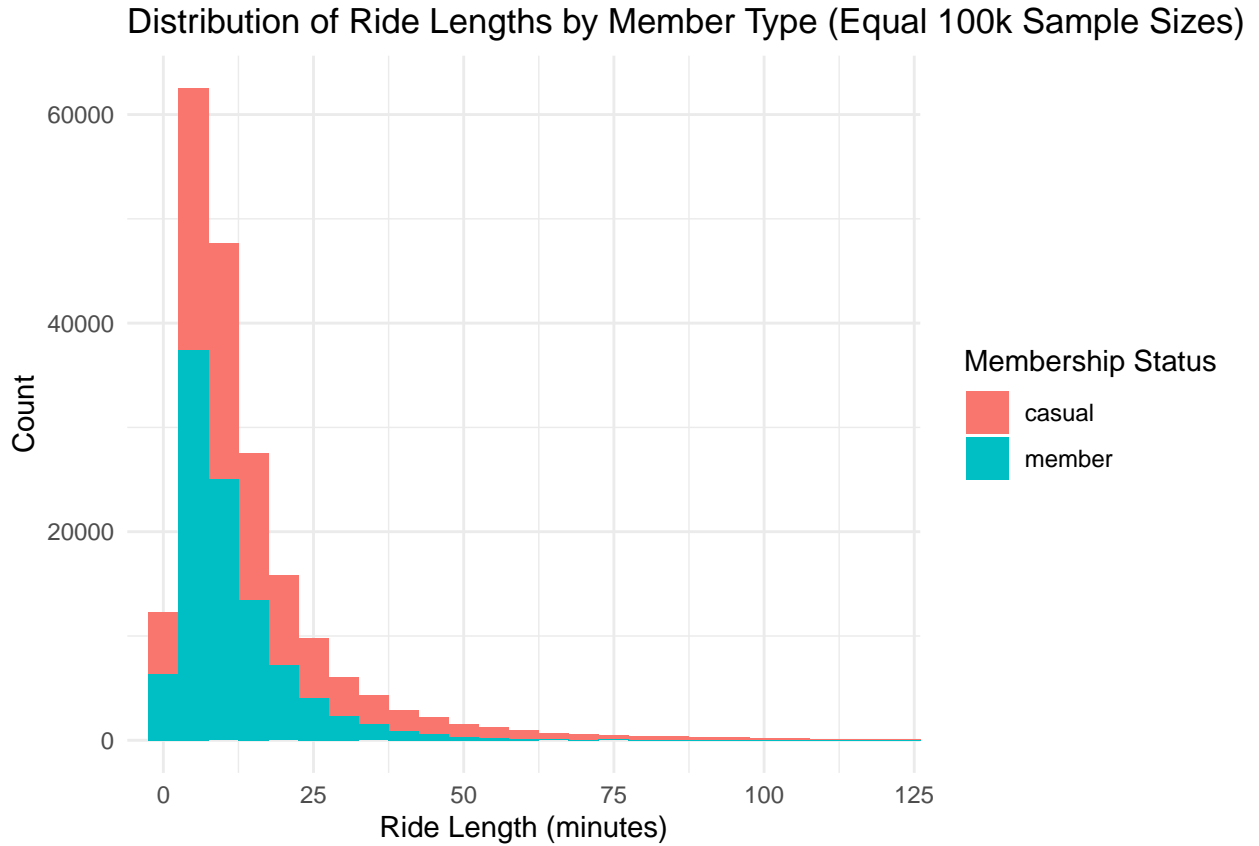
#### Ride Lengths

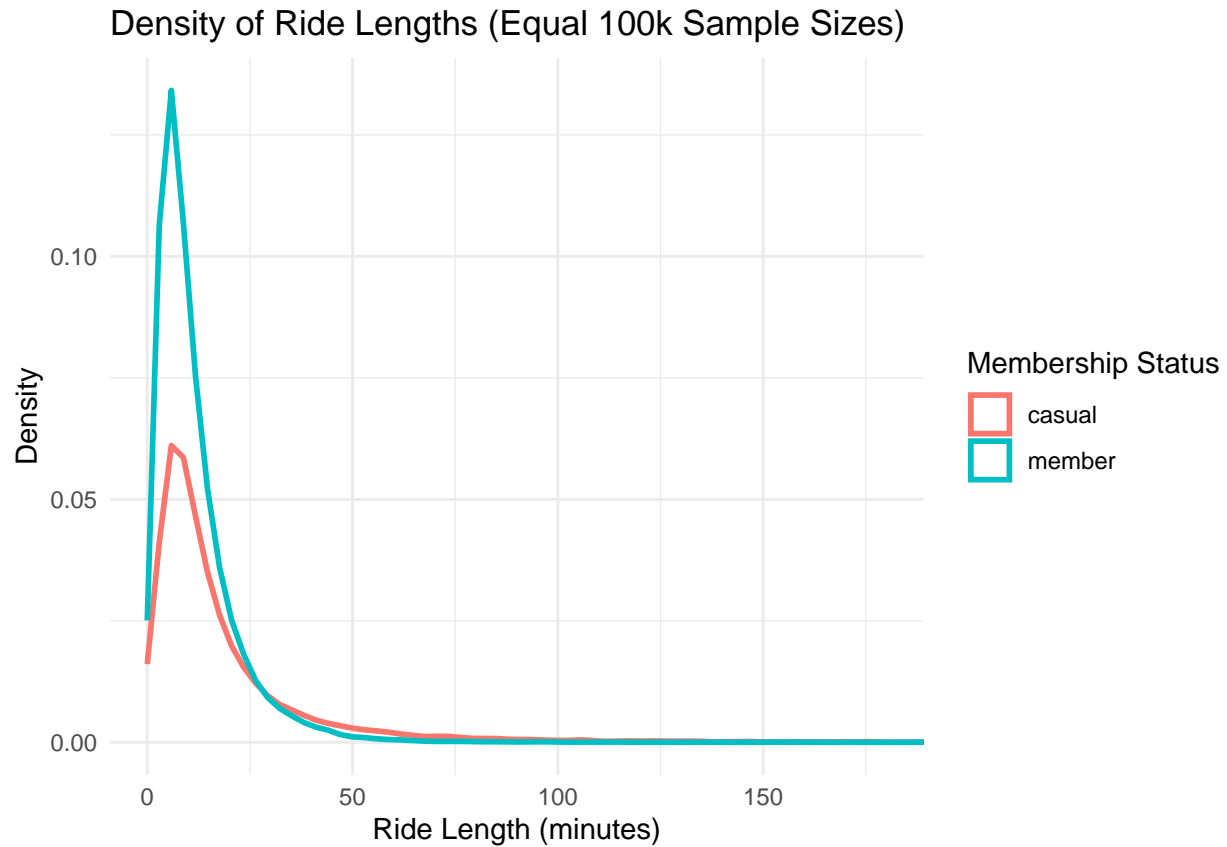
- **Members** typically take short, consistent rides averaging **12 minutes**, with most falling between 8–15 minutes.

Table 1: Ride Length Summary Statistics (100k Subsample)

member_casual	Mean	Median	Max	Min	SD
casual	24.0	11.6	1500.0	0	89
member	12.1	8.5	1499.9	0	27

- **Casual riders** take more variable rides, averaging **24 minutes**, but with many long outliers that stretch the distribution.
- Ride length distributions for both groups have a strong right skew, with the casual rides appearing to have more outliers and skewing the mean higher.



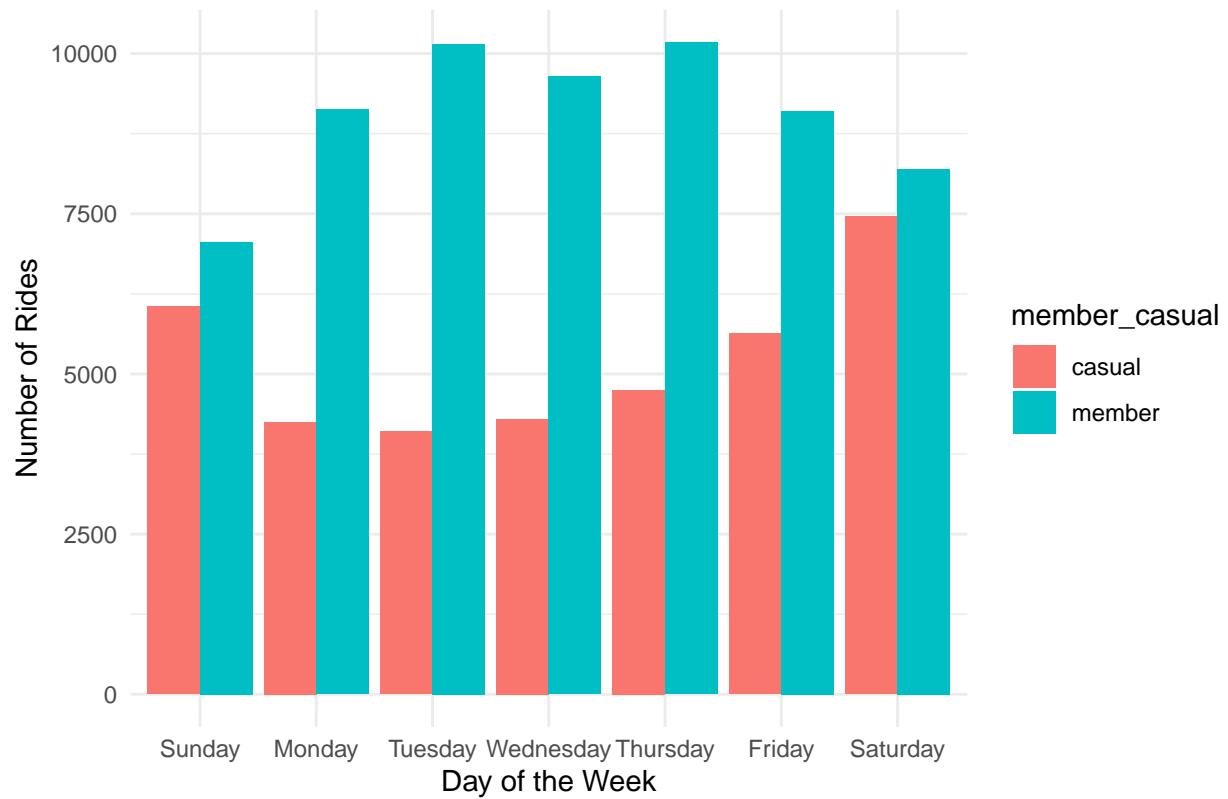


**Variability:** The **standard deviation of ride times** is over three times higher for casual riders compared to members. Members behave predictably, while casuals have much more diverse patterns.

### Ride Frequency by Day

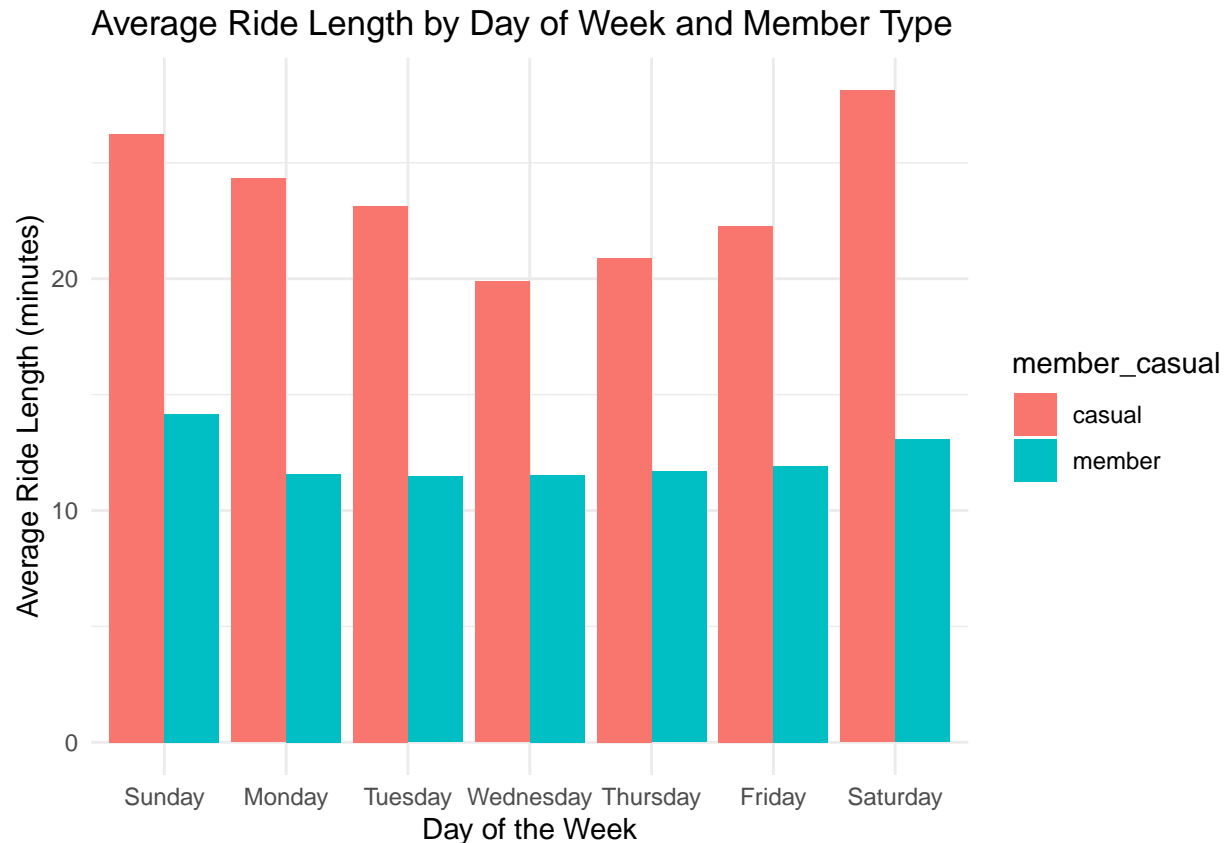
- **Members ride more on weekdays**, peaking on **Tuesday and Thursday**, which aligns with commuting patterns.
- **Casual riders ride more on weekends**, suggesting recreational use. They start to surpass members proportionally on Fridays and carry higher activity into Saturday and Sunday.
- The two groups show opposite patterns resembling a wave function.

Rides by Day of Week and Member Type (100K Subsample, 2024–25)



### Ride Length by Day

- Members remain somewhat consistent across the week, with short rides every day.
- Casual riders' mean ride times dip during the middle of the week. This might be due to fewer long leisure rides occurring then.



## Business Insights

- Members represent Cyclistic's **core commuter segment**, focused on reliable, short-distance weekday trips.
- Casual riders are more unpredictable, often leisure-driven, and less reliable for long-term profitability.
- To grow membership, Cyclistic could focus on two pathways:
  - Convert casual riders** who already enjoy the service into members by either converting them into consistent commuters or motivating them to more regularly use the service for leisure rides.
  - Acquire more commuters** who have not yet used Cyclistic but would benefit from the cost savings and convenience.

## Recommendations (Expanding Core Segment)

- Expand commuter access**
  - Place bike stations near residential areas and major business districts.
  - Provide easy-to-use route planning tools tailored to commuters.

- **Highlight commuter value**
    - Market speed, reliability, and cost savings compared to driving or transit.
    - Emphasize the eco-friendly and health benefits of cycling to work.
  - **Partner with employers**
    - Offer subsidized memberships through corporate wellness programs.
    - Provide flexible commuter-focused plans (e.g., monthly passes or unlimited 30-minute rides).
  - **Promote habit formation**
    - Launch rush-hour promotions and “streak” rewards for consistent weekday riding.
    - Use referral programs to encourage coworkers and peer groups to join.
  - **Build brand identity**
    - Position Cyclistic as the smart, eco-friendly commuter’s choice.
    - Host local events like bike-to-work days and neighborhood station activations.
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## Conclusion

The data confirms that **members are consistent commuters, while casual riders are leisure-focused**. To increase profitability, Cyclistic should double down on its commuting audience by targeting short-distance urban travelers and turning casual users into regular members. By aligning station placement, pricing, and marketing with these insights, Cyclistic can grow its membership base and strengthen long-term revenue.