

## **CYCISTIC BIKE SHARE PROJECT**

### **Project Description**

Cyclistic is a bike sharing company located in Chicago. It was founded in 2016 and operates about 5824 fleet of bicycles located in 692 docking stations across the city of Chicago. Cyclistic has two types of riders, casual riders and subscribers. Subscribers pay an annual fee and can use the bike at will while casual riders pay per ride. The company earns more revenue from subscribers compared to casual riders.

This data analysis project is focused on studying the behaviour of both casual riders and subscribers, the company hope to unlock insights on how to convert more casual riders to subscribers. The marketing team of this company needs to understand how these two groups of users utilize the bike sharing service so they can create a marketing campaign to compel casual riders to buy the annual membership.

Cyclistic sets itself apart by also offering reclining bikes, hand tricycles, and cargo bikes, making bike-share more inclusive to people with disabilities and riders who can't use a standard two-wheeled bike. The company offers three pricing plans i.e., single-ride pass, full-day passes and annual membership. Customers without annual membership are referred to as casual riders. Customers who purchase annual membership are referred to as Cyclistic members.

### **Data**

For this project, the company has provided its historical trip data, bike ride data for the past twelve months will be analyzed to identify trends and patterns of customer behaviour. This data was made available and licensed by motivate international inc. The data is in twelve different csv files, one file for each month from April 2020 to March 2021

### **Tools**

- Jupiter notebook
- Python
- MS excel
- Tableau

### **Analysis/ Findings**

- Casual riders and members take different routes, the top start and end stations for casual riders are streeter drive and grand avenue with 25,941 rides while the top start station for members is clark street and elm street with 19967 rides
- There was a total of 3,429,432 rides in the 12 months under consideration from April 2020 to March 2021. Casual riders make up 41.12% of the total rides while members make up 58.88% of the total rides
- August is the peak / busiest month for the ride share company with 609890 rides representing about 17.78% of total rides
- August is also the busiest month for both subscribers and casual riders with 325106 and 284784 rides respectively
- The average ride duration for casual riders is 45.01 minutes while that of members is 15.88 minutes

- Casual riders on the average take the most rides on Sunday, with 25.52% of their rides taken on a Sunday. They also take the least number of rides on a Tuesday, which makes up 10.16% of total rides
- Member rides throughout the days of the week are fairly consistent with Saturday representing the highest number of rides at 15.72% and Sunday representing the least number of rides at 12.91%
- The average ride duration for members during the weekdays is fairly average at 15.1 minutes with the weekends slightly higher at 17.62 minutes on Saturdays and 18.04 minutes on Sundays
- The ride duration for casual riders is less consistent compared to member riders. Sunday has the longest ride duration with 50.76 minutes, while Wednesday has the shortest ride duration with 40.36 minutes
- The start time of rides for both casual and member riders were analyzed and the peak time was 5pm with 350787 (10.23%) rides starting at that time. 9.82% (138598) of casual rides started at this time and 10.51% (212189) of member rides started also at 5pm
- For the weekend (Saturday and Sunday), both casual and member riders have 2pm as their peak period
- 69.92% of member riders prefer docked bike while 17.90% use electric bike, the rest (12.18%) prefer classic bike. The same trend goes for casual riders with 78.3% opting for docked bike, 16.72% for electric bike and 4.98% for classic bike

## **Conclusion**

From the analysis and findings, there are similarities and differences between the behaviour of casual riders and members. We can conclude that members are most likely residents of the community that bike to work or use the bike share for their daily routine while casual riders are most likely tourists or residents that use the bike share service for leisure and/or recreational purposes.