# Data Analysis Summary for Cyclistic Data

# Overview:

In 2016, Cyclistic launched a successful bike-share offering. Since then, the program has grown to a fleet of 5,824 bicycles that are geotracked and locked into a network of 692 stations across Chicago. The bikes can be unlocked from one station and returned to any other station in the system anytime. Until now, Cyclistic’s marketing strategy relied on building general awareness and appealing to broad consumer segments. One approach that helped make these things possible was the flexibility of its pricing plans: single-ride passes, full-day passes, and annual memberships. Customers who purchase single-ride or full-day passes are referred to as casual riders. Customers who purchase annual memberships are Cyclistic members. Cyclistic’s finance analysts have concluded that annual members are much more profitable than casual riders. Although the pricing flexibility helps Cyclistic attract more customers, Moreno believes that maximizing the number of annual members will be key to future growth. Rather than creating a marketing campaign that targets all-new customers, Moreno believes there is a very good chance to convert casual riders into members. She notes that casual riders are already aware of the Cyclistic program and have chosen Cyclistic for their mobility needs. Moreno has set a clear goal: Design marketing strategies aimed at converting casual riders into annual members. In order to do that, however, the marketing analyst team needs to better understand how annual members and casual riders differ, why casual riders would buy a membership, and how digital media could affect their marketing tactics. Moreno and her team are interested in analyzing the Cyclistic historical bike trip data to identify trends.

# Questions:

1). How do annual members and casual riders use Cyclistic bikers differently?

2). Which is the best time, months, year and days, for posting targeted advertisements for?

3). What are the best locations for targeted marketing?

# Observations:

- The observation was that for the casual riders, the time was lowest in January but begun to climb in February sharply to June. Then it rose slightly and peaked in July. After that it began to steadily declined until November then it dropped slightly in December. December was higher than January.

- The observation was that for the member riders, the time was lowest in January. As in casual riders, it rose steadily to June where it leveled and fluctuated minimally until a significant decline was seen from September. It sharply declined from there to November and slightly dropped in December. December was higher than January.

- The total was similar to the casual riders more than the member riders at the beginning. It began with a steady increase to June. It slightly rose in July but started to fall significantly in August until October when it sharply declined until November and slightly decreased in December. At the end it had a bigger resemblance to the member riders.

- I also observed that some stations had a higher number of casual riders or heave casual riders on specific days. Also, the casual riders seemed to spike I certain months. These months were from June to October. In my analysis of the week data, the increase of casual riders was increased on Friday and peaked on Saturday. It went down on Sunday, slightly. There was a slight increase on Monday which might have been attributed to casual riders going to their jobs on Monday.

# Conclusion:

- form my observations I can conclude that the best way for Cyclistic to proceed for their marketing strategy is to produce targeted advertisements on Mondays, Fridays Saturday and Sundays for the casual riders to join and become members between June and October in the 140 stations that I have selected by use of my analysis on the data of the year 2021. This will ensure the highest amount of either casual rider traffic or the heaviest casual riders (heavy refers to time usage). If either is true it would be still highly profitable to advertise during the specified time period according to the data that I worked with.

# Suggestions:

Additional data like actual travelers (without any identifying information of course) corresponding to the ride ids and payments corresponding to time used would help in making better targeted marketing strategy so as to better ascertain the actual profitable days. Also, to better ascertain the big spenders so that they could be targeted since they are the most likely to purchase memberships because the time frame given, even though a bit smaller than what we begun with, is quite large and might lead to wasted resources. This would further close the gap but also keeping in mind that if we overfit the data, it might not make the best prediction and we might fail completely by focusing on a small window and miss the actual targets of the marketing strategy. Weather data for the various stations and crime reports will also helping the making of decisions since weather conditions will definitely affect people’s propensity for choosing bicycles as their mode of travel and crime can make people weary of traveling in an open mode of transport like a bicycle.

Citation: Divvy Bikes, divvy-tripdata, Divvy Bikes.