**Cyclistic Bike-Share Program:**

***Conversion of Casual Riders to Annual Members***

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*On August 11th, 2023*

**1. Business Task Statement:**

To understand the differences in bike usage patterns between annual members and casual riders of the Cyclistic bike-share program, with the aim of designing targeted marketing strategies to convert casual riders into more profitable annual members.

**2. Data Sources Description:**

***Source:*** Cyclistic historical bike trip data from July 2022 to June 2023

***Data Attributes:***

- Rider type (Casual or Member)

- Trip start date and time

- Trip end date and time

- Trip duration

- Start station name

- End station name

- Bike type used for the trip (e.g., electric, classic, docked)

- Other attributes relevant to the trip

This data provides insights into when, where, and how both types of riders use the Cyclistic service, enabling a comparative analysis of behavior and preferences.

**3. Data Cleaning and Manipulation:**

***Data Augmentation:***

*1. Adding Time-related Columns:*

- Added columns to the `June2023` table for the month (`trip\_month`), day of the week (`trip\_day\_of\_week`), and duration of the trip (`trip\_duration\_time`).

- Populated these new columns based on the `started\_at` and `ended\_at` timestamps.

***Data Consolidation:***

*1. Quarterly Data Creation:*

- Created quarterly tables for Q3 and Q4 of 2022 (`2022\_Quarter\_3` and `2022\_Quarter\_4` respectively) by merging monthly data tables.

- Similarly, created quarterly tables for Q1 and Q2 of 2023 (`2023\_Quarter\_1` and `2023\_Quarter\_2` respectively).

*2. Annual Data Creation:*

- Created a comprehensive table `Annual\_Data` that collates all monthly data from July 2022 to June 2023.

***Data Cleanup:***

*1. Standardizing Member Categories:*

- Cleaned and standardized the `member\_casual` column in the `annual\_data` table to ensure consistent labeling.

- Removed any leading or trailing spaces and non-printable characters from the member categories.

- Standardized the naming to just 'member' or 'casual', eliminating variations like 'Members', 'MEMBER', 'Casuals', etc.

By conducting the above steps, the data is now in a consolidated, standardized format and augmented with additional time-related attributes, paving the way for a detailed comparative analysis between annual members and casual riders.

**4. Analysis Summary:**

*a. Seasonal Preferences:*

- Both user segments showed a distinct preference for Q3 (summer months), with members contributing 54% of rides and casual riders at 46%.

- Casual riders demonstrated a significant increase in activity from March to April, suggesting a potential seasonal influence in their bike usage.

*b. Time Preferences:*

- Members primarily utilized bikes during traditional commuting hours, suggesting they might be using the service for their daily work commute.

- Casual riders, in contrast, showed a spike in usage during mid-morning to early afternoon, indicative of leisure or tourism-oriented use.

*c. Bike Type Preferences:*

- Members displayed a near-even split between classic bikes and electric bikes.

- Casual riders leaned heavily towards electric bikes, which constituted 57.85% of their bike usage. This suggests a preference for ease of use and speed.

*d. Day of Week Preferences:*

- Members showed higher activity during weekdays, especially on Wednesdays and Thursdays.

- Casual riders were more active during weekends, with Saturdays being the most popular day for rides.

*e. Location Preferences:*

- Members showed a preference for city-centric stations, suggesting practical usage like daily commuting.

- Casual riders were drawn to scenic and tourist-friendly spots, pointing towards recreational or sight-seeing preferences.

For further analysis and recommendations for Cyclistic, check out [this dashboard](https://public.tableau.com/app/profile/joseph.gaffney/viz/CyclisticCaseStudy_16917701122620/Dashboard?publish=yes).