



19 APRIL 2024

**AN ANALYSIS REPORT ON CASUAL RIDERS VS
SUBSCRIBERS**

CYCLISTIC



Dimpy Thapa

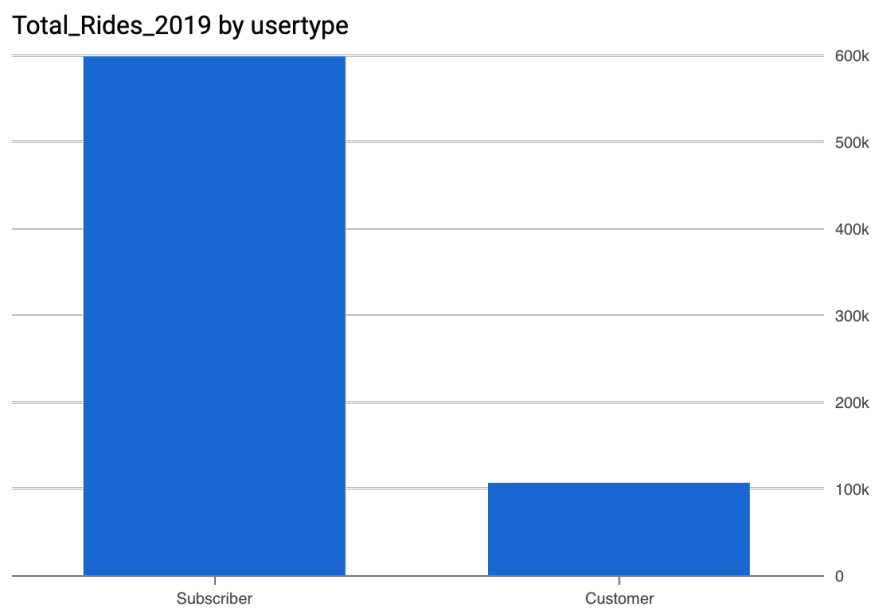
CAPSTONE PROJECT

Scenario

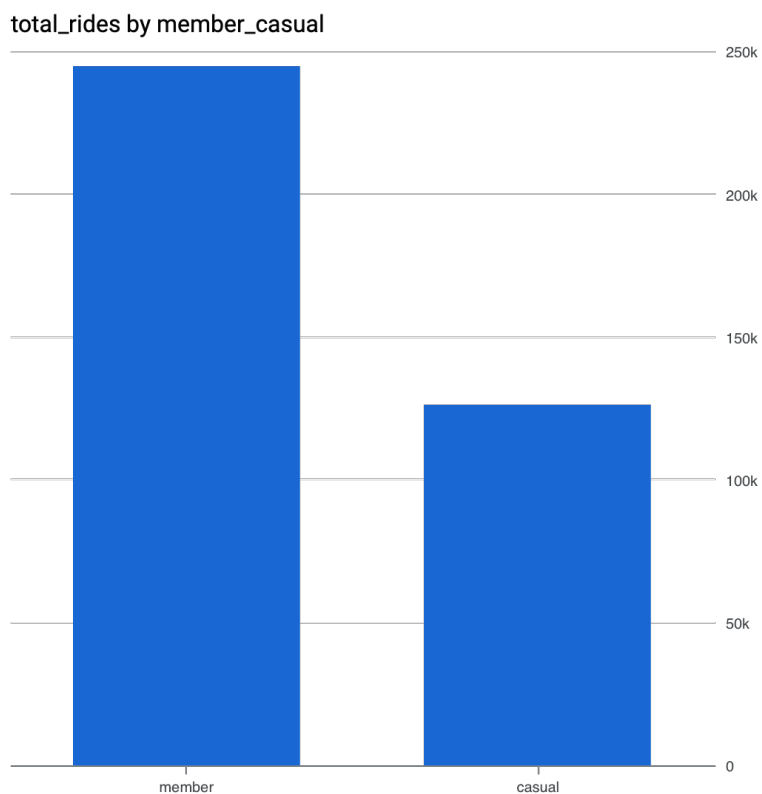
You are a junior data analyst working on the marketing analyst team at Cyclistic, a bike-share company in Chicago. The director of marketing believes the company's future success depends on maximizing the number of annual memberships. Therefore, your team wants to understand how casual riders and annual members use Cyclistic bikes differently. From these insights, your team will design a new marketing strategy to convert casual riders into annual members.

Ask -How do annual members and casual riders use Cyclistic bikes differently?
Why would casual riders buy Cyclistic annual memberships?

Total Rides taken by Subscriber vs Customer Riders (2019)



Total Rides taken by Member vs Casual Riders (2022)



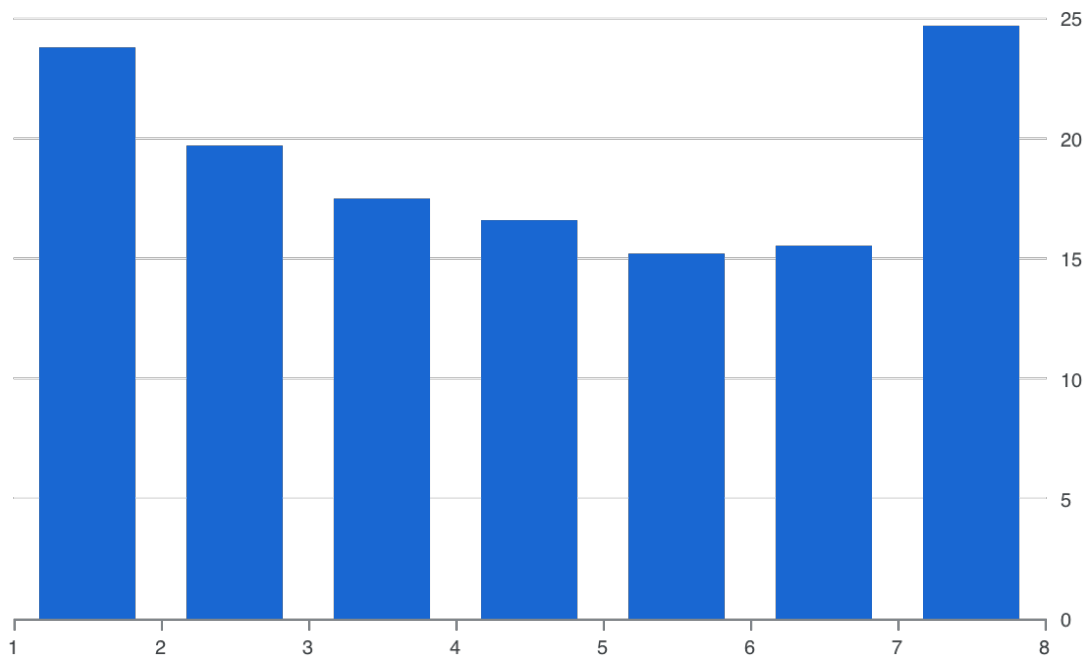
X Axis- Member Details, Y Axis-No of Rides

AVERAGE RIDE LENGTH BY RIDERS THROUGH OUT WEEK

A quick analysis on the average ride time (minutes) reveals a higher average ride time during the weekends as compared to weekdays.

2019 DATA

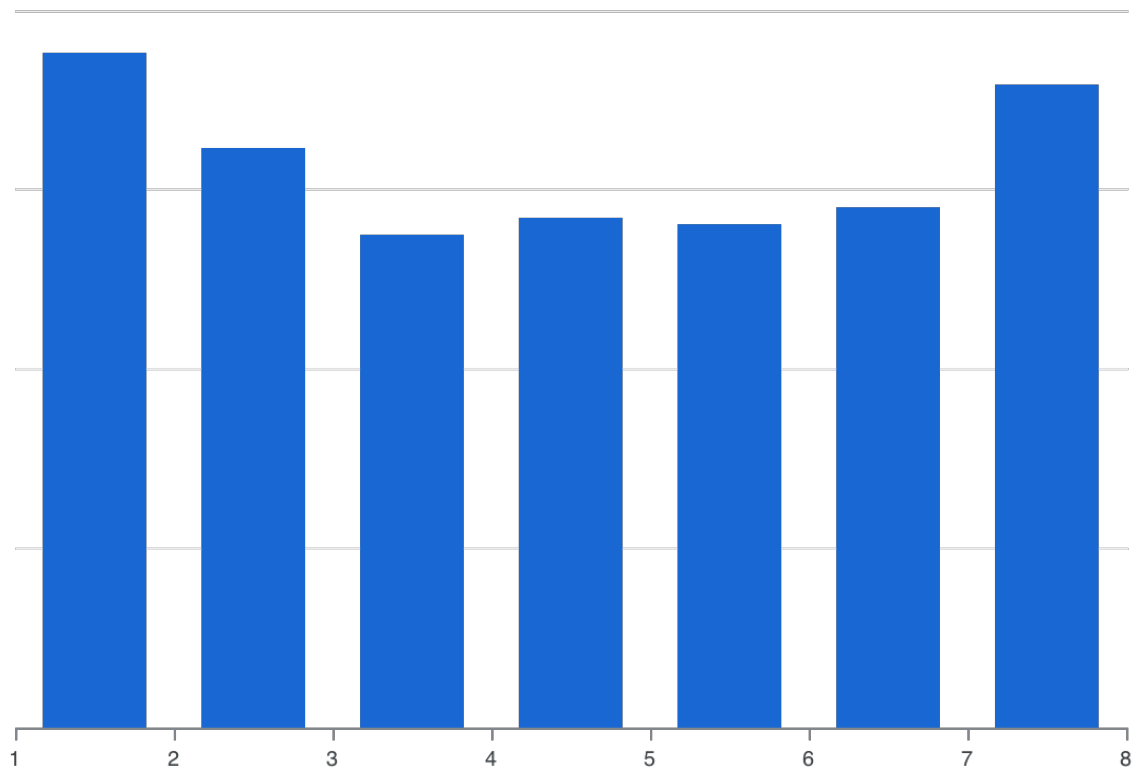
AVG_ride_length_minutes by weekday_number



X AXIS- WEEKDAY Y AXIS-RIDE LENGTH (MINS)

2022 DATA

AVG_ride_length_minutes by weekday_number

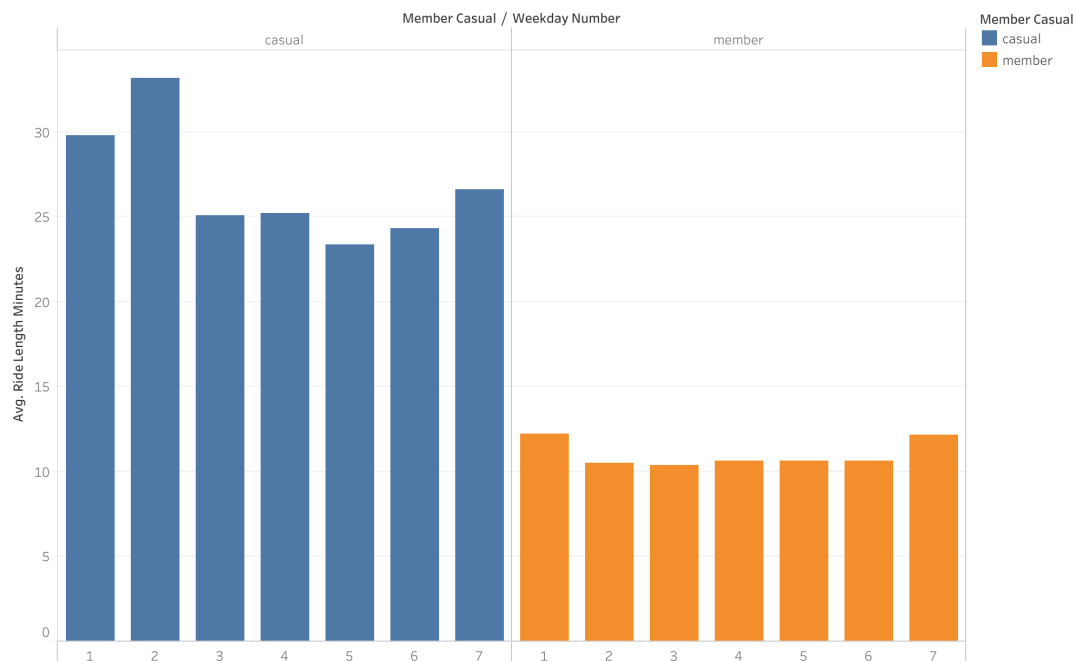


Further Analysis in Tableau revealed for 2022 that Casual Riders had more ride time than Members

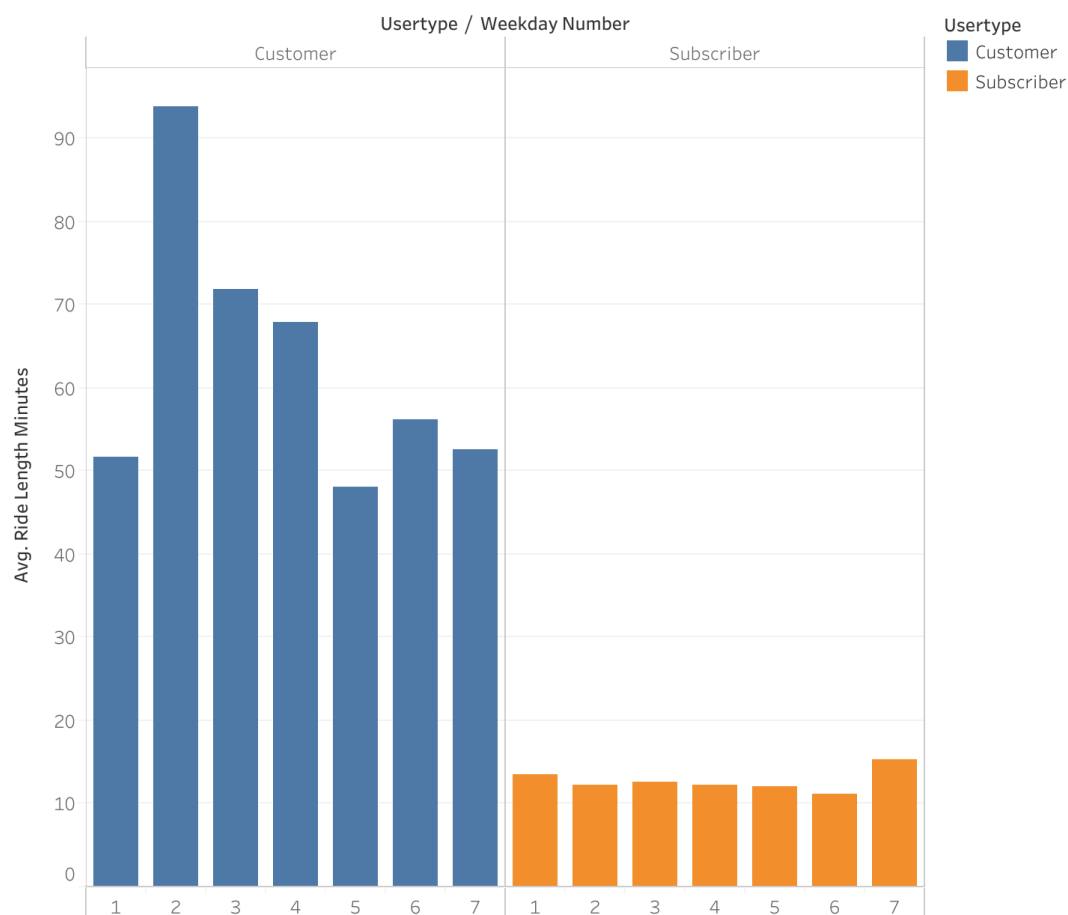
Similar trend was also seen in 2019 data where Subscribers average ride time was lesser than one time Customers. Thus, it is clear that Customers/Casual Riders are using the bikes for longer time going from Distance A—>B

ANALYSIS REPORT ON CASUAL RIDERS VS SUBSCRIBERS

2022 Member VS Casual Ride Time



<2019 Subscriber vs One Time Customer Ride Time >



ANALYSIS REPORT ON CASUAL RIDERS VS SUBSCRIBERS

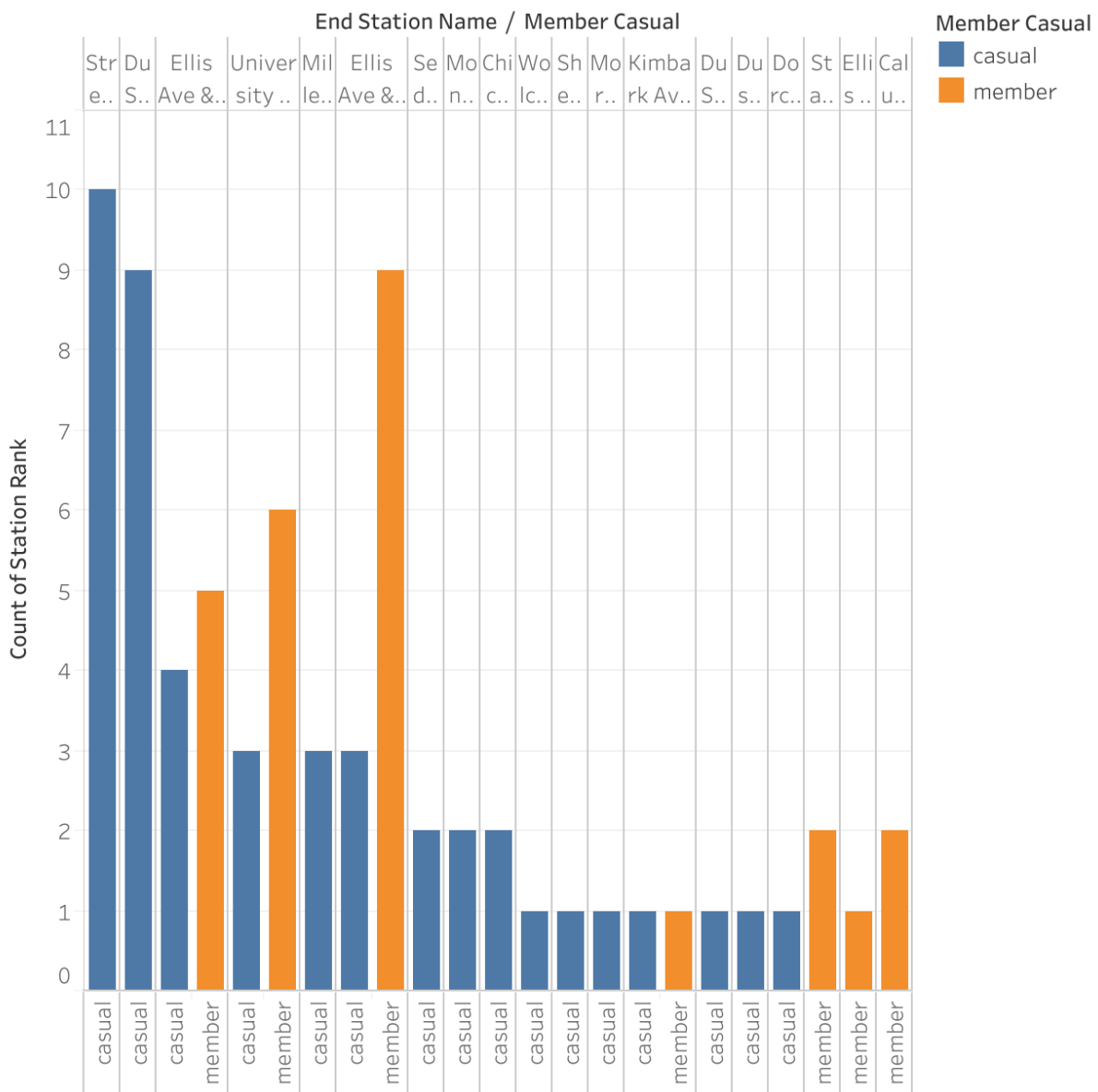
2022- Riders End Destination

A summary analysis of Riders Destination revealed the following Station as most popular with highest number of station count

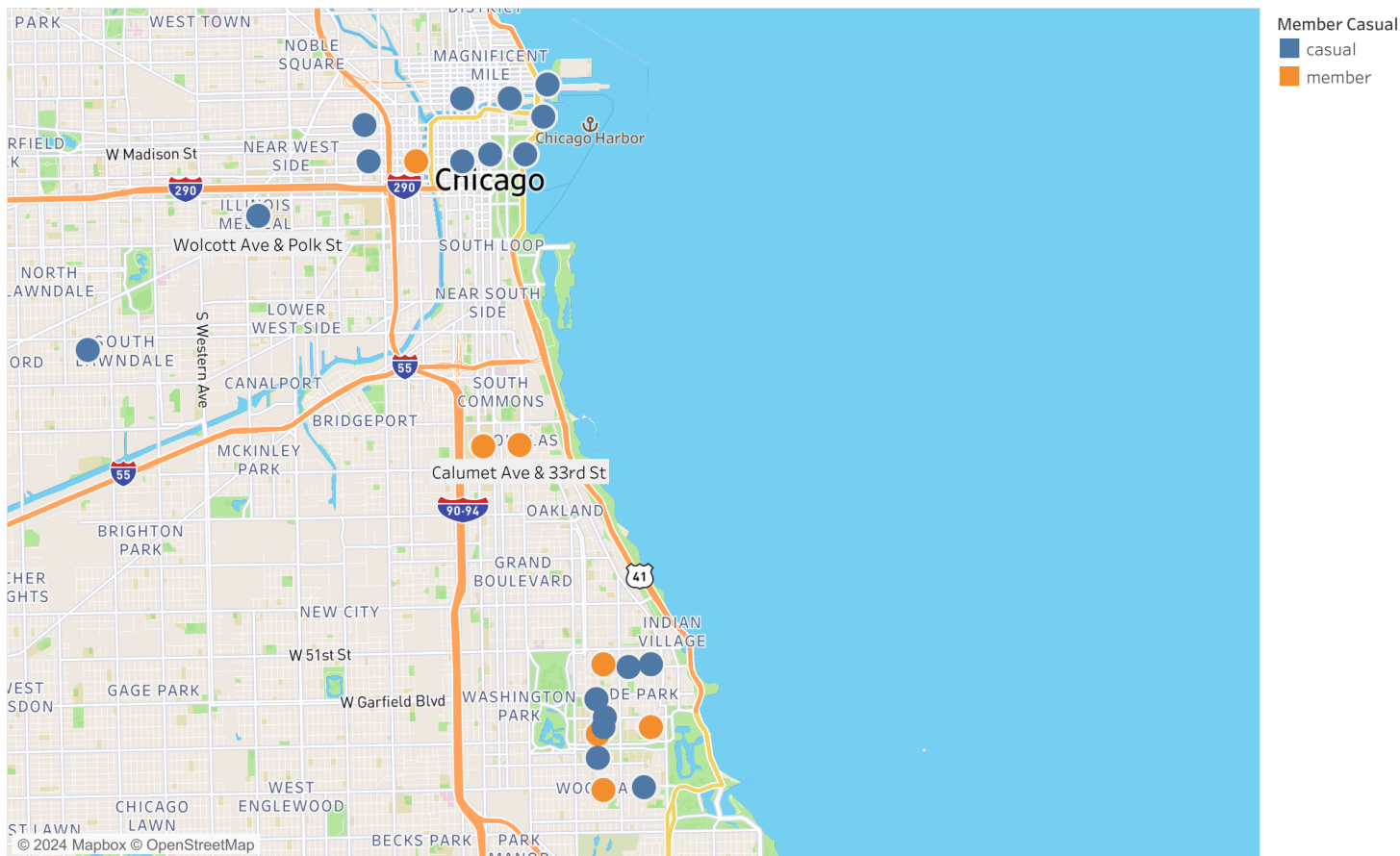
Subscriber -S Ellis Ave & E 58th St - A quick search in google maps revealed a University of Chicago in its vicinity, museum of art etc.

Casual -S Dorchester Ave & E 63rd St An interesting history about the 63rd street given in the [Chicago Planning Gov](#) mentions Woodlawn Station which has neighbourhood predominantly of African American origin(82%).

Sheet 3



ANALYSIS REPORT ON CASUAL RIDERS VS SUBSCRIBERS



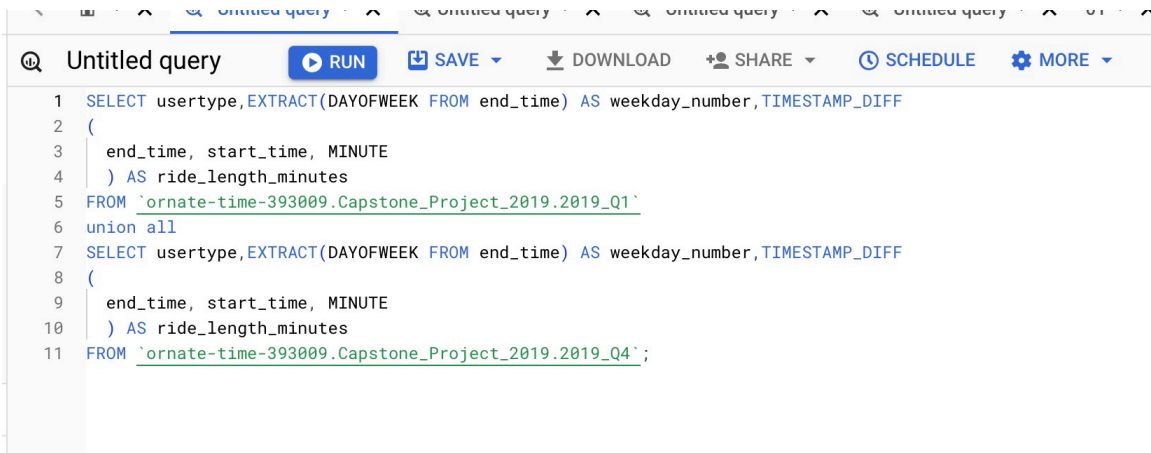
Recommendations

Based on the evidence provided and the statistics few points can be carried out by the Marketing team

1. It is clear from the above evidences that Subscriber/Members use the service for daily work commute.
2. Target the top 10 Stations of Casual Riders, offer subscription based incentives like discounts, coupons and additional health benefits of riding cycle daily.
3. Cyclistic can use social media apps like Instagram, Facebook, snapchat to give daily health benefits update, discount updates on membership etc.
4. One Time free ride, if the user posts review, and tags the official handle.
5. Collaborate with environmental friendly organisations/workplace , to expand the network and encourage their employees to use alternative services like ours.

Process

1. First downloaded 2022 ZIP file, however due to size issue I was able to load data from January, February, March, April, November and December in Big Query size exceeded 100 MB
2. Analysed the data extracted the average length time and used function such as Extract to get Weekday details.

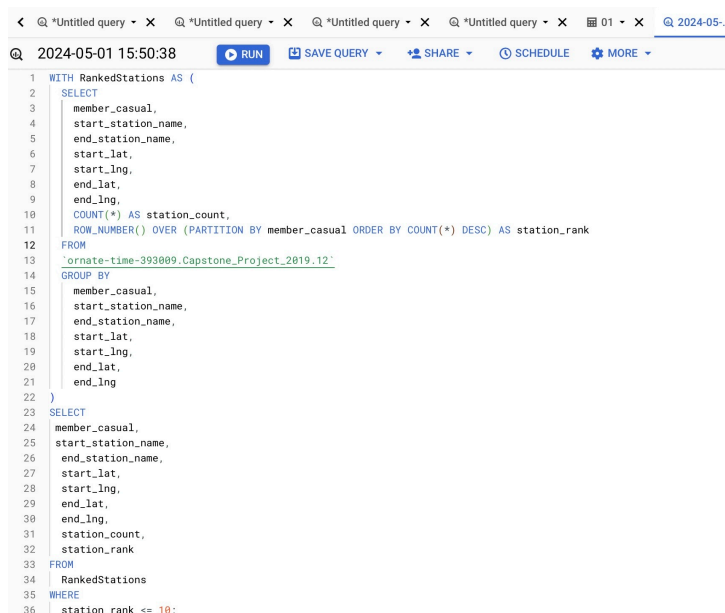


```

1 SELECT usertype,EXTRACT(DAYOFWEEK FROM end_time) AS weekday_number,TIMESTAMP_DIFF
2 (
3   end_time, start_time, MINUTE
4 ) AS ride_length_minutes
5 FROM `ornate-time-393009.Capstone_Project_2019.2019_Q1`
6 union all
7 SELECT usertype,EXTRACT(DAYOFWEEK FROM end_time) AS weekday_number,TIMESTAMP_DIFF
8 (
9   end_time, start_time, MINUTE
10 ) AS ride_length_minutes
11 FROM `ornate-time-393009.Capstone_Project_2019.2019_Q4`;

```

3. Since Big Query has the Chart functionality downloaded prepared chart and used in the presentation
4. Similarly I downloaded 2019 Q1 and Q4 data however, this data did not have Latitude and Longitude details so this data was excluded from Tableau Destination Analysis.
5. I also analysed Subscriber and Casual Riders top 10 Station counts, and used only end destinations to see where each party was travelling to or from



```

1 WITH RankedStations AS (
2   SELECT
3     member_casual,
4     start_station_name,
5     end_station_name,
6     start_lat,
7     start_lng,
8     end_lat,
9     end_lng,
10    COUNT(*) AS station_count,
11    ROW_NUMBER() OVER (PARTITION BY member_casual ORDER BY COUNT(*) DESC) AS station_rank
12  FROM
13    `ornate-time-393009.Capstone_Project_2019.12`
14  GROUP BY
15    member_casual,
16    start_station_name,
17    end_station_name,
18    start_lat,
19    start_lng,
20    end_lat,
21    end_lng
22 )
23 SELECT
24   member_casual,
25   start_station_name,
26   end_station_name,
27   start_lat,
28   start_lng,
29   end_lat,
30   end_lng,
31   station_count,
32   station_rank
33 FROM
34   RankedStations
35 WHERE
36   station_rank <= 10;

```

6. Used Tableau to plot the destinations and google the Number 1 Station with most number of rides.

Disclaimer- I have used inspiration from many Capstone Projects available. All Data provided were part of Google Data Analytics Programme.