CYCLISTIC USER USAGE CASUAL VS MEMBER

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Date: 2022-07-29

OVERVIEW OF CURRENT OPERATIONS

- Cyclistic operates a bike share service in Chicago operating more than 5,800 bicycles across 600 docking stations.
- Cyclistic offers three types of bikes including Traditional Bikes, Electric Bikes, and Docked Bikes.
- Cyclistic offers single-ride passes, full-day passes, and annual memberships. Riders who use single-ride or full-day passes are considered "casual riders", while riders who use the annual membership are considered "members".
- Although initial strategy has been general awareness and broad consumer segments, members prove to be more profitable than casual riders. As such, increasing Cyclistic memberships will be key to future growth.

BUSINESS TASK

Design marketing strategies aimed at converting casual riders into annual members by distinguishing how Cyclistic members use bikes differently than casual riders.

DATA SOURCES

Internal, monthly data from July 2021 to June 2022 gathered from trips taken on Cyclistic bikes was utilized for analysis. Data includes:

- ride_id
- rideable_type
- started_at
- ended_at
- start_station_name
- start_station_id
- end_station_name
- end_station_id
- start_lat
- start_long
- end_lat
- end_long
- member_casual

DOCUMENTATION OF DATA CLEANING & MANIPULATION

Tool(s) Used: Rstudio, Tableau

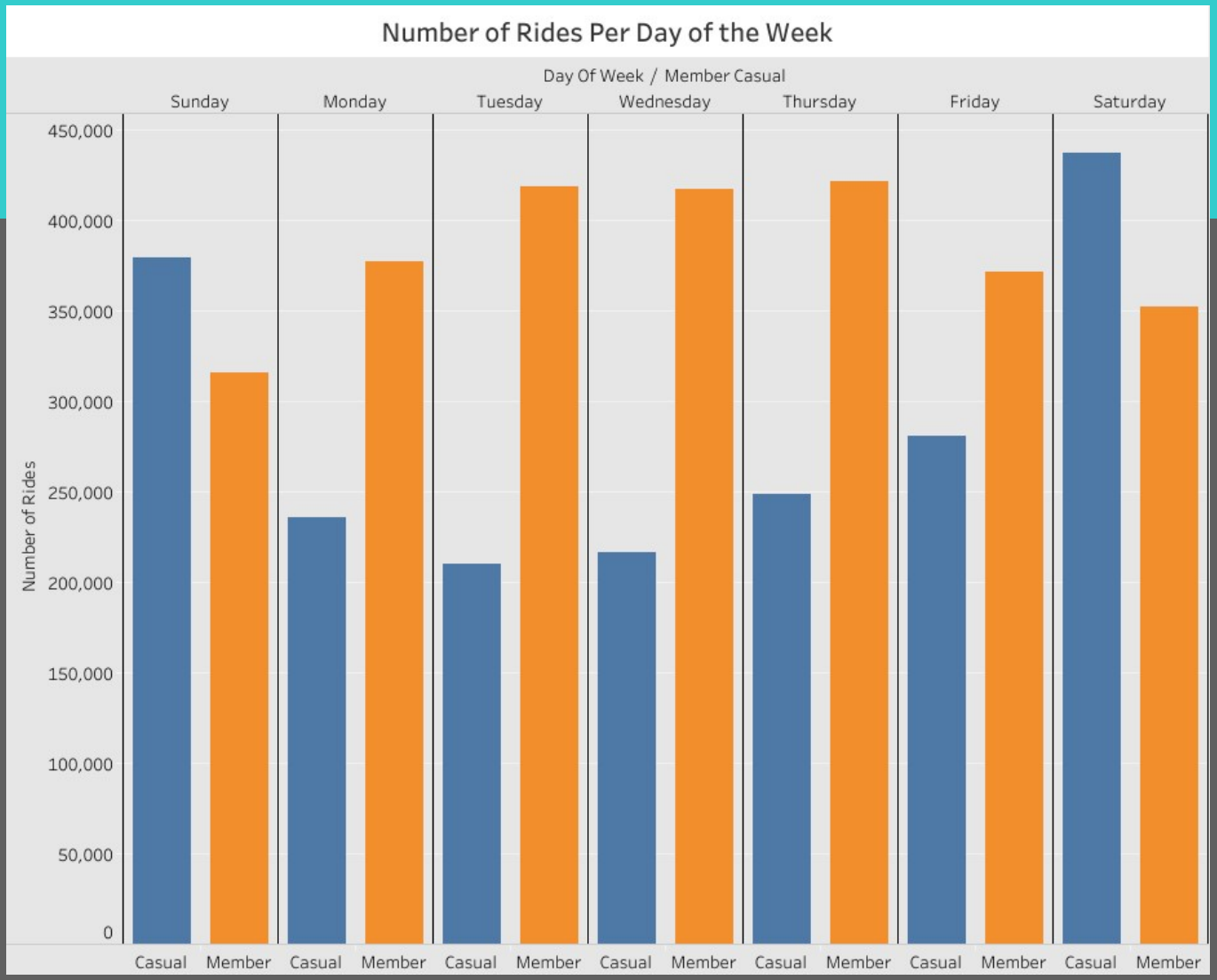
1. Twelve files containing monthly data from July 2021 – June 2022 were downloaded, saved, and uploaded to RStudio as individual datasets
2. Comparison of data structure was conducted to ensure uniformity between each dataset
3. Twelve individual datasets were combined into a singular dataset for efficiency and accessibility purposes
4. Summary functions were ran to inspect new dataset for unforeseen errors.

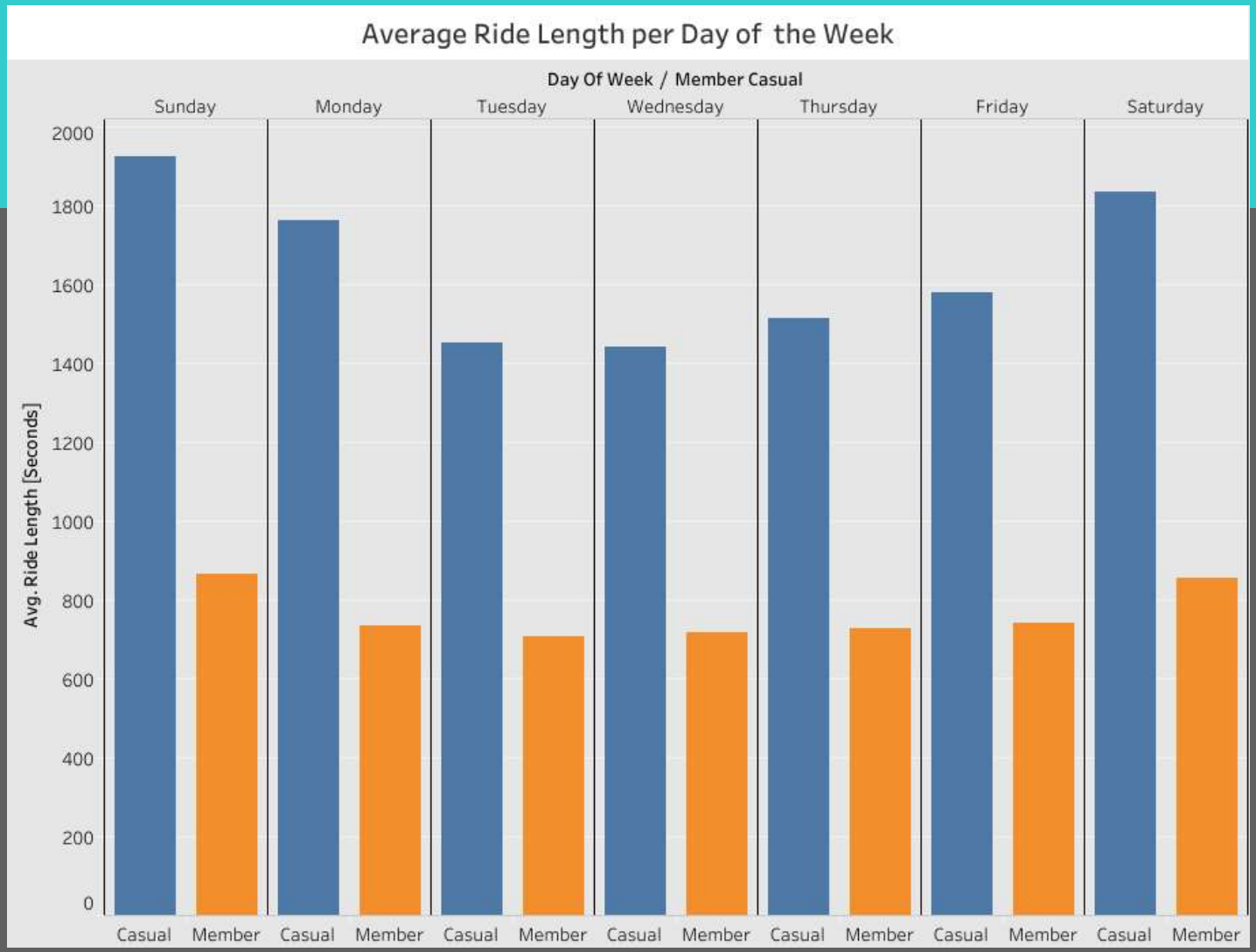
DOCUMENTATION OF DATA CLEANING & MANIPULATION CONT.

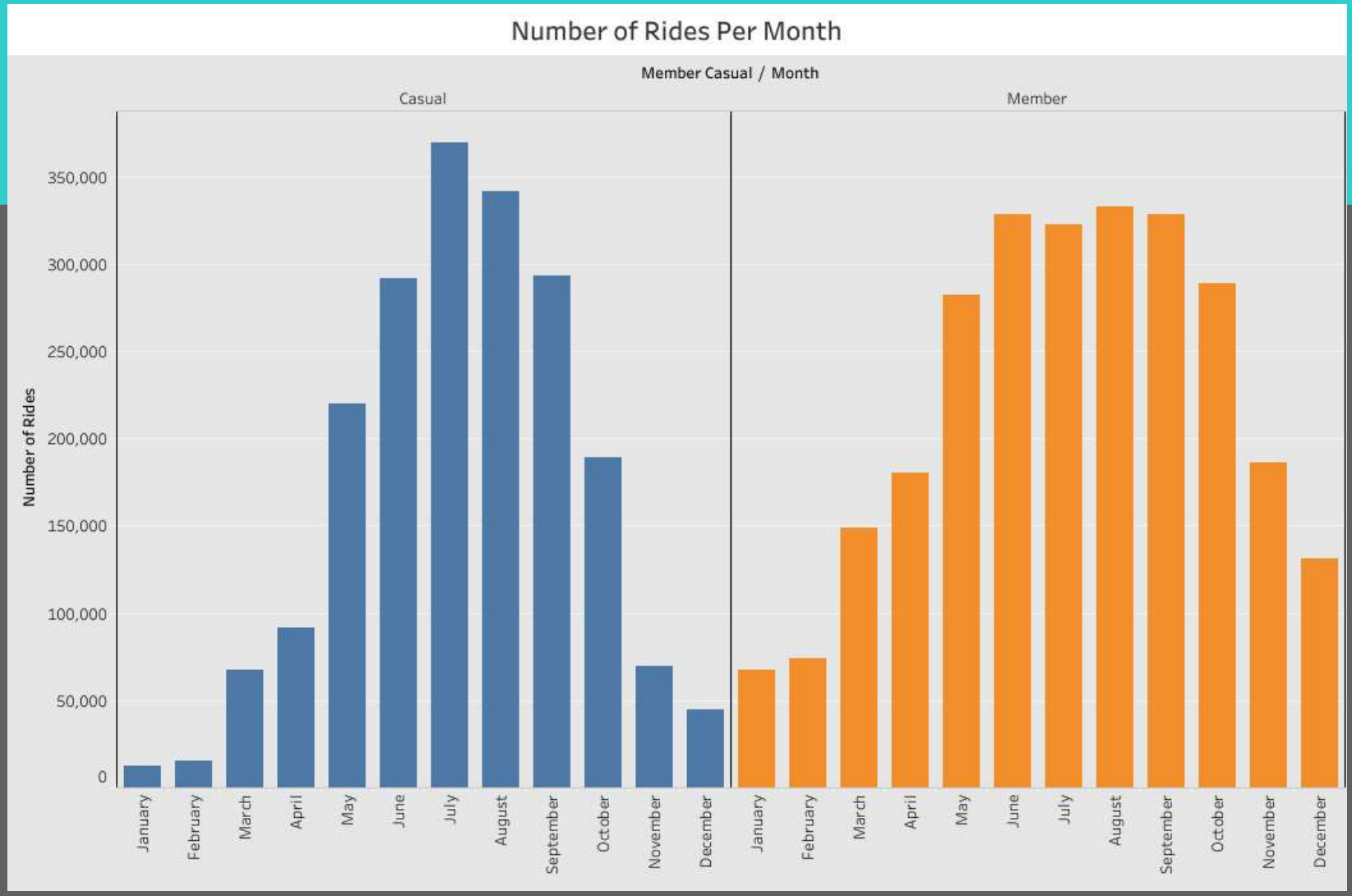
5. Columns added from existing data to include full calendar date month, day, year, and day of week
6. Trip duration was calculated in seconds based on record data of start and end times into new column titled "ride_length" as numeric data
7. Data consisted of rides with negative durations and unpopulated entries for start or end locations. Trip records with unpopulated entries for start or end locations indicate bikes were taken out of circulation for maintenance purposes. Affected records were removed from dataset as they do not provide accurate insight and skew analysis results.
8. Duplicate of final dataset was created to have two copies. One containing the full dataset while the other excludes starting and ending latitudes and longitudes. This was done to remove data not used in analysis in an effort to reduce file size for use in other programs. Data was then exported from RStudio as a .csv file for further analysis.

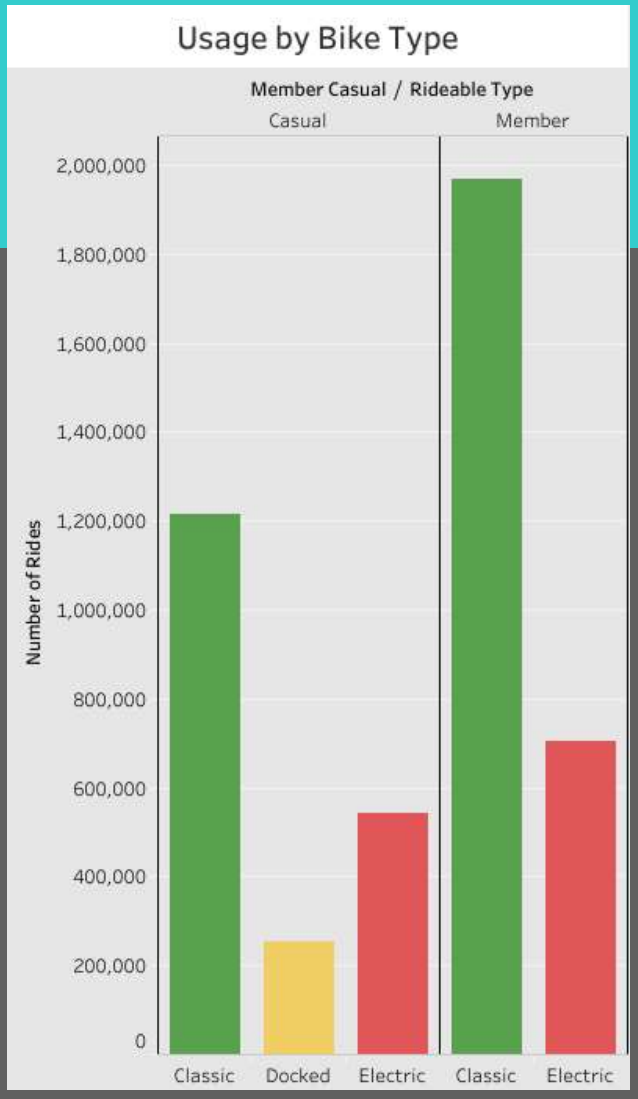
FINDINGS

1. Members use bike-sharing services significantly more on Monday – Friday than casual riders, who inversely, use the bike-sharing service more on weekends.
2. Members use bike-sharing services for on average for 15 minutes during any day of the week, while casual riders ride varying periods typically at a minimum of 20 minutes and longer during weekends.
3. Casual and member usage surges during spring and summer months indicating popular times of member usage along with a large pool of potential casual converters.
4. Members use Classic Bikes significantly more than Electric Bikes relative to casual riders.


Number of Rides Per Day of the Week
Day Of Week / Member Casual
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Number of Rides
450,000
400,000
350,000
300,000
250,000
200,000
150,000
100,000
50,000
0
Casual
Member


Average Ride Length per Day of the Week
Day Of Week / Member Casual
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Avg. Ride Length [Seconds]
2000
1800
1600
1400
1200
1000
800
600
400
200
0
Casual
Member


Number of Rides Per Month
Member Casual / Month
Casual
Member
Number of Rides
350,000
300,000
250,000
200,000
150,000
100,000
50,000
0
January
February
March
April
May
June
July
August
September
October
November
December


Usage by Bike Type
Member Casual / Rideable Type
Casual
Member
Number of Rides
2,000,000
1,800,000
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
Classic
Docked
Electric
Classic
Electric

RECOMMENDATIONS

1. Offer incentive promotions for usage on Saturday and Sunday such as unlimited rides or discounted use for the first 15 minutes of use to incentivize casual members to convert on their days of highest usage as well as to retain already subscribed members
2. We can offer additional benefits for members based on use such as frequency, trip duration, or other factors. We can also offer discount memberships in the form of partnerships with local businesses in the Chicago area to help promote use of Cyclistic for commuting purposes
3. As casual rider usage spikes during spring and summer months, focus campaign timelines to align with and capitalize on the surge in casual usage
4. Increase inventory of Traditional Bikes compared to Electric Bikes as they are the most popular among members