



Google Data Analytics
Professional Certificate



The Cyclistic Case Study

Google Data Analytics Capstone

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Cyclistic bike-share



About Cyclistic

- Cyclistic is a bike-share company in Chicago, founded in 2016 that features more than 5,800 bicycles and 600 docking stations.
- It sets itself apart by making bike-share more inclusive to people with disabilities
- There are two types of customers: annual members and casual customers.
- They have a flexibility pricing plans: single-ride passes, full-day passes, and annual memberships.
- Cyclistic's finance analysts have concluded that annual members are much more profitable than casual riders.

Scenario

The Cyclistic Case Study is one of the capstone projects of Google Data Analytics, a professional certificate program offered on Coursera.

I roleplayed as a data analyst working on the marketing analyst team at Cyclistic.

Lily Moreno, The director of marketing and my manager assigned me to explore the behaviour of casual riders and annual members. The aim is to understand the difference in their Cyclistic service bike usage.

03 Business task

How do annual members and casual riders use Cyclistic bikes differently?

stakeholders

- **Primary stakeholders**

Cyclistic executive team: The notoriously detail-oriented executive team will decide whether to approve the recommended marketing program.

Lily Moreno: The director of marketing and your manager.

- **Secondary stakeholders**

Cyclistic marketing analytics team

Data

- Public Data, dataset made available through Motivate International Inc. under a license from divvybikes.com.
- Cyclistic is a fictional company. For the purpose of this case study, the datasets are appropriate and will enable to answer the business questions.
- The data we are working on is first-party type: data collected and used by Cyclistic.
- The data integrity was checked and deemed unbiased.
- The Cyclistic's dataset has the historical trip data from 2022

Questions

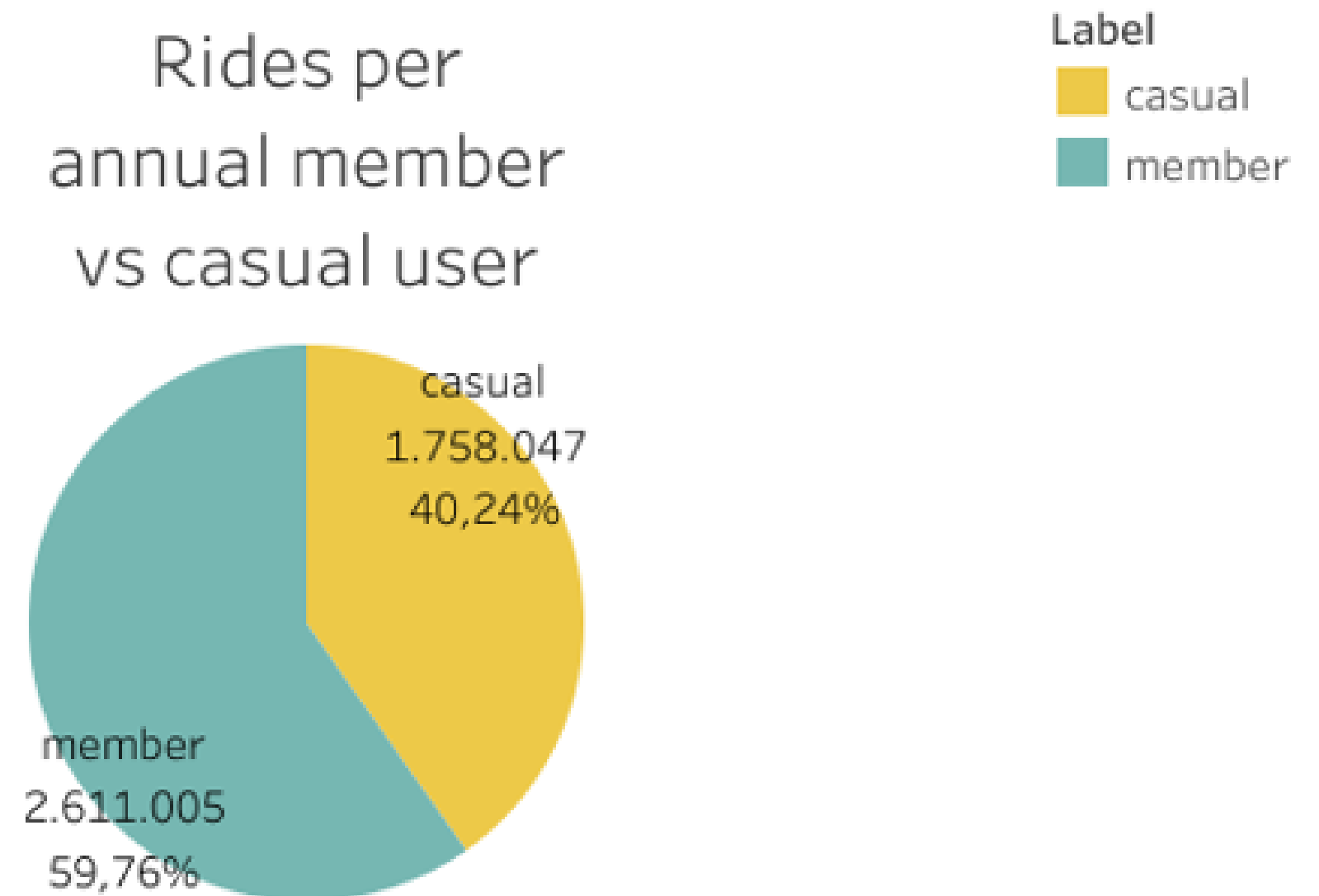
How do annual members and casual riders use Cyclistic bikes differently?

- How many casual vs membership rides take place?
- Is the number of rides seasonable?
- When do different users ride throughout the day? and Week?
- What is the duration of each user type rides? Does it vary per week day or month?
- Do members and casual users have different bike type preferences?
- Where does each type of user start and end their trips?



How many casual vs membership rides take place?

- More than half (59,76%) of rides are made by Cyclistic annual members
- We still have considerable activity from casual users (40,24%)

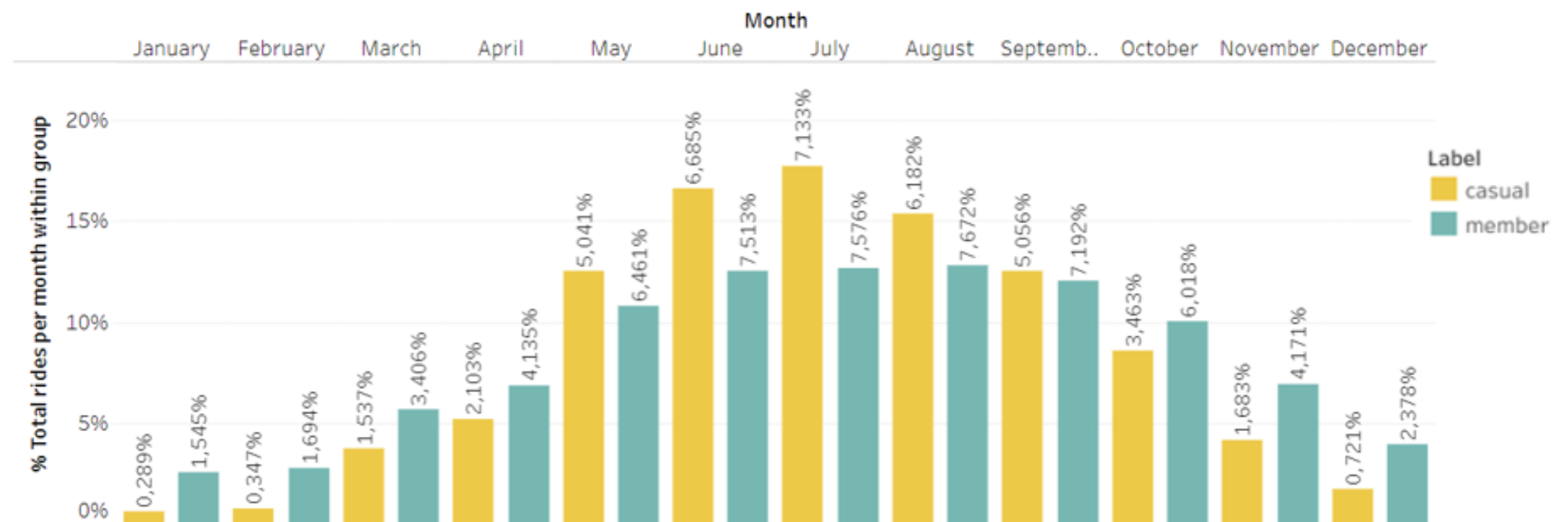


Is the number of rides seasonable?

Seasons affect customer behaviour:

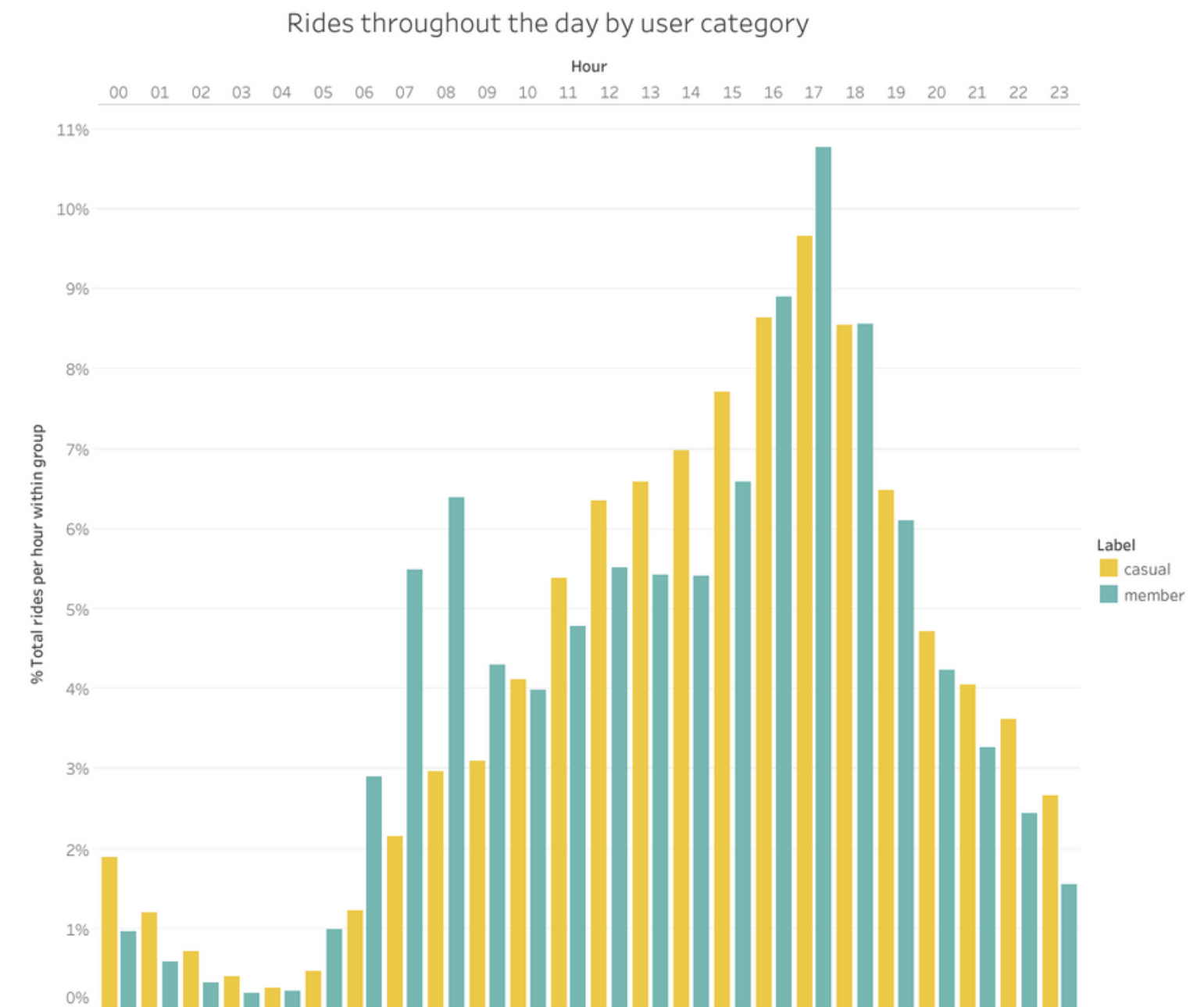
- Both type of customers are more active during the warmer months
- Casual users ride more than members during spring/summer

Compare the number of trips for annual members and casual users, monthly



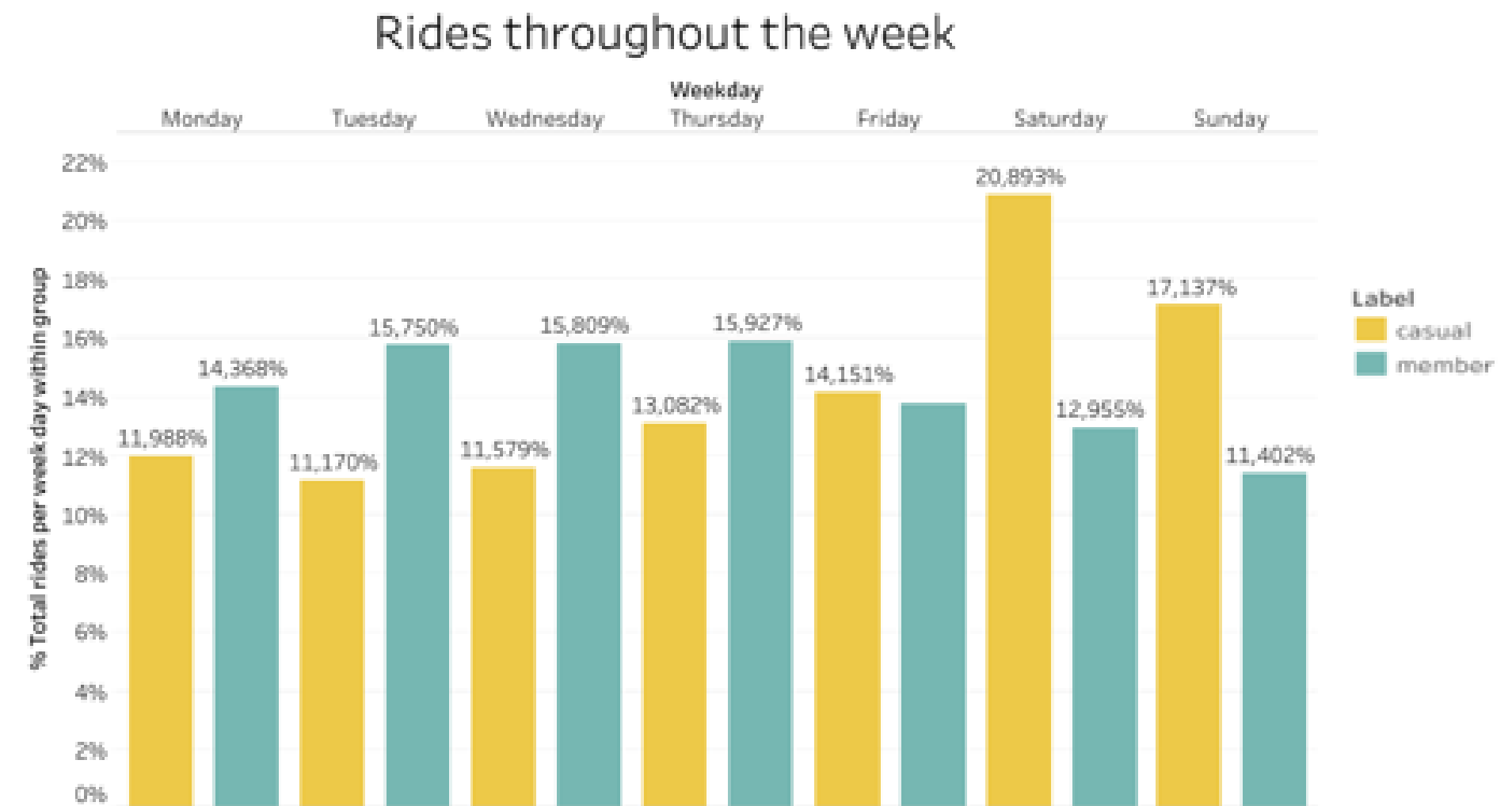
When do different users ride throughout the day?

- Annual members ride during during rush hours. This means that they may be mainly using Cyclistic to commuting to work
- Casual users ride more freely throughout the day. But they prefer to ride from 10 to 19 hours.



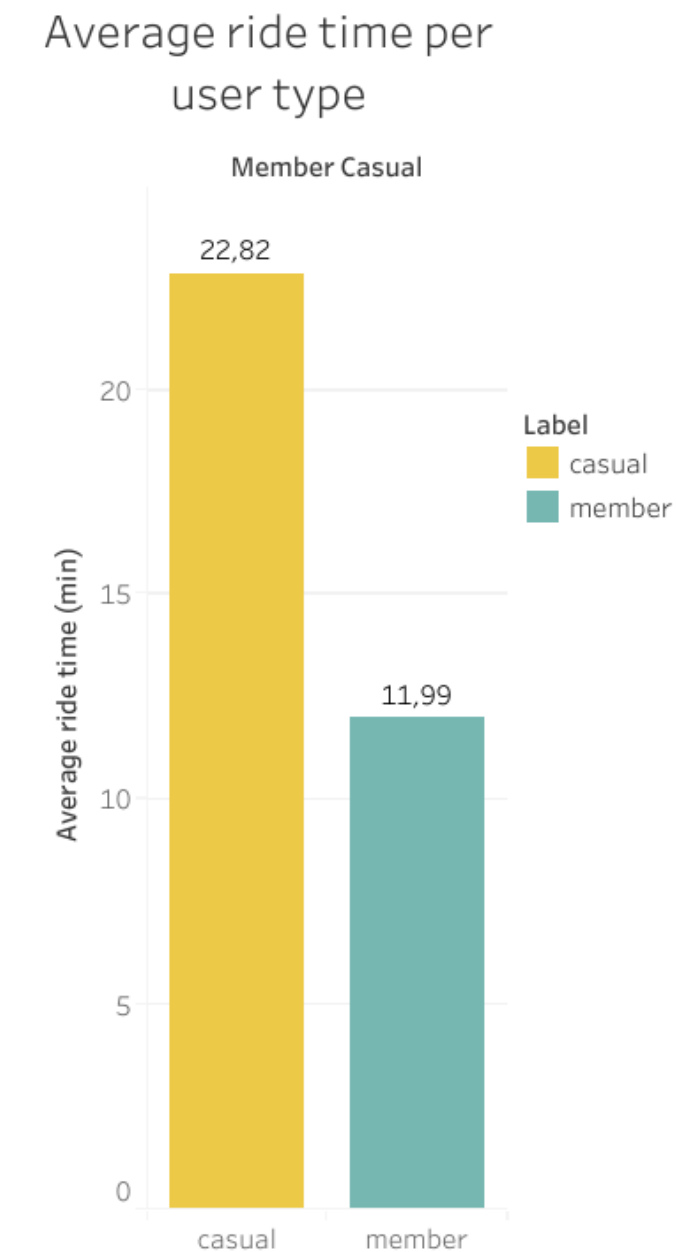
When do different users ride throughout the week?

- Annual members ride mostly from Monday to Friday. This supports the idea of Cyclistic being used to commuting to work
- Casual users are more active during the weekend
- During Saturday the share of rides almost doubles for casual users, compared to their Monday to Friday activity.



What is the duration of each user type rides?

- **Casual users ride longer than members**
- **If there is a price per minute, casual users spend more on their rides**
- **Casual users have access to full-day passes. It would be interesting to look further into this: daily passes might be discouraging new annual memberships and or preventing potential revenue from single rides passes.**

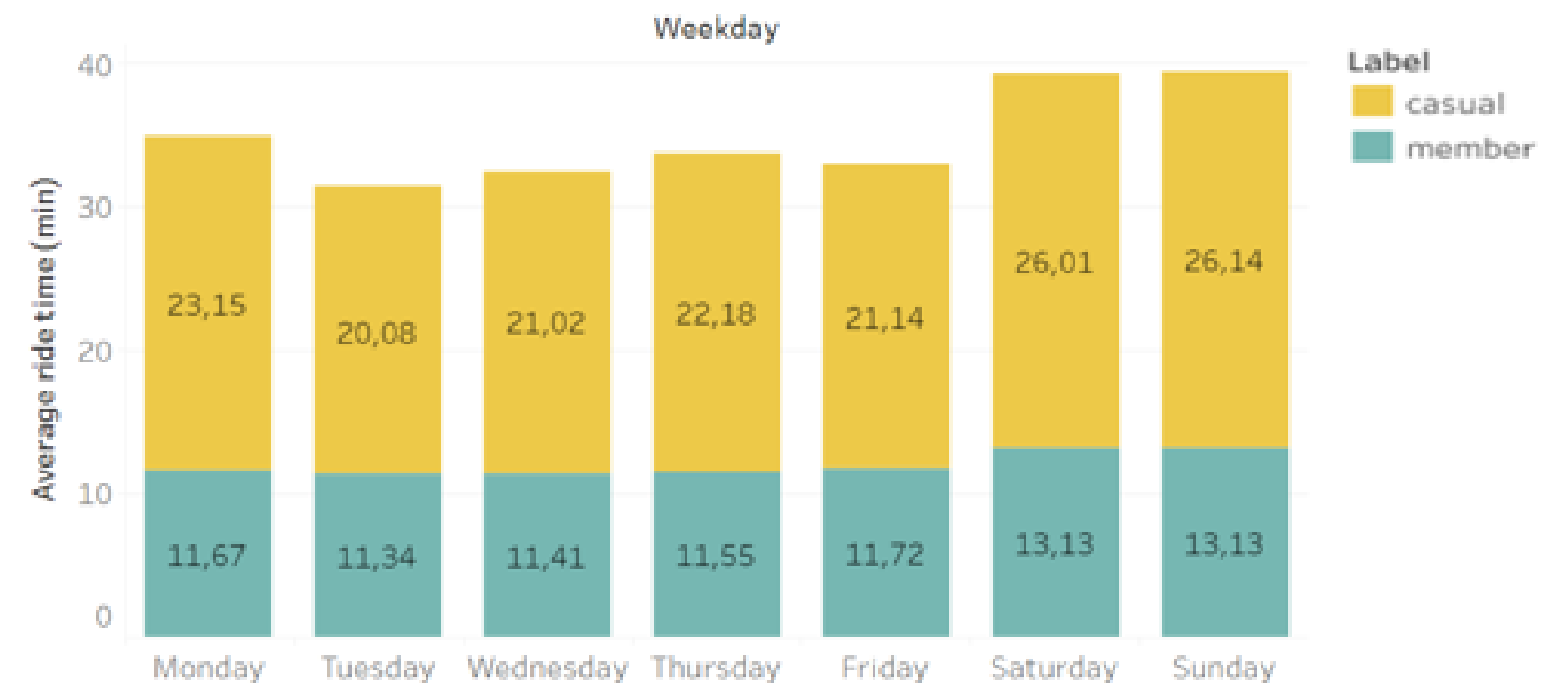


What is the duration of each user type rides?

Does it vary per week day?

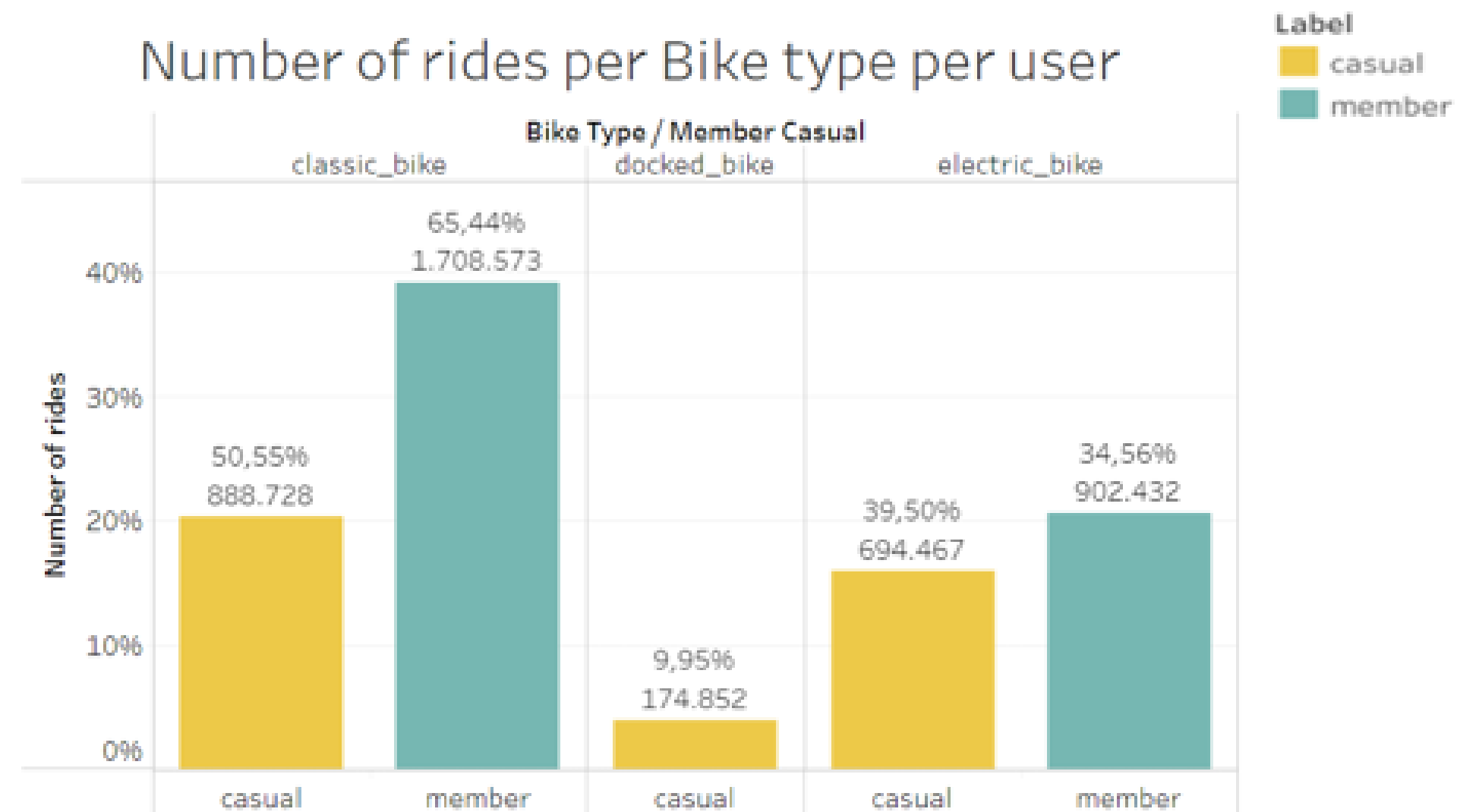
- Casual users ride longer than members.
- Members have less variation in their ride duration throughout the week, slightly longer rides during the weekend. Again this reinforces the idea that members may be commuting to work

Average ride time by weekday for each user type



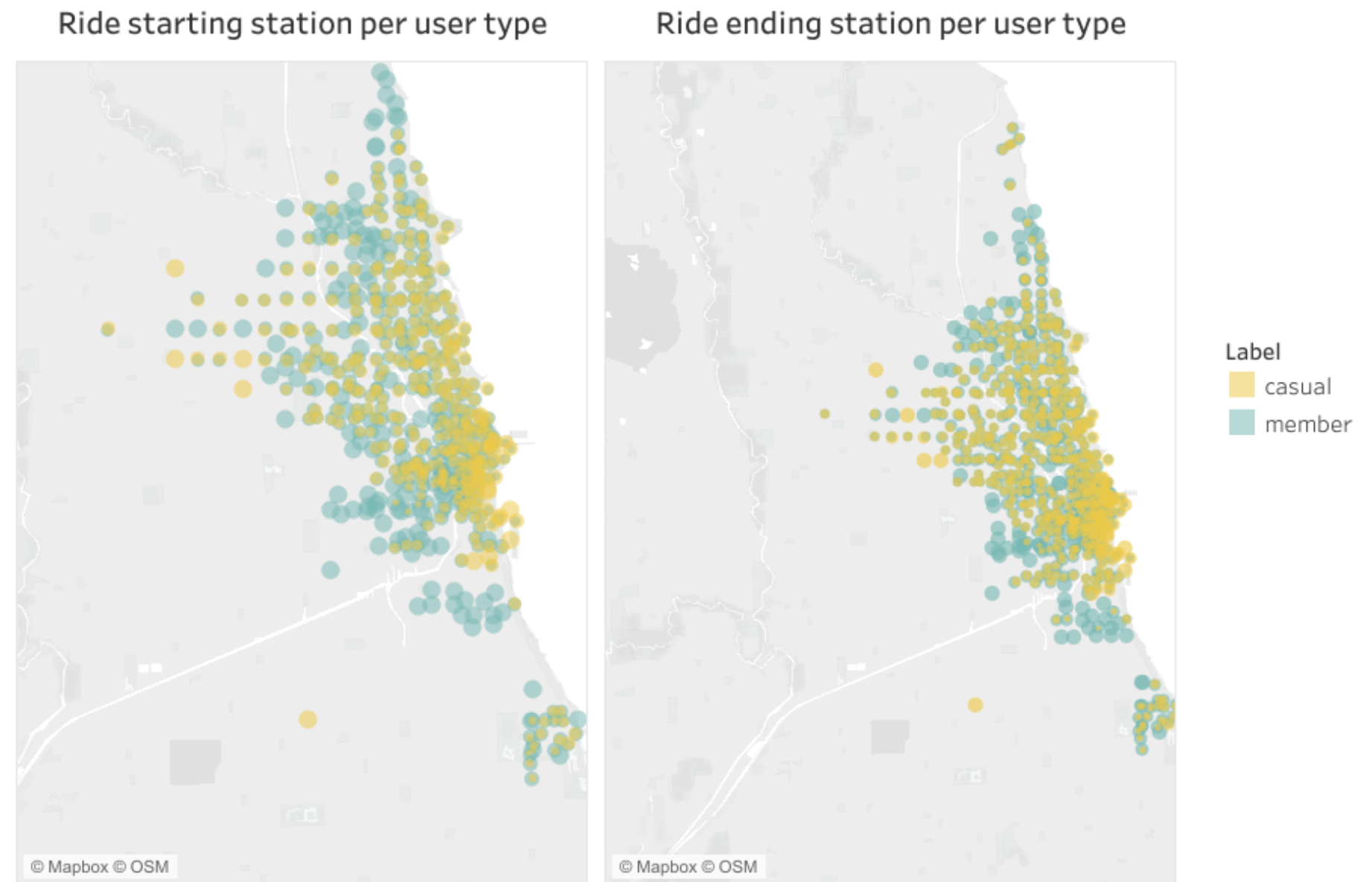
Do members and casual users have different bike type preference?

- Both groups prefer to ride in classic bikes
- Only casual riders use docked bikes
- Members don't go for docked bikes presumably because they want the freedom to park their bikes.
- Casual customers might be tourists that don't mind the start and end point of the ride



Where does each type of user start and end their trip?

- Casual riders tend to start their trips more frequently downtown than annual members.
- Members start their trips further from downtown.
- There isn't much different between ending station for customers.
- Both tend to end their rides closer to downtown.



Conclusion

13

- The analysis results seem to show that annual members and casual users are two different customer groups.
- More than half (59,76%) of rides are made by Cyclistic annual members.
- The average ride time for members is considerably lower than casual riders, which seems to indicate that members use Cyclistic bikes for different purposes comparing to casual riders. Due to this, there may be opportunities to review the company pricing plan and passes for casual users.
- The members are probably locals who use the bikes daily to commute to and from their workplaces, while casual customers are most likely tourists and use the bikes for leisure and sightseeing around Chicago.
- Cyclistic can try to build a campaign to turn casual customers to members, especially during spring and summer but it will most likely be difficult, since they have such different purposes.
- The amount of casual rides (more than 1.7 million) is still considerable, and we might have some opportunities to convert them to members to get more value.

Suggestions and recommendations

Change pricing plans

Cyclistic doesn't have a pricing limit per ride duration. they might be losing new annual memberships because of the full-day passes.

Maybe creating a weekend membership can allow casual riders to become members. This would allow Cyclistic getting more value from their customers.

Membership Referral campaign

To increase the membership base the company might consider a campaign giving additional benefits or discounts to the existing members with a referral program. Specially during spring and summer.

Reference

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- 01 Cyclistic's Data: <https://divvytripdata.s3.amazonaws.com/index.html>
- 02 Data license: <https://ride.divvybikes.com/data-license-agreement>
- 03 Full report link : [https://github.com/Catarinaperiquito/Google-Data-Analytics---](https://github.com/Catarinaperiquito/Google-Data-Analytics---Cyclistic-Case-Study#readme)
- 04 [Cyclistic-Case-Study#readme](https://github.com/Catarinaperiquito/Google-Data-Analytics---Cyclistic-Case-Study#readme)
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Thank you