

## GOAL: DESIGN MARKETING STRATEGIES AIMED AT CONVERTING CASUAL RIDERS INTO ANNUAL MEMBERS.

The marketing analyst team needs to understand how annual members and casual riders differ, why casual riders would buy a membership.

### **The business task:**

To determine, how do annual members and casual riders use Cyclistic bikes differently?

### **Stakeholder:**

- *Lily Moreno: The director of marketing, Reporting Manager.*

## DESCRIPTION OF THE DATA SOURCES:

- Last twelve months Cyclistic historical trip data (6/1/2021 12:00:38 AM to 6/2/2022 11:35:01 AM)
- The data has been made available by Motivate International Inc. under below license (<https://ride.divvybikes.com/data-license-agreement> )
- All the data is stored on a secured device and only a few authorized relevant persons are able to access this data.

DATA IS PROCESSED BY EXCEL 2013.

## PRIMA FACIE KEY FINDINGS:

- Ride time in some cases are 00:00:00 and in some cases negative, which is incorrect hence deleted all rows with such ride times.

(ONLY THOSE RIDES ARE CONSIDER FOR THIS ANALYSIS WHERE RIDE DURATION IS MORE THAN 3 MINUTES)

- After sorting ride length from 'largest to smallest' it is evident that casual users are one who use bike service for longer time period, while members use them for short duration.
- Ride\_id column is a randomly selected number ID.
- No bias issue in the data, proper sampling of data. No gender, age or demographic biasing.
- No ethical issues in the data, personal identification information such as phone nos., e-mail ids are not revealed, proper consent is available from all the participants as per license-agreement.
- Data received is reliable, original, comprehensive, current and cited.

## DATA CLEANING, FORMATTING & MANIPULATION STEPS:

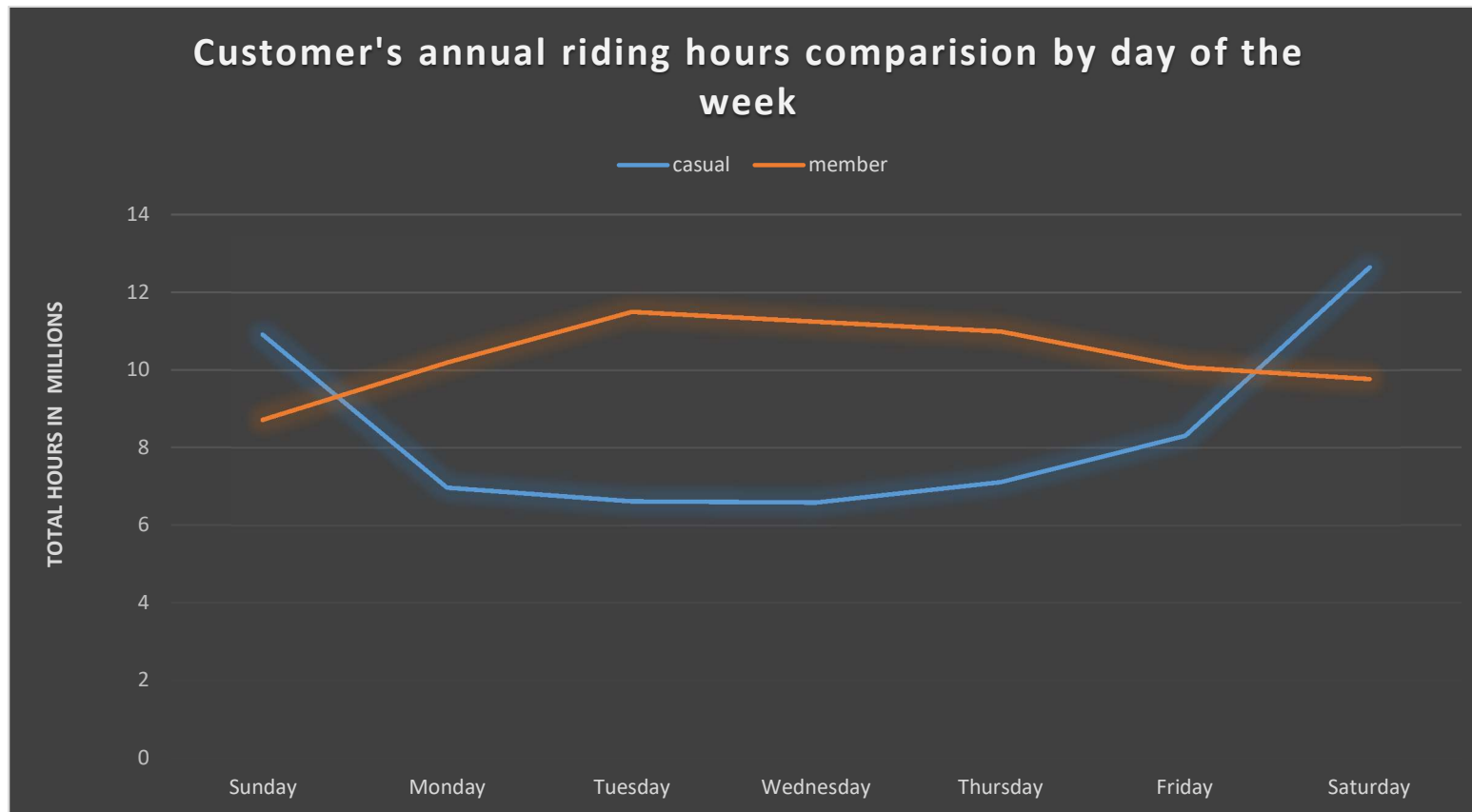
- '*started\_at*' & '*ended\_at*' columns are formatted to Time in the 3/14/12 13:30 format since this columns are not in particular one format for analysis.
- '*ride\_length*' column is added to indicate total ride time in HH:MM:SS format
- '*day\_of\_week*' column is added to indicate which day of the week bike is used (1=Sunday, 7=Saturday), then formatted to its equivalent day of the week i.e. 1=Sunday, 7=Saturday, now day of week columns have characters instead of numerical data.
- '*ride\_length*' column is sorted for 'smallest to largest', so that all rides below time duration 00:03:00 can be identified.
- Conditional formatting is used to format all cell in '*ride\_length*' column in red color which has value 'less than or equal to' 00:02:59.
- All rows with red color fill i.e. less than or equal to 00:02:59 are deleted.

- Pivot table is inserted to summarize the data, to calculate the ride\_length for users by day\_of\_week , where Columns = day\_of\_week; Rows = member\_casual; Values = Count of ride\_length
- Since all 12 xls sheets has a very large data , they can not be merged together for the analysis hence 12 different pivot table are inserted in each sheet and then a master sheet is prepared by coping and special pasting (values and formatting) all the data into one sheet then again formatted to time format hh:mm:ss.
- Pivot tables fields are changed to create Average ride\_length for users by day\_of\_week, where columns = member\_casual, rows= day\_of\_week, Values = Average of ride\_length.
- Data visualization is created by inserting a line chart and a bar chart.
- In both the chart a Title and a axis name is added and formatted so that they are easy to understand.

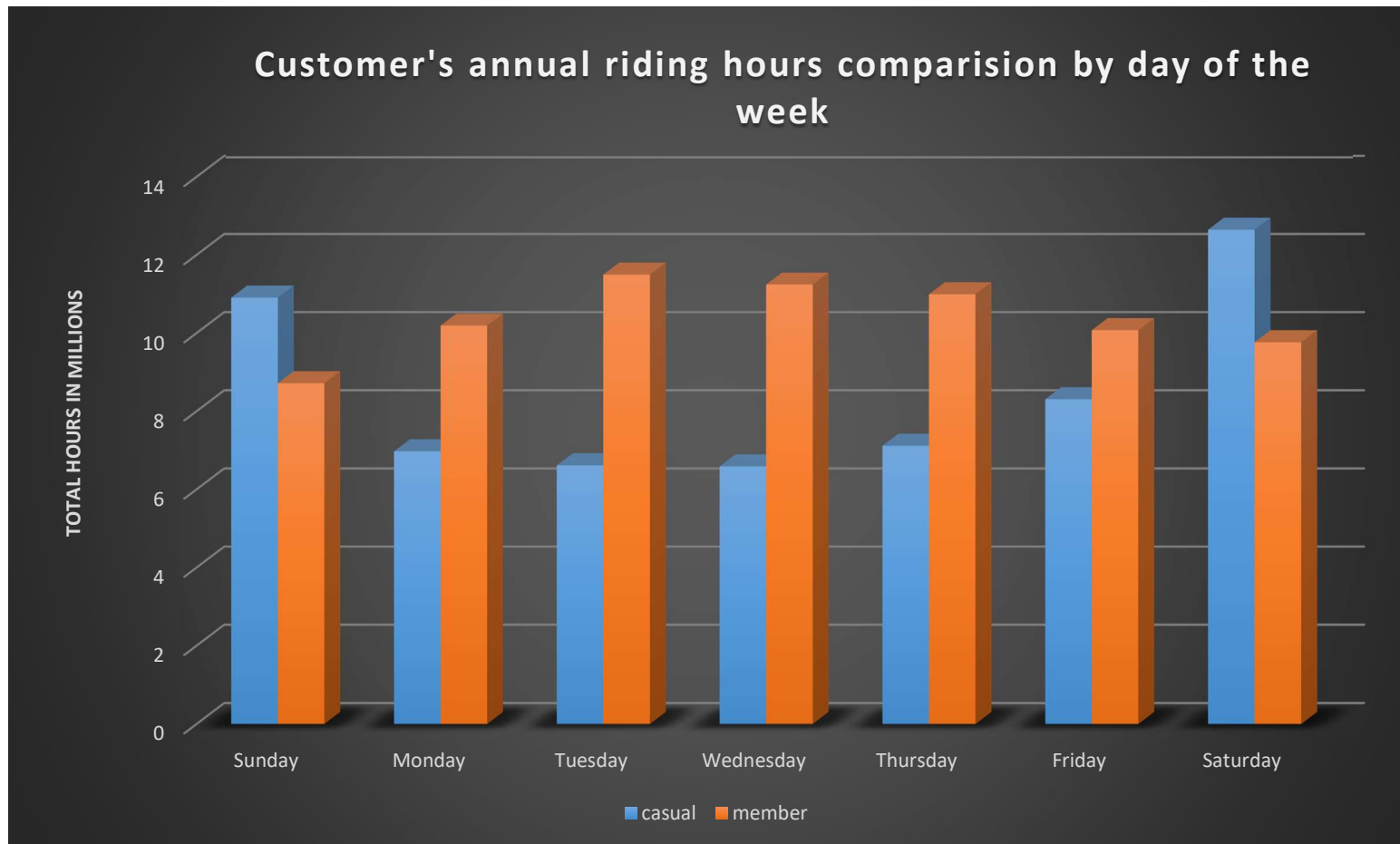
## A SUMMARY OF ANALYSIS & KEY FINDINGS:

- Casual riders are use cyclistic bikes for very long time duration while annual members are using bikes for shorter duration of time, casual members are using bikes for almost double time duration than annual members.
- Casual member's bikes usage increases significantly during weekends as they use bike for long period of time for leisure purpose.
- Annual members use bikes for daily commute most probably for home to work location and back i.e. between fixed locations, hence their ride duration dips on weekends when they have weekly off.

## SUPPORTING VISUALIZATIONS:

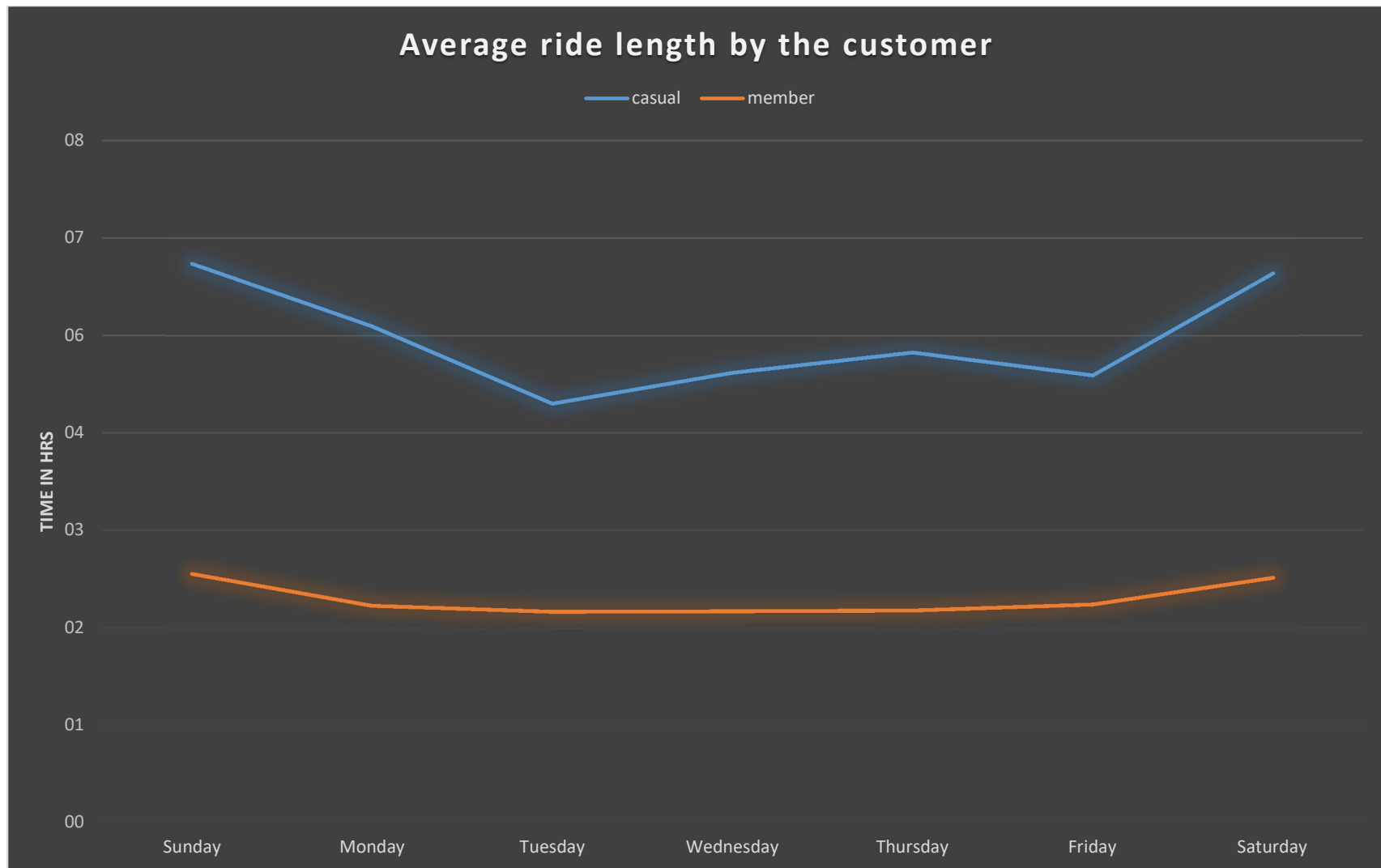


On weekend casual member's riding hours are increased significantly while annual member's decreased marginally. Annual members riding hours are almost steady throughout the week.

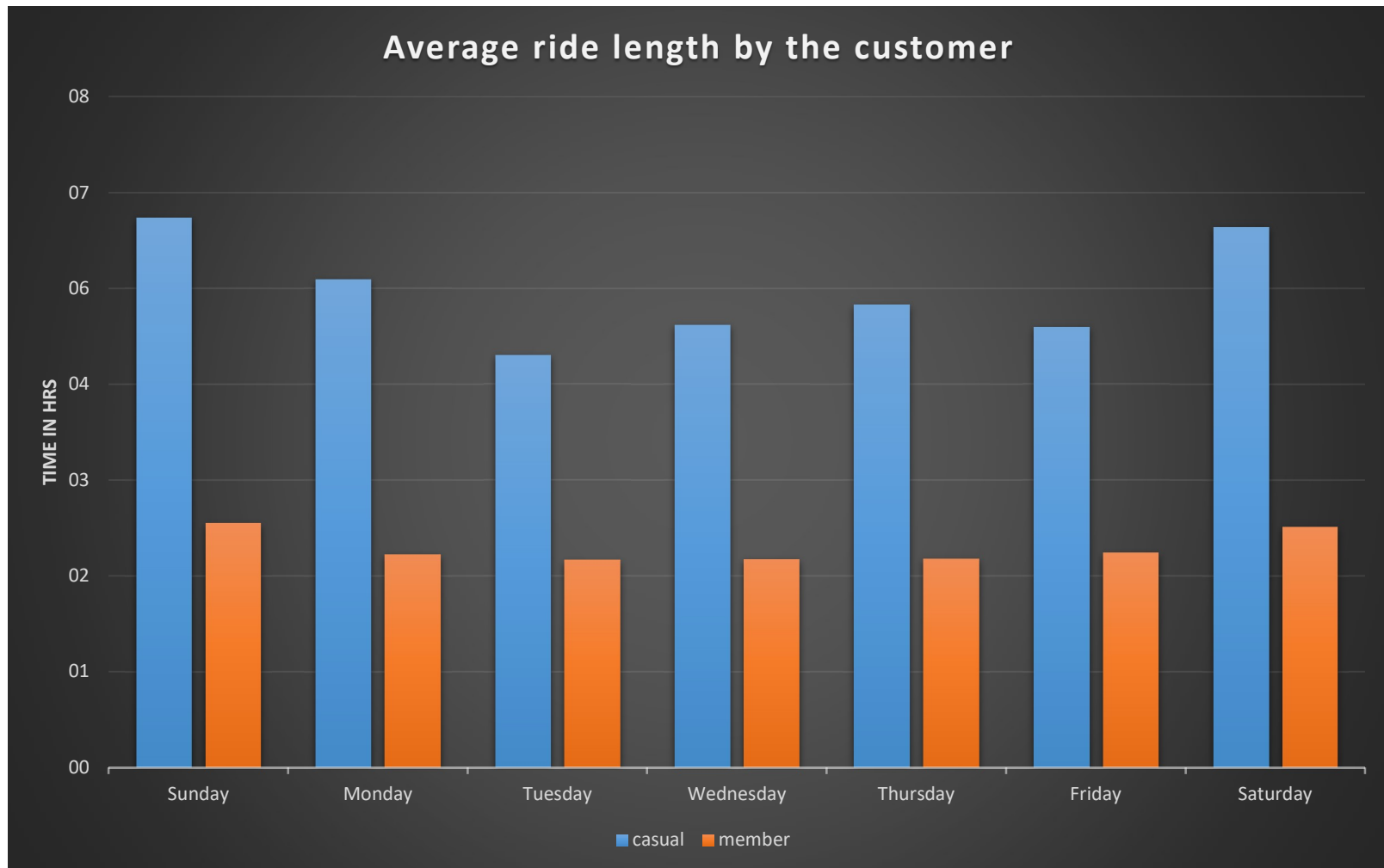


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## TOP THREE RECOMMENDATIONS BASED ON ANALYSIS :

- If bikes are offered to annual members at some discounted price on weekends (when also there is less number of annual members), then casual members may consider opting for annual membership.
- Discounted food coupons may be given to annual members, since casual members use this bikes for longer duration they have to eat at nearby restaurants. This might help to convert casual members into annual members.
- If annual members are provide with free bike ride above certain time duration i.e. above one hour on all days then it may attract casual members to go for annual membership.

## DATA LIMITATIONS

- Total distance travelled by the users is missing.
- Age & sex of the users are missing, might able to target particular age group or sex group of casual members.

# Thank you.

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