Cyclistic Case Study

How does a Bike-Share Navigate Speedy Success?

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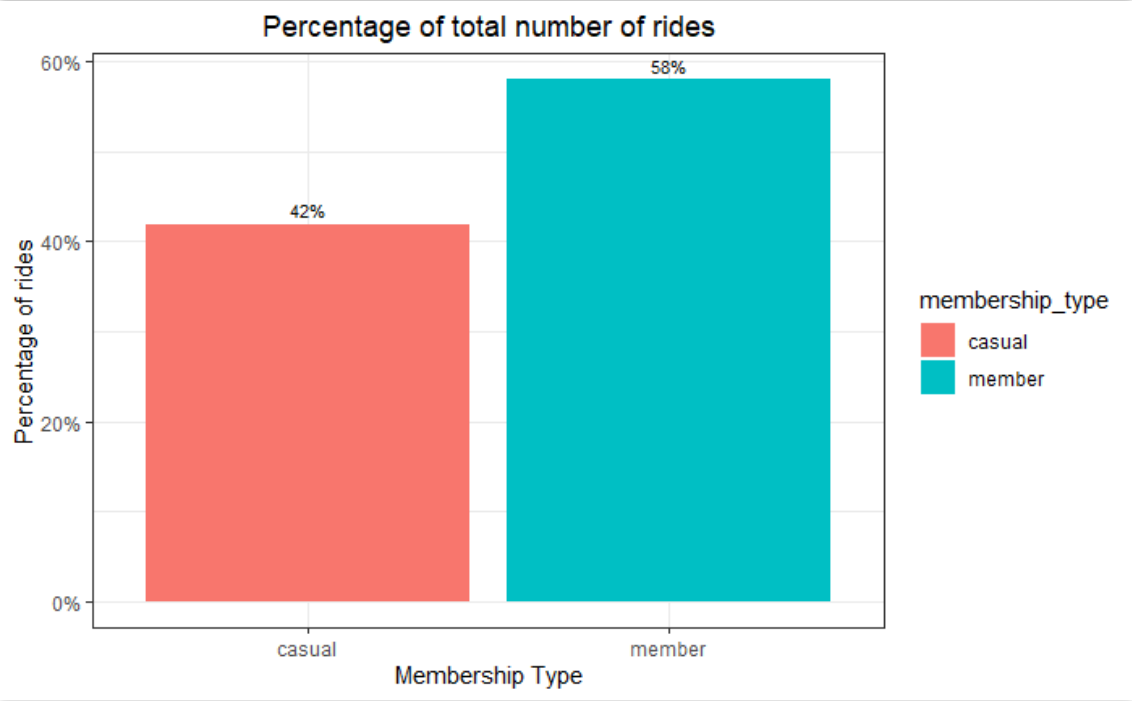
Background

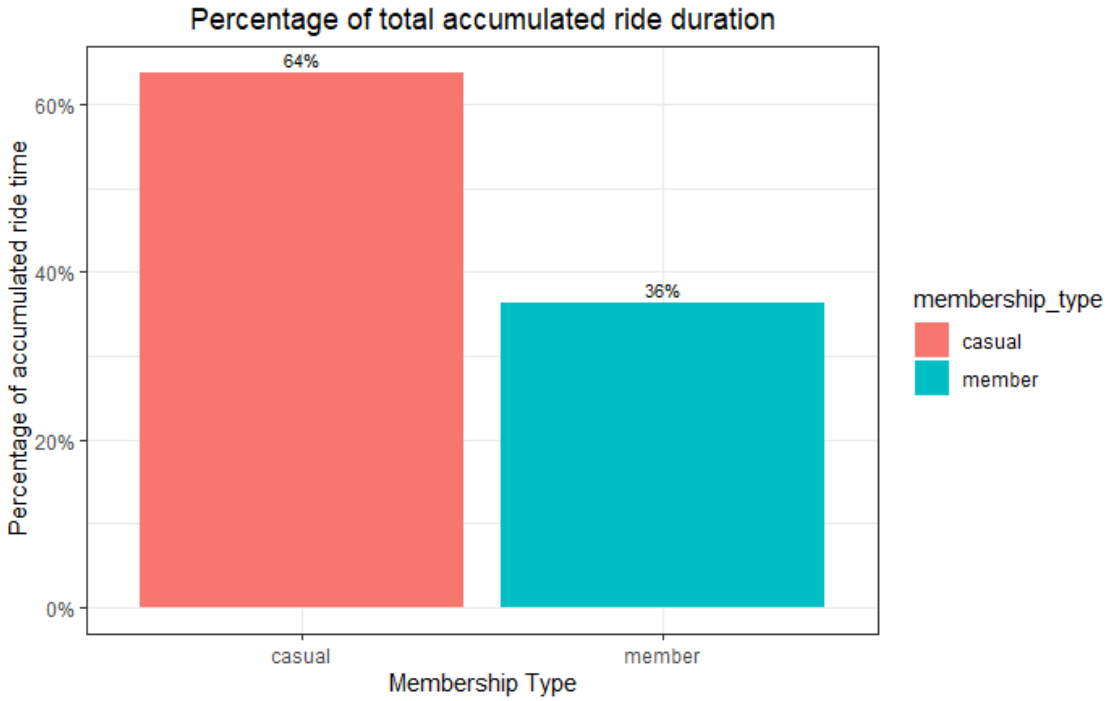
- **Company Description** : In 2016, Cyclistic launched a successful bike-share offering. Since then, the program has grown to a fleet of 5,824 bicycles that are geotracked and locked into a network of 692 stations across Chicago. The bikes can be unlocked from one station and returned to any other station in the system anytime.
- **Customer Segments** : Casual Riders (those who buy single ride and full day passes) & Annual Members (those who purchase an annual membership).
- **Stakeholders Involved** : Marketing Analytics Team, Executive Team, Data Analyst, Customers.
- **Task** : Cylistic's financial analyst have concluded that annual members are much more profitable than casual riders, and hence maximizing the number of annual memberships will be the key to future growth of the company. The marketing analytics team wants to launch a marketing campaign targeted at casual riders to convert them to annual members. But first, they want us to understand how casual riders and annual members use Cylistic's bikes differently. They also want us to generate recommendations that are backed up by compelling data insights and visualizations, for review by the Cylisctic's executives.

Information about data

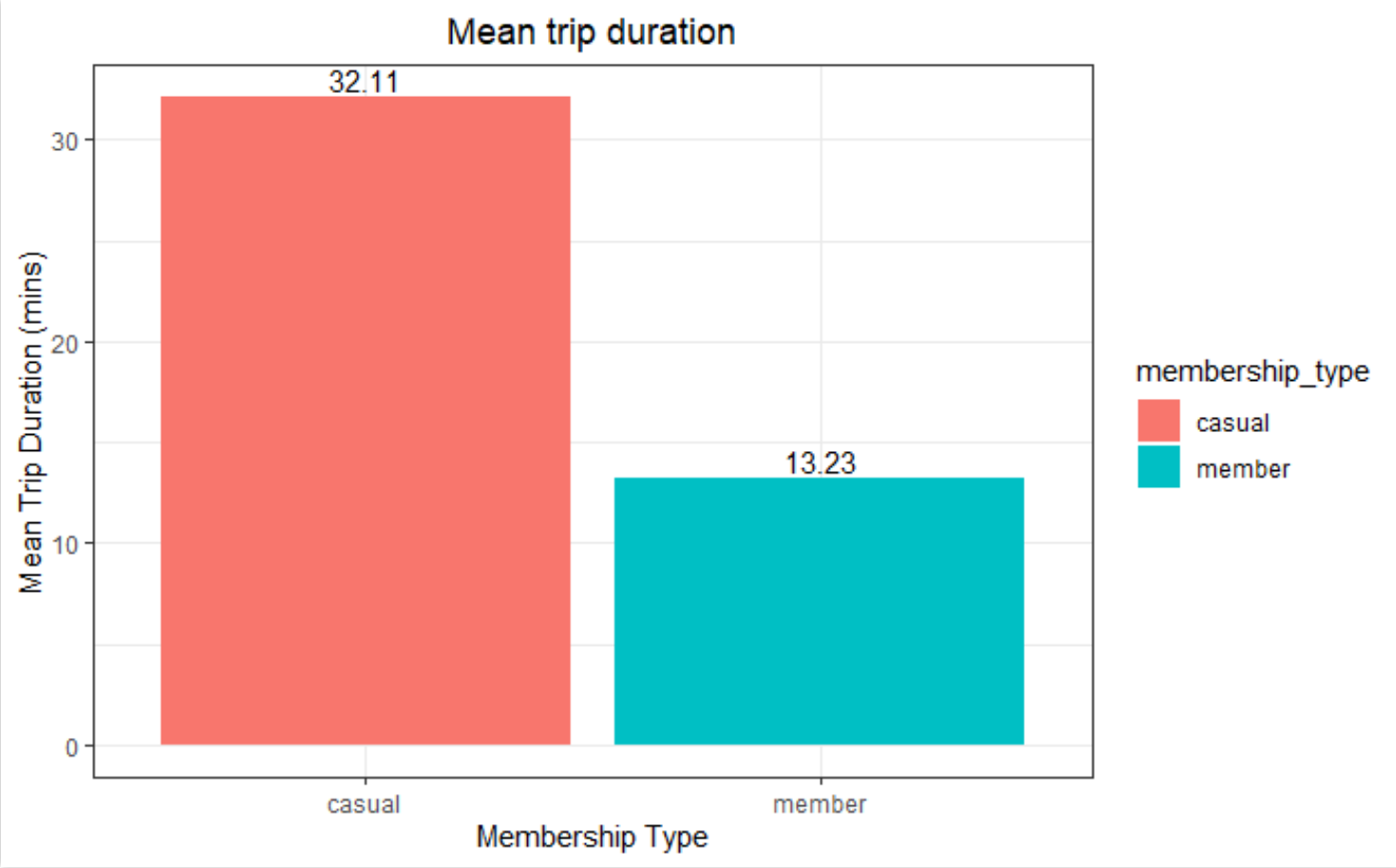
- **Source & License :** Cylistic's historic trip data has been used to analyse and identify trends(data). The datasets have a different name because Cyclistic is a fictional company. For the purposes of this case study, the datasets are appropriate and will enable you to answer the business questions. The data has been made available by Motivate International Inc. under this license.) This is public data that you can use to explore how different customer types are using Cyclistic bikes. But note that data-privacy issues prohibit you from using riders' personally identifiable information. This means that you won't be able to connect pass purchases to credit card numbers to determine if casual riders live in the Cyclistic service area or if they have purchased multiple single passes.
- **Data Features :** Each record represents a unique ride that is identified by 13 features (ride id, ride start and end times, ride start and end geolocation data, ride start and end stations etc.) Additional features (day, month, hour time granularity levels) were created for ease of analysis.
- **Data Cleaning :** Very short trips (< 1 min) and rides tagged as quality control rides were removed from dataset.
- **Tools used for Analysis & Visuals :** R Studio

Cyclistic bikes are utilized more by casual riders despite registering fewer number of rides

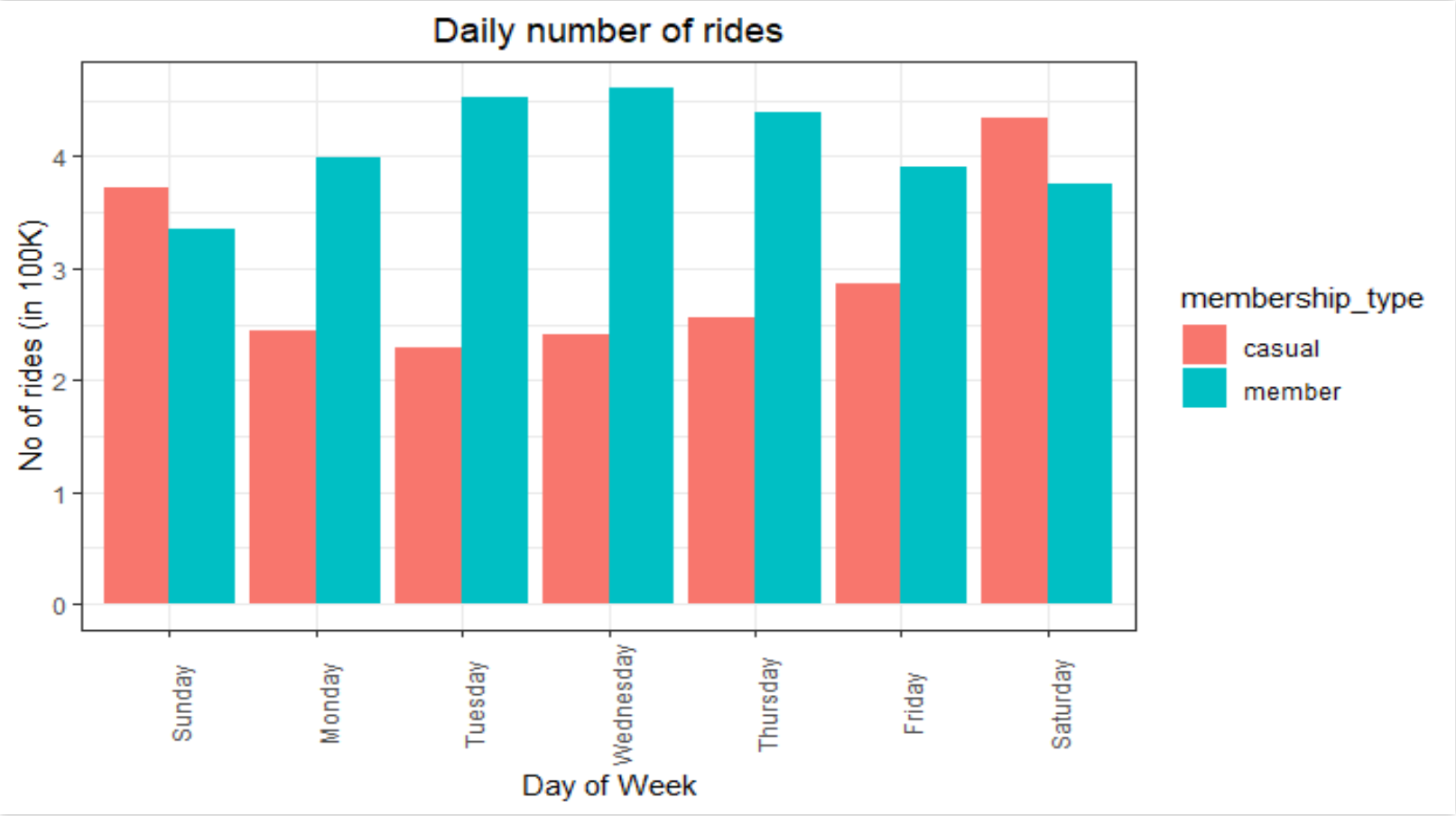




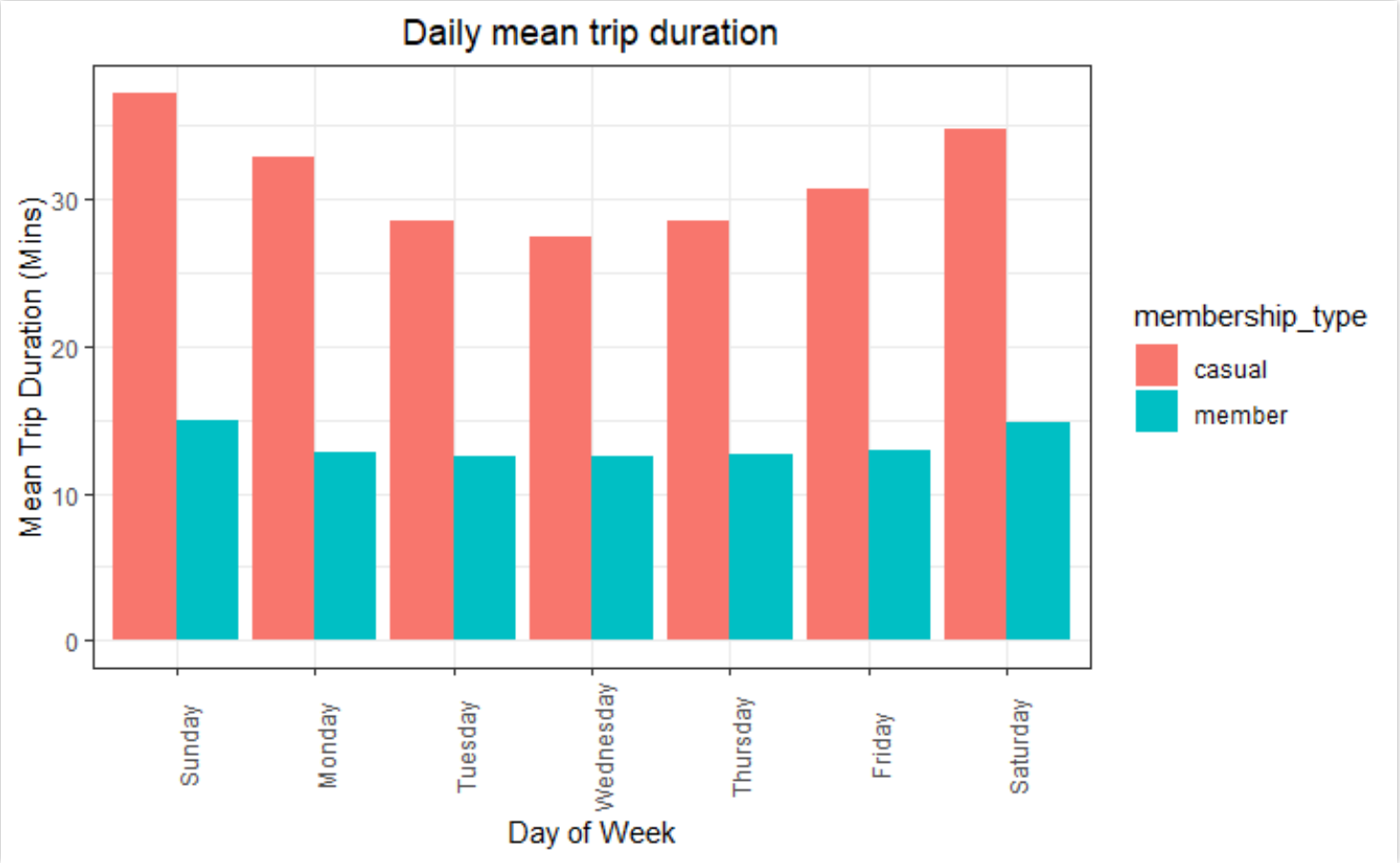
Casual riders tend to have longer trips than annual members



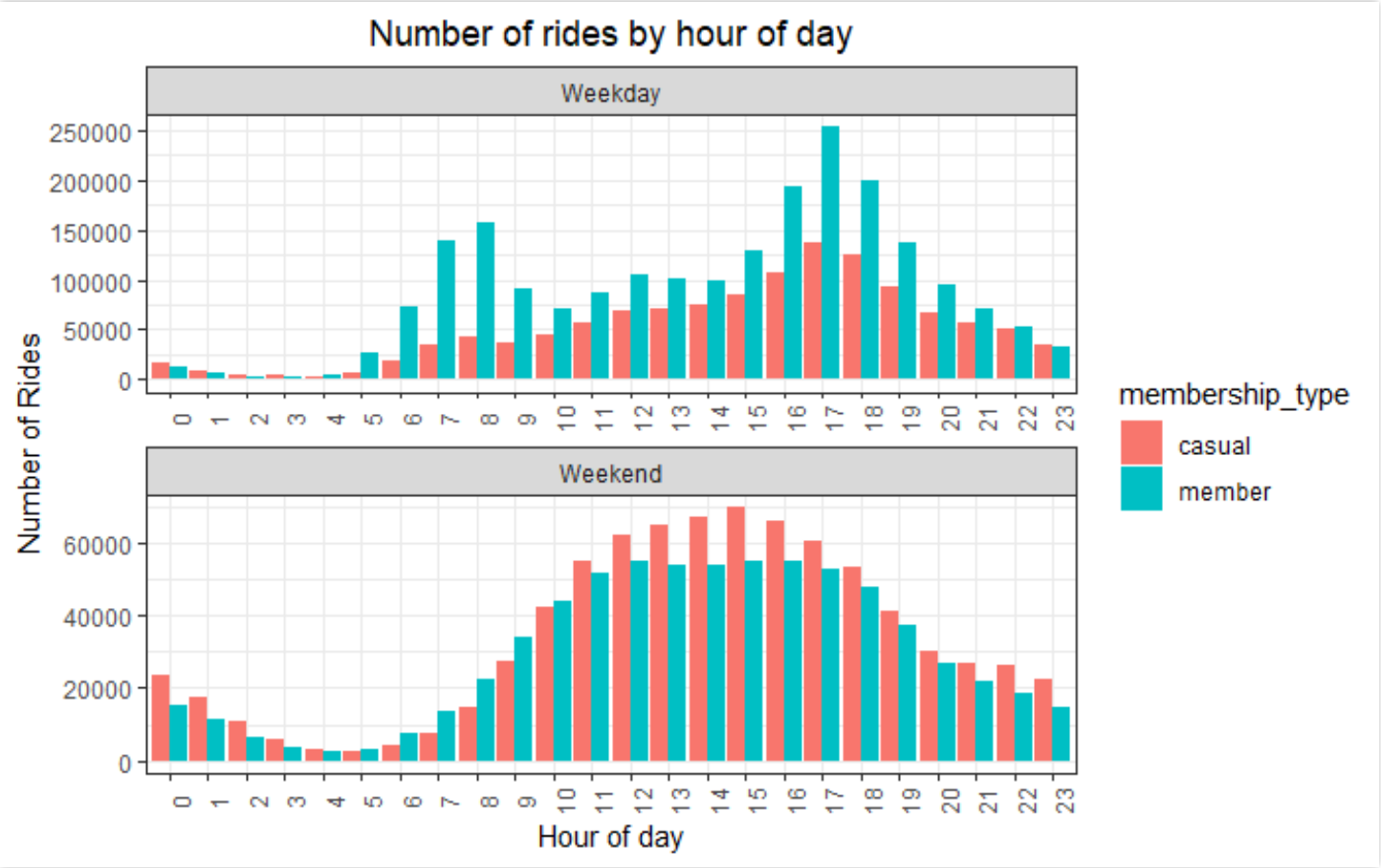
Casual riders tend to take more rides on weekends than weekdays, whereas it is the opposite for annual members



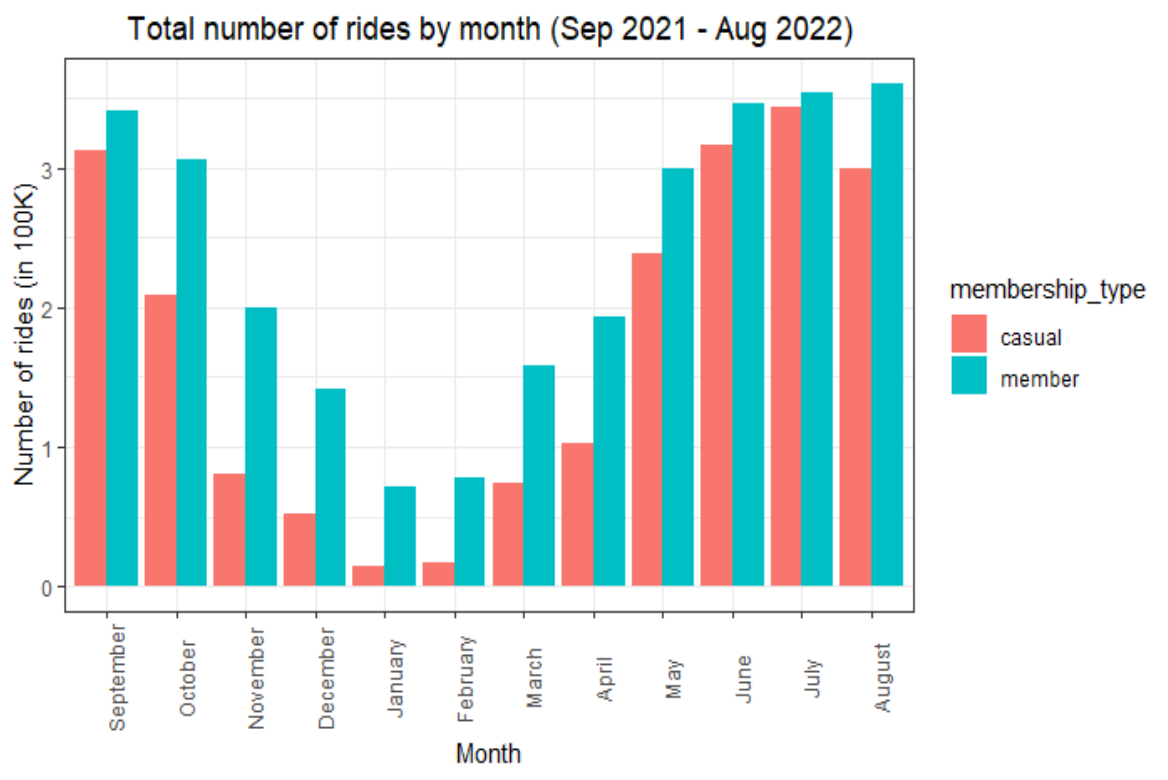
Casual riders tend to take longer trips on weekends, whereas there is little variation in trip duration of annual members over the week

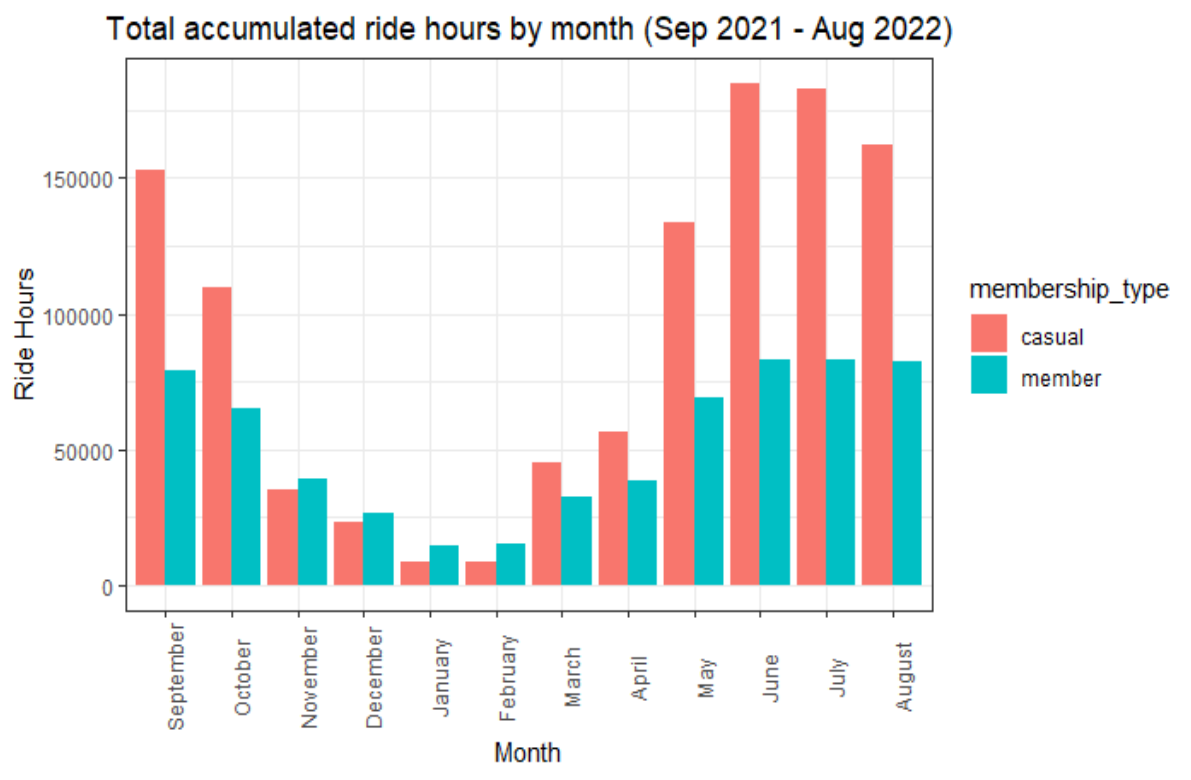


Annual member ride activity is at it's highest, during rush hours on weekdays. On weekends, both casual riders and annual member ride activity grows steadily throughout the day.

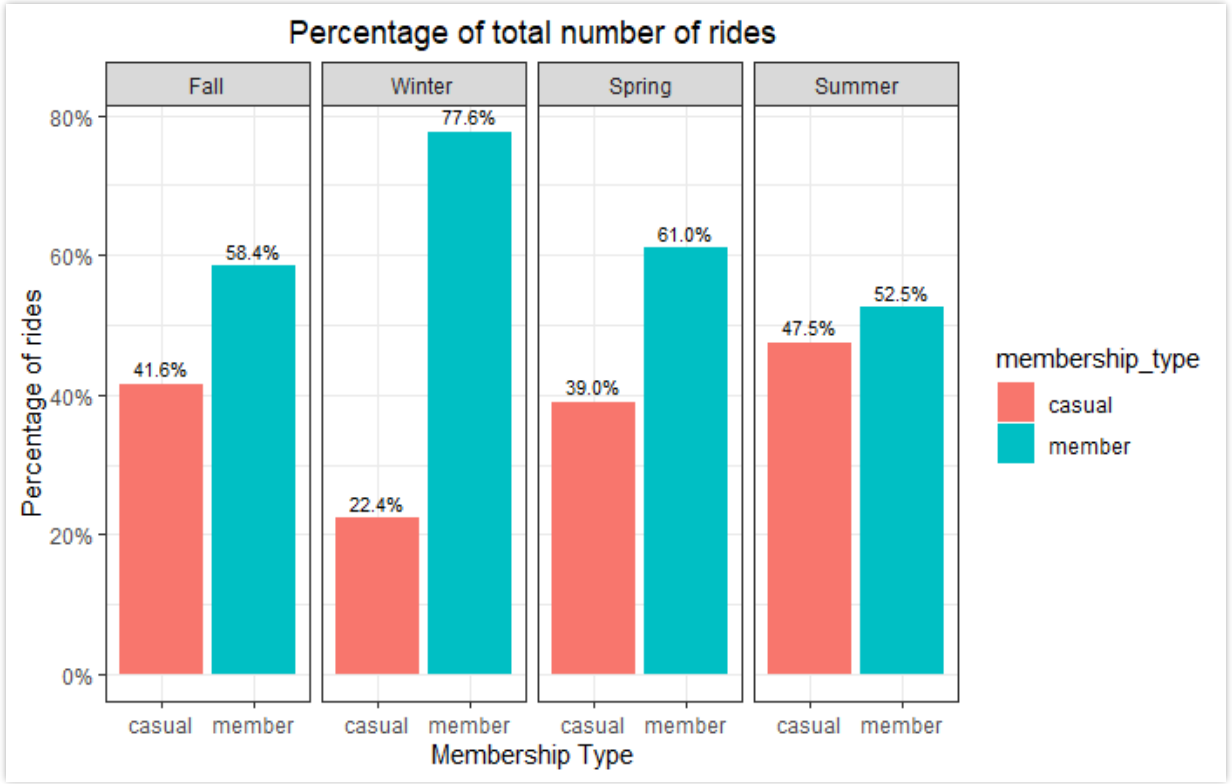


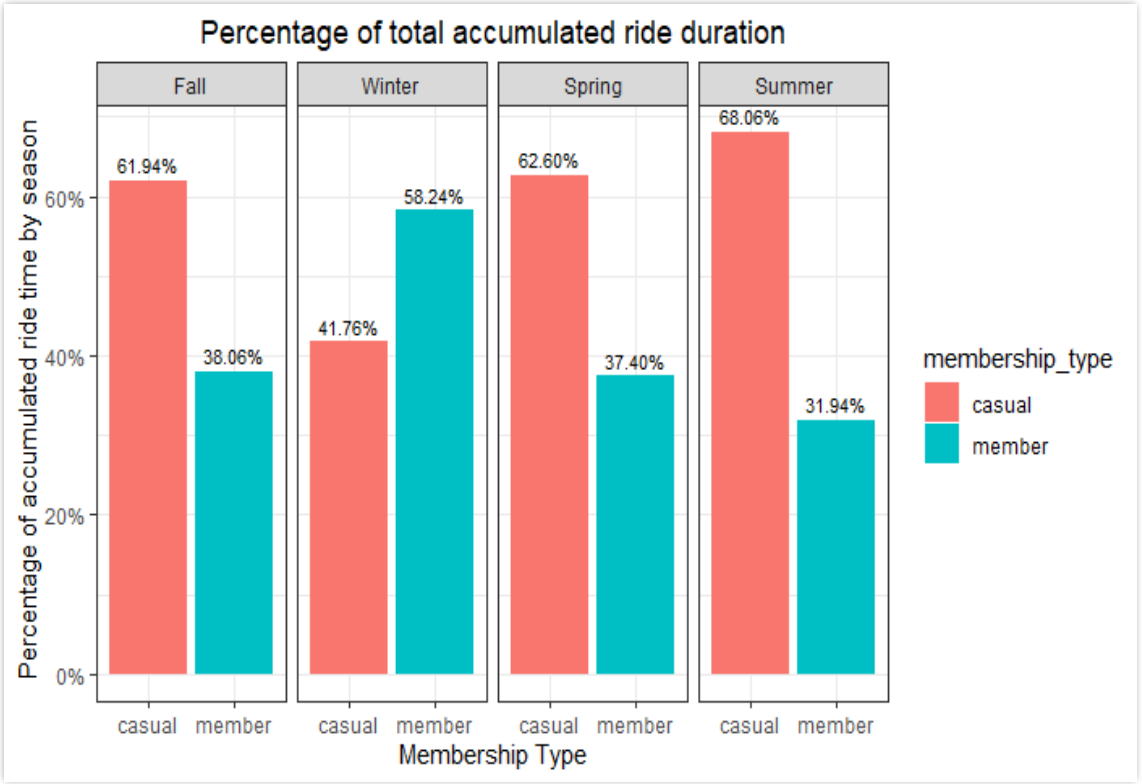
Ride activity follows a seasonal pattern, which is highest during the summer & spring months (Jun-Nov) and least during the winter months (Dec-Feb)



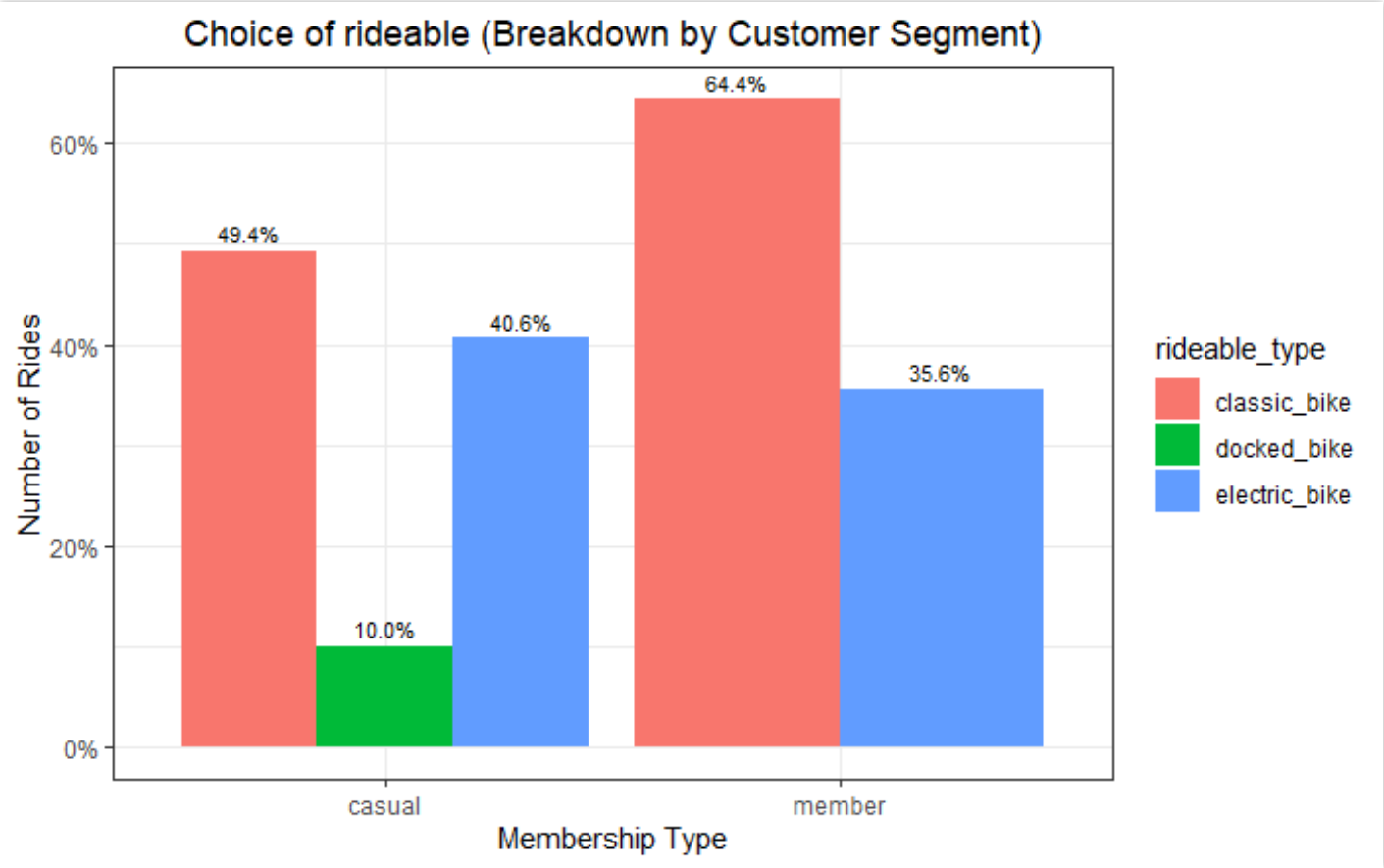


Casual riders utilize the bike service more so during favourable seasons (Summer, Fall, Spring) and lesser during the Winter.





Classic bikes are most popular ride type among both customer segments



Summary of findings

- **Casual Riders :** Take longer trips than the annual member, ride more often & longer during the weekends compared to weekdays, ride very less (almost no activity) during the colder months (Dec-Feb) and highest during the warmer summer months (Jun-Aug). On weekdays, casual rider activity steadily increases throughout the day with highest during evening rush hours (4pm – 5pm) and drops off after. On weekends, casual rider activity is most significant during (10am – 6pm).
- **Annual Members :** Take shorter trip compared to casual rider, ride more often during the weekdays compared to weekends, little variation in trip duration over the week, ride more during the warmer months and lesser (significant activity compared to casual rider) during winter. On weekdays, annual member shows clear peaks during the rush hours. On weekdays, a pattern similar to that of casual riders is observed.
- **Bike Service Usage :** Except for the winter months, casual rider constitute the segment that majorly utilizes the bike service. Overall, casual riders represent ~64% of the service usage (in terms of ride duration), suggesting a significant user base to target for conversion to annual membership.

User Persona

- Based on combining the insights from the two customer groups, we can form user personas for the two rider types. The **annual member** is made up of working professionals, students who typically take fixed routes to & from place of work, which is reflected in the short and constant trip duration during the weekdays. The annual member segment shows significant activity during the rush hours, which further reinforces the user persona type. On weekends, they may utilize the service for leisure.
- **Casual riders** are tourists & visitors who tend to ride longer either by choice or lack of familiarity with routes. They utilize the service mostly on weekends, indicating that they may be using the service for leisure. No activity is observed from this segment during the winter, further reinforcing the user persona as tourists typically tend to visit during the favourable seasons. During weekdays, peak rider activity is observed for this segment during evening rush hours, which may suggest students/professionals utilizing the service to commute from work from time to time.

Recommendations

- The marketing team wants to launch a marketing campaign to convert casual riders to annual members, based on the fact that casual riders already know about the service and hence would be easier to convert. The data does confirm that casual riders make up significant portion of the ride service usage. The data also shows us clearly that the two user groups use the service differently. But, the **data does not tell us why the two groups differ in how the use the service**. As a result, **launching a marketing campaign** without understanding this key difference may be **risky.**
- We have theorized on what these user groups may be. However, this needs to be backed up data as well. The next step would be to **launch a data collection campaign (surveys, questionnaires)** to understand the breakdown (reason for use, age brackets) of each customer segment and their key motivators for using the bike service.
- A campaign backed up this additional data, represents a more reliable approach to target casual customers for conversion to annual members.

Thank You & Q&A