Casual clients vs. Annual members
A Chicago bike-share story

Discovering differences in consumer behaviour between the two customer types

Presented by:
George Tsolov
12-03-2022

Table of contents

– Introduction –

The main goal is to identify the differences in consumer behaviour between the two customer types of **Cyclistic bike-share** (a fictional Chicago-based company). The business task is to increase the number of casual customers who buy annual subscriptions.

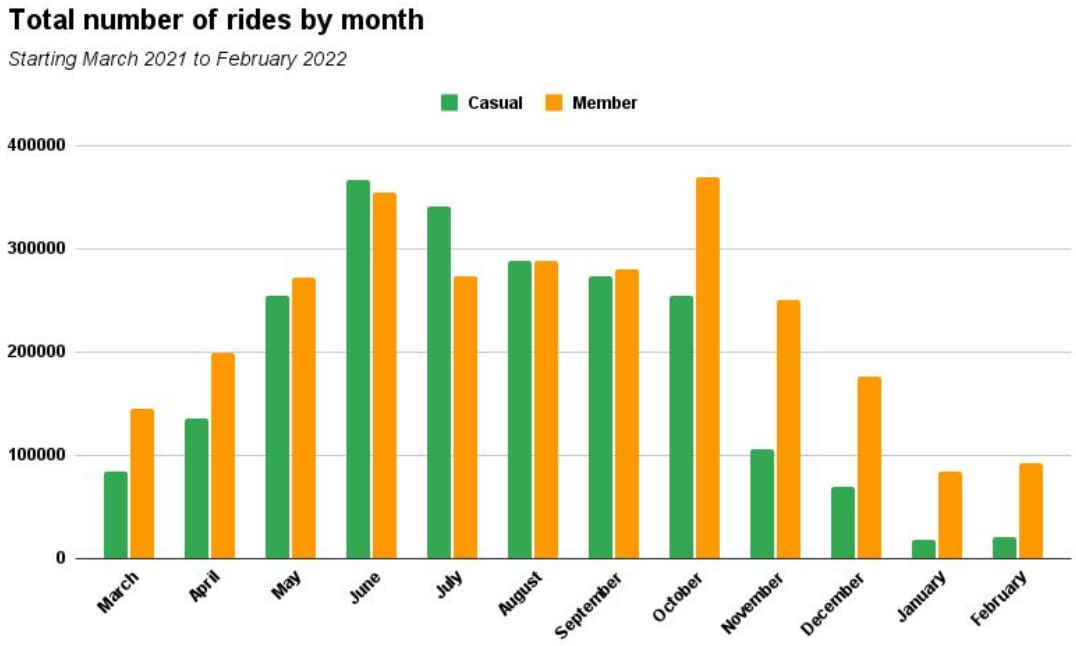
Period of observation are the last twelve months (March 2021 to February 2022). Objects of analysis are the aforementioned **casual rider** and **annual member** (referred to from here on out as **Casuals** and **Members**, respectively).

Business task related metrics are **ride_count** (the total number of rides taken), and **ride_duration** (the average duration of rides).

– Analysis –

Starting with the distribution of total number of rides **by month**.

For both groups, we can see a decrease in the number of rides over the winter months. Probably to be expected. However, the difference in monthly distribution of rides between the groups, also sees a significant change. November to February, Casuals account for only 20 to 30 percent of all rides. A significant contrast to the rest of the year, where both groups are fairly even.

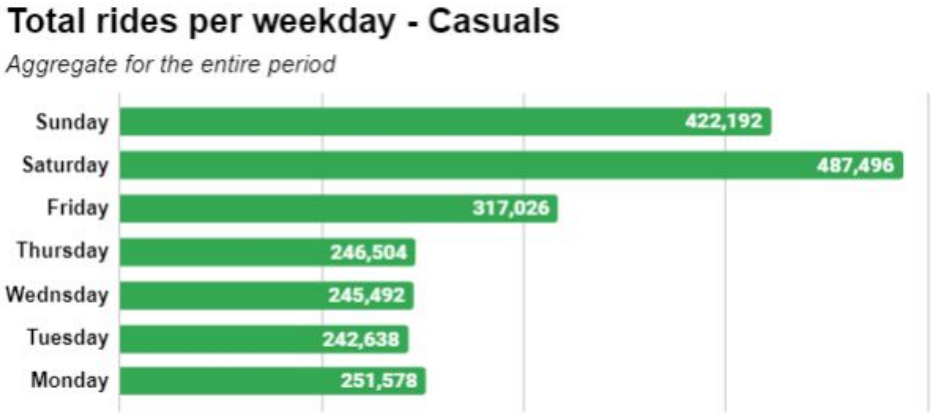


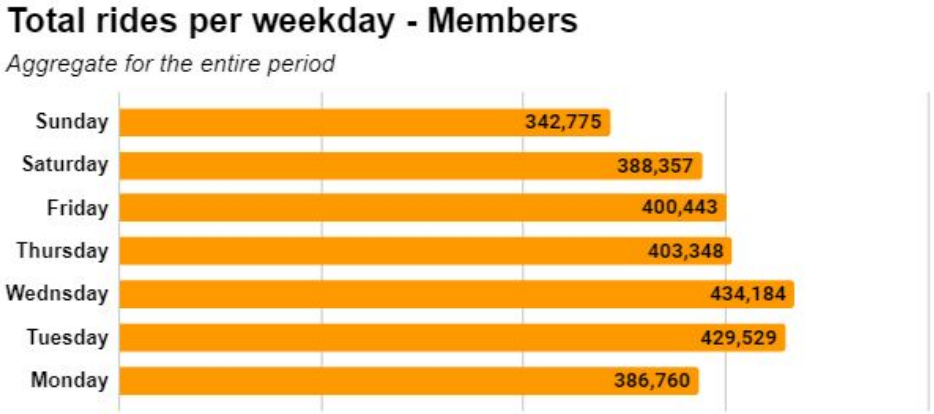
Taking a look here at the total number of rides over the period based on **day of the week**.

Interesting is the drastic upswing of total rides for Casuals over the weekends. We see a 60 to 100 percent increase compared to most workdays. We can assume that Casuals use the service mostly for leisure activities.

Member numbers are distributed more evenly, with some of its lowest over the weekends, and highest during midweek. In this case, most rides likely take place to-and-from work.

We can speculate all we want. But, a discrepancy in consumer behaviour is apparent. Further analysis should be conducted.

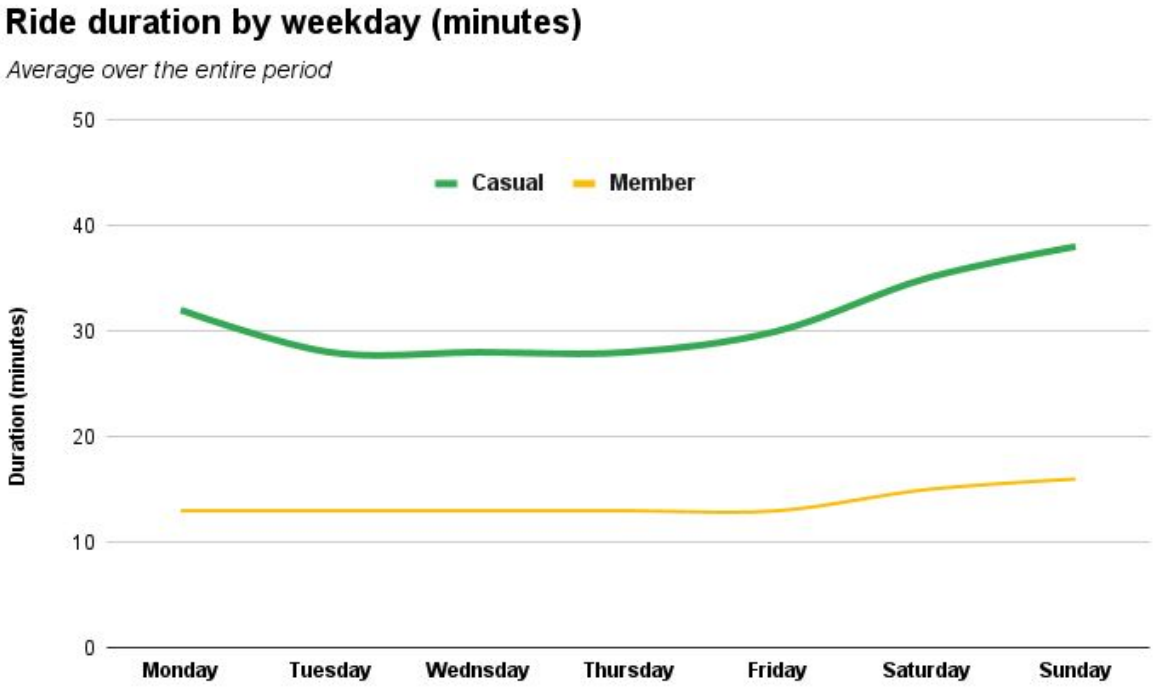




Taking a look at the **average ride duration** over the period, we observe another interesting find. On average, Casual ride duration is 32 minutes, compared to Member ride duration at only 14 minutes. Once again, this find reinforces the apparent discrepancy in consumer behaviour.

Continuing the weekend-trend for Casuals, on the right here, we see an increase in ride duration over the weekends.

In comparison, Member ride duration remains fairly constant regardless of season or weekday.



– Recommendations –

A **good place to start** would be to also focus on finding **similarities** between the two groups. The new marketing campaign should be aimed at Casuals who behave like Members. That would be an easier transition. Further analysis needed.

Second, there is a clear correlation between the type of customer and average ride times. We should plan and conduct a **survey** trying to **find the cause** of this behaviour. The survey will help us better understand our customers and prepare for the marketing campaign.

Looking at the data, we recognize that Casuals are more active on a weekend- and seasonal basis. From this we would recommend revisiting the pass-system as a whole and considering adding more options, like Weekend and Monthly pass. We believe this would appeal to more Casuals, transitioning them into Members.

A few final thoughts remain: Would Casuals behave as Members if they had an annual pass? Would Members ride less if they had other pass options?

Thank you for your time.

– Appendix –

Data has been made available by **Motivate International Inc.** under the following license.

Data is original, reliable, comprehensive, and current. No PII (Personal Identifiable Information).

This is a capstone project for the Google Data Analytics Professional Certificate.

Tools used - Google Sheets, BigQuery, Tableau

– Cleaning process –

1. Check for duplicates - done. Remove whitespace - done.
2. Removed latitude and longitude fields
3. Rename **rideable_type** to **bike_type**
4. Rename **member_casual** to **customer_type**
5. Filter **bike_type** - only 3 types, no null/na
6. Filter **customer_type** - only the 2, no null/na
7. Format **started_at** & **ended_at** to Date-Time format
8. Add column **day_of_week** to show what day of the week it was **=WEEKDAY(C2,2)** --- Note! Type = 2 makes Monday = 1. Week starts on Monday (as it should :p) Also, format data type to number!
9. Add column **ride_minutes** subtracting started_at from ended_at. **=(E2-C2)*24*60**
10. Decided to make it in minutes. Seconds would be harder to understand.
11. Check if **ride_minutes <= 0**. Conditional formatting by color. Delete any records that are <= 0
12. Cleaned and prepared all 12 table. Files were pretty big so I had trouble in Spreadsheets. Made a union using SQL. Aggregated file - in BigQuery