Cyclistic bike-share analysis

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PREPARED BY
E. Raghavi Niranjani
BADM - 5 Batch Student

APPROVED BY
GUVI, IIT Madras

Business Problem

Cyclistic is a bike-share company based in Chicago with two types of customers. Customers who purchase single-ride or full-day passes are known as casual riders, while those who purchase annual memberships are known as members. Cyclistic's financial analysts have concluded that annual members are much more profitable than casual riders. The director of marketing believes the company's future success depends on maximizing the number of annual memberships.

The marketing analytics team wants to understand how casual riders and annual members use Cyclistic bikes differently. From these insights, the team will design a new marketing strategy to convert casual riders into annual members. The primary stakeholders for this project include Cyclistic's director of marketing and the Cyclistic executive team. The Cyclistic marketing analytics team are secondary stakeholders.

It's necessary to design marketing strategies aimed at converting Cyclistic's casual riders into annual members. For the scope on this data analysis report, we need to analyze the following challenging points:
- How do annual members and casual riders use Cyclistic bikes differently?
- Why would casual riders buy Cyclistic annual memberships?
- How can Cyclistic use digital media to influence casual riders to become members?

By looking at the dataset, a broad sense of certain patterns that are occurring in the two different groups can be found. Understanding the differences will provide more accurate customer profiles for each group. These insights will help the marketing analytics team design high quality targeted marketing for converting casual riders into members. For the Cyclistic executive team, these insights will help Cyclistic maximize the number of annual members and will fuel future growth for the company.

Data Source

For this analysis, Cyclistic's historical bike trip data from the last 12 months will be used. The data is made available by Motivate International Inc. under this license. The data is stored in spreadsheets. The dataset is in .CSV file with structured data in rows and columns. The dataset taken is public data that contains accurate, complete and unbiased info on Cyclistic's historical bike trips. It can be used to explore how different customer types are using Cyclistic bikes.

Methodology

01 DATA CLEANING AND MANIPULATION

Dataset is examined for duplilcate values, missing values and null values. After checking data it is found that "start station name and ID" and "end station name and ID" for some rides are missing. Further observations suggest that the most missing data about "start station name" belongs to "electric bikes". Additionally, because of data privacy issues, riders are not personally identified and, although each ride ID was checked and confirmed to be distinct, there is no way to tell if the same rider has purchased multiple single passes, or if they live in the Cyclistic service area. This limitation could affect our analysis for electric bike use, and for profiling casual riders beyond our hypothesis.

02 DATA ANALYSIS

Using SQL, the dataset is analyzed to find and interpreted to get insight. Parameters like Average Ride Length, Maximum Ride Length, Total Trips - Overall, member and casual, Looking at top 100 longest rides for casual riders to check for outlliers, Popular start and end station.

03 DATA VISUALIZATION

Using Tableau, to convert data into visualization chart to interpret and get insights clearly.

Recommendation

- Use local influencers on social media platforms such as instagram, You Tube, Snapchat and Tiktok to promote the bikeshare and show its appeal to city residents.
- Highlight the convenience and ease of using Cyclistic as a solution for locals during the "good weather" period in Chicago.
- Focus on promoting the benefits and safe use of electric bikes, as they may be an area of growth for Cyclistic.
- * More data is needed to understand the proportion of casual riders who are local residents, or visitors from out of town in order to customize membership programs.
- ** More data is needed on the most popular starting and ending locations for bikeshare trips to aid in marketing and bike distribution.

Summary

- Members primarily use bikeshare for commuting and task, while casual riders use it on weekends for longer rides and recreation.
- Identify local, casual riders and offer seasonal "good weather" membership option to increase conversion.
- Hire local content creators to document bikeshare trips around Chicago to improve Cyclistic's image and attract new customers.