CAPSTONE PROJECT

Shanjali Arul

I’m a junior data analyst at BikeAway, a fictitious company inspired by the Divvy bike-share system in Chicago. My role is to distinguish between casual riders and members, and use this analysis to develop strategies that could encourage casual riders to become members.

Tools Utilized: Excel, PostgreSQL , RStudio, and Tableau

Inquiry Phase: Understanding the business questions and tasks. Questions: What sets casual riders apart from members? Why would casual riders want to become members? How can digital media persuade casual riders to consider membership? Stakeholders Identified: Lily Moreno, Marketing Director Cyclistic marketing analytics team Cyclistic executive team Business Objective: Increase the number of annual memberships by converting casual riders into members.

**Hypothesis**: Casual riders’ conversion to membership is influenced by ride length, bike type, season, and day of the week.

Processing Phase: I used Excel Power Query to transform and merge the 12 months of data. To bypass Excel’s limitations, the dataset was loaded into the data model as a connection. Then, using DAX Studio—which recognizes the data model—I exported the dataset as a new CSV file named ‘cyclistic\_full\_year.csv.’ Additional data manipulation and cleaning were performed in R Studio. Please refer to the Markdown file for details.

Key Discoveries: Even though the number of members is almost twice that of casual riders, the total ride length between the two groups isn’t as disparate as anticipated. Casual riders had a significantly longer average ride length than members, which helps account for the relatively small difference in total ride length. Casual riders on classic bikes had an average ride length twice as long as that of members on classic bikes. Day passes offer casual riders unlimited 3-hour classic bike rides within a 24-hour period, which helps explain the large discrepancy. Casual riders were more active during the 2nd and 3rd quarters of 2023. Casual riders were more active on weekends, possibly dedicating their time to leisure or exercise.

Top Suggestions: Allocate resources to increase marketing campaigns aimed at converting casual riders into members during the spring and summer months. After each bike unlock and dock at a top starting and ending station, display an ad in the app promoting the membership and its advantages. Allow casual riders to earn points towards an annual membership by completing certain tasks every weekend. Similar to the “Bike Angels” perk, casual riders can find opportunities to help them purchase a membership. Introduce a second-tier membership that offers riders a free hour with classic bikes, instead of just 45 minutes. This might attract casual riders who frequently use day passes to consider a membership that suits their daily needs. Use TikTok and YouTube shorts to quickly highlight the benefits of memberships. Also, enable content creators to offer discount codes and free trials