Task Deliverables: Capstone Project (Trip Data)

* Task 1: A clear statement of the business task.

How do annual members and casual riders use Cyclistic bikes differently?

* Task 2: A description of all data sources used.

The data used for my analysis came from Cyclistics which is a bike share program.

* Task 3: Documentation of any cleaning or manipulation of data.
* Filtered data to removed blanks.
* Deleted columns I am not working with.
* Changed the ride length format from decimal to hh:mm:ss.
* Task 4: A summary of your analysis and supporting visualization.

To answer the question for the business task “How do annual members and casual riders use Cyclistic bikes differently?”, I analyzed the dataset provided to me by Cyclistics bike-share for the year of 2022.

Based on my analysis I gained insights on the following;

1. Member riders use the cyclist bike on weekdays more than casual riders. While Casual riders use the cyclist bike on weekends more than member riders. This shows that more riders who use the bikes for maybe work, school or business meetings which takes place mostly on weekdays are member riders and more riders who use the bikes for leisure which usually happens on weekends are casual riders. This leads to the assumptions that;
2. Even though there are casual riders who use the bikes on weekdays, casual riders have the highest overall riding percentages i.e. Saturday (21%) and Sunday (17%) and hence they will see no need to subscribe to membership. This is because they might be riding the bikes for either sports, family bonding, relaxation, playing. This happens only twice a week, for the majority casual riders and hence they will see no need for membership.
3. Since majority people who use the bikes on weekdays are members and I also assume that since you are a member you can also use the bikes on weekends which means that members who use the bikes on weekdays are the same people who use the bikes on weekends.

The reason for a drop in percentage of member rides on weekends could be that most members rest on weekends or just use the bikes to either beat traffic, meetup with time or its cheaper to subscribe to the bike share program than use the public transportation.

This analysis can be seen in the following charts below.

1. From the total monthly ride, we will see that member riders use the bikeshare program more than the casual riders throughout the year (January through December). June and August have the highest monthly rides which happens to be in summer, while December, January and February have the lowest monthly rides. This is because these months happen to be in winter which makes these months very cold and not conducive to use bikes. Notwithstanding member riders are higher than casual riders.
2. The average ride length per week of casual riders is higher than that of member riders throughout the week most especially on weekends. This shows that casual riders go on longer distance than member riders. This could mean that casual riders are mostly people who love to exercise using bikes while member riders are mostly who just want to get to work, or meetings early wile beating traffic.

1. Member riders have a ride percentage of (60%) while Casual riders have a ride percentage of (40%). Which means that the percentage ride of member riders surpasses casual riders by 20%. This means that most people who really need bikes to maybe go for work, meetings, to beat traffic and then coupled with exercise maybe after work and on weekends, just subscribe to membership. This means that becoming a member is more financially convenient for them than paying for single ride passes and full ride passes. While casual riders will prefer the single ride passes or full ride passes since majority users use bikes mostly on weekends.

* Task 5: Key findings.

Based on my analysis above, I found out that;

* Member riders use bikes more on weekdays than on weekends, while casual riders use bikes mostly on weekends than on weekdays.
* The average weekly ride length for casual riders is more than the average weekly ride length for member riders.
* Riders use the bikeshare program based on the seasons which means that total rides in winter are significantly lower than total rides in summer, fall and autumn. The season with the highest rides is summer which happens to be in the months of July and August.
* Member riders make up 60% of the total annual rides while casual riders make up 40% of total annual rides.
* Member riders use only classic and electric bikes while casual riders use classic bikes, electric bikes and docked bikes.
* Task 6: Your top three recommendations based on your analysis.

From my analysis and key findings, I would recommend the following;

* Cyclistics bike share company can organize competitions for all its member only with very attractive prizes. This can draw the attention and interest of casual riders.
* I would recommend proposing membership discounts to casual riders so as to encourage them to subscribe to membership.
* Do social media adverts like posting videos and photos, showing all the benefit of being a member or subscribing to membership. The benefits could be randomly selecting members and sending them treats like t-shirts, home equipment or gadgets. This offers will draw the attention of casual riders, encouraging them to subscribe for membership.