**OVERVIEW**

COMPANY BACKGROUND

Cyclistic is a bike-share company in Chicago that features more than 5,800 bicycles and 600 docking stations. It sets itself

apart by also offering reclining bikes, hand tricycles, and cargo bikes, making bike-share more inclusive to people with

disabilities and riders who can’t use a standard two-wheeled bike.

Until now, Cyclistic’s marketing strategy relied on building general awareness and appealing to broad consumer segments but they want to change their marketing approach by utilizing data driven metrics based on customer usage trends in order to increase their membership base.

COMPANY METRICS

1. A bike-share program that features more than 5,800 bicycles and 600 docking stations.
2. The majority of riders opt for traditional bikes; about 8% of riders use the assistive options.
3. Cyclistic users are more likely to ride for leisure, but about 30% use them to commute daily.
4. Pricing plans: single-ride passes, full-day passes, and annual memberships.
5. Customers who purchase single-ride or full-day passes are referred to as casual riders.
6. Customers who purchase annual memberships are Cyclistic members.

SCOPE OF WORK

My scope of work will cover:

* A clear statement of the business task
* A description of all data sources used
* Documentation of any cleaning or manipulation of data
* A summary of my analysis
* Supporting visualizations and key findings
* My top three recommendations based on my analysis

GOAL OF BUSINESS TASK

Design marketing strategies aimed at converting casual riders into annual members by analyzing the Cyclistic historical bike trip data to identify trends.

OBJECTIVE

Understanding how Annual members and Casual riders use Cyclistic bikes differently using historical data.

KEY STAKEHOLDERS

1. The Cyclistic Executives
2. The Director of Marketing
3. The Cyclistic Marketing Analytics Team

**PREPARING THE DATA**

DATA OVERVIEW

Source of the dataset is from Internal Data obtained from Cyclistic’s historical monthly trip from the previous year (January – December, 2021).

1. Location: There is readily downloadable data from (<https://divvy-tripdata.s3.amazonaws.com/index.html>).
2. The data is stored (Archived) in .rar formats making it very safe but was in no particular order.
3. The data is reliable as it is Cyclistic’s internal data covering the entire previous year.
4. The data is a public data under the license ([Data License Agreement | Divvy Bikes](https://ride.divvybikes.com/data-license-agreement)).
5. The limitation to this data is it only covers the space of one year hence deductions will be solely based on the trends from the previous year. (2021)
6. Data-privacy concerns prohibit the use of riders’ personally identifiable information and other sensitive information for each rider.

**DATA PROCESSING**

DATA PROCESSING WITH MS EXCEL

Data was checked and examined for errors and possible concerns that might affect the results and cleaned. The following steps were taken for data cleaning and preparation for analysis.

CLEANING

* Data was checked for duplicates using the check for duplicates option.
* Missing data (no data cells) using the ``countif()`` function to find null cells, errors or cells with no data
* Trim using the ``trim()`` function to remove spaces in the data.
* Converted time and date to appropriate data type
* Double checking to make sure the data is clean
* The new data files were renamed and saved in a new folder.

DATA TRANSFORMATION

Three (3) new Columns Created for the next step of analysis:

* ride\_date
* ride\_duration
* day\_of\_week

NOTE: These steps were replicated on the different datasets from the other months to ensure the data was uniform

And corresponds with each other. Below is a log of the outcome of the data cleaning.

|  |  |  |  |
| --- | --- | --- | --- |
| DATA FILE NAME | DUPLICATES ROWS FOUND | Filtering with COUNTIF(X, “<=0:00:00”) function for rows with errors or null cells | ACTION (Deleting filtered results) |
| 202101-divvy-tripdata | null | 6 rows | Removed |
| 202102-divvy-tripdata | null | 4 rows | Removed |
| 202103-divvy-tripdata | 11 rows | 12 rows | Removed |
| 202104-divvy-tripdata | 37 rows | 38 rows | Removed |
| 202105-divvy-tripdata | 53 rows | 54 rows | Removed |
| 202106-divvy-tripdata | 65 rows | 66 rows | Removed |
| 202107-divvy-tripdata | 81 rows | 82 rows | Removed |
| 202108-divvy-tripdata | 106 rows | 107 rows | Removed |
| 202109-divvy-tripdata202101-divvy-tripdata | 106 rows | 107 rows | Removed |
| 202110-divvy-tripdata | 69 rows | 70 rows | Removed |
| 202111-divvy-tripdata | 85 rows | 84 rows | Removed |
| 202112-divvy-tripdata | 20 rows | 21 rows | Removed |

There were lots of slow processes with the MS Excel due to the volume of data in each document.

DATA PROCESSING AND CLEANING WITH SQL

Data will be cleaned and processed using My SQL SSMS platform.

Created new columns from manipulating the data to get relevant dataset needed for analysis.

Created columns; `ride\_duration`, `ride\_date`, `day\_of\_week` , `max\_ride\_duration`, `average\_ride\_duration`, `number\_of\_rides`,

The new table was filtered using `Where` clauses to check for and remove;

* Blanks
* ride\_durations <= 0.00
* errors
* missing data

Filtering out ride\_duration `<= 0` as it will not be relevant to the analysis

df\_1 --- 6 rows had either `<=0` seconds or error in the data

df\_2 ---4 rows had either `<=0` seconds or error in the data

df\_3 ---12 rows had either `<=0` seconds or error in the data

df\_4 ---38 rows had either `<=0` seconds or error in the data

df\_5 ---54 rows had either `<=0` seconds or error in the data

df\_6 ---66 rows had either `<=0` seconds or error in the data

df\_7 ---82 rows had either `<=0` seconds or error in the data

df\_8 ---107 rows had either `<=0` seconds or error in the data

df\_9 ---107 rows had either `<=0` seconds or error in the data

df\_10 ---70 rows had either `<=0` seconds or error in the data

df\_11 ---86 rows had either `<=0` seconds or error in the data

df\_12 ---21 rows had either `<=0` seconds or error in the data

The cleaned data results from each query was inputted into new tables with the dame `df\_1` for January.

Created a new table with a combination of all 12 monthly datasets to easily analyze the trends for the entire year with the `union` query to create a table called `cyclistic\_df`.

CONCERNS ABOUT THE DATA (KEY FINDINGS)

1. The data had many duplicate roles which had to be removed
2. There were many columns with missing data or incorrect data which though few may or may not have the potential to influence some analysis eg. Weekly analysis.
3. Some data columns had information that would require some verification before analysis though few in number.
4. Due to absence of many start\_location\_ids it will be difficult to analyze the data in relation to geospatial information based on location id to check for trends at each location.

The data is cleaned and processed data is ready for analysis.

**RESUTS FROM THE ANALYSIS**

OBSERVATIONS FOR JANUARY

1. January had a total bike ride of 96,828 out of which member patronage was 78,711 and casual patronage was 18,117.
2. On the contrary average ride duration for member users was lower at 11.9 minutes compared to causal users at 34.6 minutes.
3. For each day of week

* Members recorded very significant usage across the days of the week with numbers ranging between 8,872 and 12,643 with Sunday having the highest and Tuesday having the lowest
* Casual usage was significantly low compared with member usage with numbers ranging from 1,882 to 4003 with Monday having the highest and Thursday recording the lowest.

1. For rideable types

* Classic bikes were significantly the most used rideable type record for members recording a total of 53,438, electric bikes being next at 25,272 and docked bikes being the lest with just 1 use for the entire month.
* For casual users, classic bikes and electric bikes had close usage numbers at 8,259 and 7,753 respectively with docked bikes being the least at 2,105 but still significantly higher than docked bike usage by members
* Further breakdown revealed
* Classic bikes are the most used bikes for each day of the week for members followed by electric and just one user for docked bikes
* Approximately the same number of casual customers use both electric and classic rides with a significant number also using docked rides.

OBSERVATIONS FOR FEBRUARY

1. February had a big decrease in the total bike rides with 49,618 out of which member patronage was 39,488 and casual patronage was 10,130.
2. Higher average ride durations are recorded compared to January. Member users continue to record lower averages at 16.8 minutes compared to causal users at 63.9 minutes.
3. For each day of week

* Even with the drop in patronage, members recorded very significant usage across the days of the week with numbers ranging between 4,003 and 6,694 with Sunday and Monday having the highest usage numbers with Tuesday and Wednesday having the lowest numbers.
* Casual usage was significantly low again compared with member usage with numbers ranging from 585 to 3485 with Monday maintaining the highest and Wednesday recording the lowest.

1. For rideable types

* Classic bikes were still significantly the most used rideable type record for members recording a total of 29,314, electric bikes being next at 10,174 and docked bikes being the lest with no users for the entire month.
* For casual users, classic bikes had a slightly higher patronage than electric bikes with usage numbers at 5,695 and 3,164 respectively with docked bikes being the least at 1,271 but still significantly higher than docked bike usage by members
* Further breakdown revealed
* Classic bikes are still the most used bikes for each day of the week for members followed by electric and no user for docked bikes
* Slight increases in the number of casual customers using classic rides compared to electric with a significant number also using docked rides.

OBSERVATIONS FOR MARCH

1. March had a huge increase in the total bike rides with 228,484 out of which member patronage was 144,456 and casual patronage was 84,028.
2. Lower average ride durations recorded compared to February. Member users continue to record lower averages at 13.7 minutes compared to causal users at 43.5 minutes.
3. For each day of week

* With an increase in patronage, member usage numbers were significantly high across most days but recorded close numbers with casual riders on Monday and Tuesday with numbers ranging between 15,978 and 23,536 with Thursday, Monday, Wednesday and Friday having the highest usage numbers while Saturday had the lowest numbers.
* Casual usage increased significantly recording high close figures with member users on Monday and Tuesday though low on remaining days compared with member usage with numbers ranging from 5,488 to 22,089 with Monday maintaining the highest and Saturday recording the lowest.

1. For rideable types

* Classic bikes were still significantly the most used rideable type record for members recording a total of 107,012, electric bikes being next at 37,444 and docked bikes with no users for the entire month.
* For casual users, classic bikes had higher patronage than electric bikes with usage numbers at 45,526 and 22,845 respectively with docked bikes being the least at 15,657 but still significantly higher than docked bike usage by members
* Further breakdown revealed
* Classic bikes are still the most used bikes for each day of the week for members followed by electric and no user for docked bikes
* Huge increases in the number of casual customers using classic rides compared to electric with a significant number also using docked rides.

OBSERVATIONS FOR APRIL

1. In April numbers kept increasing in total bike rides with 337,192 out of which member patronage was 200,602 and casual patronage was 136,590.
2. Similar average ride durations recorded compared to March. Member users continue to record lower averages at 14.6 minutes compared to causal users at 45.27 minutes.
3. For each day of week

* With a continuous increase in patronage, member usage numbers were still significantly high across most days but recorded very close numbers with casual riders on Monday and Tuesday with numbers ranging between 25,348 and 35,789 with Sunday having the highest usage numbers while Tuesday and Friday had the lowest numbers.
* Casual usage increased significantly recording high close figures with member users on Monday and Tuesday though low on remaining days compared with member usage with numbers ranging from 11,988 to 27,728 with Monday maintaining the highest and Friday and Saturday recording the lowest.

1. For rideable types

* Classic bikes were still significantly the most used rideable type record for members recording a total of 143,834, electric bikes being next at 56,768 and docked bikes with no users for the entire month.
* For casual users, classic bikes continued having higher patronage than electric bikes with usage numbers at 70,772 and 41,105 respectively with docked bikes being the least at 24,713 but still significantly higher than docked bike usage by members
* Further breakdown revealed
* Classic bikes are still the most used bikes for each day of the week for members followed by electric and no user for docked bikes
* Huge increases in the number of casual customers using classic rides compared to electric with a significant number also using docked rides.

OBSERVATIONS FOR MAY

1. The month of May recorded very steep increase in total bike rides at 531,579 with close figures for both member and casual users but slightly higher member patronage pegged at 274,691 and casual patronage at 256,888.
2. Average ride durations remained similar to values recorded in February and March. Member users continue to record lower averages at 14.3 minutes compared to causal users at 45.6 minutes.
3. For each day of week

* With a steep increase in patronage, close values are recorded for most days of the week with casual riders superseding member riders on Monday and Tuesday but having slightly lower numbers across most days. Member riders had numbers between 33,416 and 46,689 with Monday having the highest usage numbers while Thursday had the lowest numbers.
* Casual usage increased significantly superseding member users on Monday and Tuesday though slightly lower on remaining days compared with member usage with numbers ranging from 18,588 to 65,300 with Monday maintaining the highest and Thursday recording the lowest.
* There is a noticeable trend of low figures on Sunday and a sudden steep rise on Monday and slow or sudden decline from Tuesday on ward for casual riders but member users show close patronage for each day of week.

1. For rideable types

* Classic bikes were still significantly the most used rideable type record for members recording a total of 185,125, electric bikes being next at 89,566 and docked bikes with no users for the entire month.
* For casual users, classic bikes continued having higher patronage than electric bikes with usage numbers at 123,941 and 89,595 respectively with docked bikes though being the least at 43,352 is still increasing and remains significantly higher than docked bike usage by members
* Further breakdown revealed
* Classic bikes are still the most used bikes for each day of the week for members followed by electric and no user for docked bikes
* Huge increases in the number of casual customers using classic rides compared to electric but casual riders used more electric bikes than member riders with a significant rise in the number of casuals also using docked rides.

OBSERVATIONS FOR JUNE

1. The month of June recorded another steep increase in total bike rides at 729,529 with close figures for both member and casual users but casual users having a slightly higher patronage compared to member patronage. Member patronage pegged at 358,493 and casual patronage rising steeply to 370,636.
2. Average ride durations remained similar to values recorded in the previous months. Member users continue to record lower averages at 14.5 minutes compared to causal users which increased slightly to 49.3 minutes.
3. For each day of week

* With a steep increase in patronage, close values were recorded for most days of the week with casual riders superseding member riders on Sunday, Monday and Tuesday but having slightly lower numbers across remaining days. Member riders had numbers between 43,860 and 64,849 with Fridays and Thursdays having the highest usage numbers while Wednesdays had the lowest numbers.
* Casual usage increased significantly superseding member users on Sunday, but predominantly on Mondays and Tuesdays though slightly lower on remaining days compared with member usage with high numbers ranging from 35,076 and 75,725 with Mondays and Tuesdays maintaining the highest and Wednesdays recording the lowest.
* There is still a noticeable trend of low figures on Sunday and a sudden steep rise on Monday and slow or sudden decline from Tuesday on ward for casual riders but member users showed close patronage from the beginning of the week and sharp increase on Thursdays and Fridays and drop on Saturdays.

1. For rideable types

* Classic bikes were still significantly the most used rideable type for members recording a total of 246,761, electric bikes being next at 112,132 and docked bikes with no users for the entire month.
* For casual users, classic bikes continued having higher patronage than electric bikes with usage numbers at 188,219 and 130,702 respectively with docked bikes though being the least at 51,715 is still increasing and remains significantly higher than docked bike usage by members
* Further breakdown revealed
* Classic bikes are still the most used bikes for each day of the week for members followed by electric and no user for docked bikes
* Huge increases in the number of casual customers using classic rides compared to electric but casual riders used more electric bikes than member riders with a significant rise in the number of casuals also using docked rides.

OBSERVATIONS FOR JULY

1. The month of June recorded another steep increase in total bike rides at 729,529 with close figures for both member and casual users but casual users having higher patronage compared to member patronage. Member patronage pegged at 380,317 and casual patronage rising steeply to 442,011.
2. Average ride durations remained similar to values recorded in the previous months with a slight drop. Member users continue to record lower averages at 14.2 minutes compared to causal users which reduced to 42.89 minutes.
3. For each day of week

* With a steep increase in patronage, close values were recorded for most days of the week with casual riders continuing to supersede member riders on Sunday, Monday and Tuesday but having slightly lower but close numbers across remaining days. Member riders had numbers between 39,741 and 64,425 with Saturdays and Sundays having the highest usage numbers while Tuesdays had the lowest numbers.
* Casual usage continued increasing significantly superseding member users on slightly on Sundays and Wednesdays, but predominantly on Mondays and Tuesdays though slightly lower on remaining days compared with member usage with high numbers ranging from 45,398 and 103,220 with Mondays maintaining the highest and Thursdays recording the lowest.
* There is still a noticeable trend of low figures on Sunday and a sudden steep rise on Monday and slow or sudden decline from Tuesday onward for casual riders but member users showed declining patronage towards the middle of the week and gradual increase on Wednesdays to Saturdays.

1. For rideable types

* Classic bikes were still significantly the most used rideable type for members recording a total of 265,401, electric bikes being next at 114,916 and docked bikes still with no users for the entire month.
* For casual users, classic bikes continued having significantly higher patronage than electric bikes with usage numbers at 241,466 and 142,847 respectively with docked bikes though being the least at 57,698 is still increasing and remains significantly higher than docked bike usage by members
* Further breakdown revealed
* Classic bikes are still the most used bikes for each day of the week for members followed by electric and no user for docked bikes
* Huge increases in the number of casual customers using classic rides with figures close to member users compared to electric bikes but casual riders continue to use more electric bikes than member riders with a significant rise in the number of casuals also using docked rides.

OBSERVATIONS FOR AUGUST

1. The month of August recorded another increase in total bike rides at 804,245 with close figures for both member and casual users but casual users having slightly higher patronage compared to member patronage. Member patronage pegged at 391,637 and casual patronage dropping to 412,608.
2. Average ride durations remained similar to values recorded in the previous months with a significant drop for casual riders. Member users continue to record lower but consistent averages at 14.1 minutes compared to causal users which dropped again to 35.40 minutes.
3. For each day of week

* With a continuing increase in patronage, close values were recorded for most days of the week with casual riders continuing to supersede member riders on Sunday, Monday and Tuesday but having slightly lower but close numbers across remaining days. Member riders had numbers between 51,352 and 63,605 with Thursdays and Wednesdays having the highest usage numbers while Mondays had the lowest numbers.
* Casual usage continued a significant drop on total users Mondays but continued to supersede member users on slightly on Sundays, but predominantly on Mondays and Tuesdays though slightly lower on remaining days compared with member usage as seen in previous months with numbers ranging from 40,022 and dropping to 86,322 with Tuesdays and Mondays recording the highest and Fridays recording the lowest.
* There is still a noticeable trend of low figures on Sunday and a sudden steep rise on Monday and slow or sudden decline from Tuesday onward for casual riders but member users showed close usage figures throughout the week.

1. For rideable types

* Classic bikes were still significantly the most used rideable type for members recording a total of 273,021, electric bikes being next at 118,616 and docked bikes still with no users for the entire month.
* For casual users, classic bikes continued having significantly higher patronage than electric bikes with usage numbers but general drop in numbers of each bike type to 229,960 and 137,583 respectively with docked bikes though being the least at 45,065 and decreasing compared to the previous month remains significantly higher than docked bike usage by members
* Further breakdown revealed
* Classic bikes are still the most used bikes for each day of the week for members followed by electric and no user for docked bikes
* Huge increases in the number of casual customers using classic rides with figures close to member users compared to electric bikes but casual riders continue to use more electric bikes than member riders with a decrease in the number of casuals using docked rides.

OBSERVATIONS FOR SEPTEMBER

1. The month of September recorded a slight drop in total bike rides at 756,040 with close figures for both member and casual users but this time Member users having slightly higher patronage compared to Casual patronage. Member patronage pegged at 392,200 similar to previous month and casual patronage dropping again to 363,840.
2. Average ride durations remained similar to values recorded in the previous months with a slight drop for member riders. Member users continue to record lower but consistent averages dropping slightly at 13.80 minutes compared to causal users which stayed at 35.85 minutes.
3. For each day of week

* With a drop in patronage, close values were recorded for few days and slightly large difference on other days of the week with casual riders superseding member riders on Mondays and Tuesdays but having slightly lower but close numbers on Sundays and Wednesdays and significant difference across remaining days. Member riders had numbers between 46,635 and 71,521 with Fridays and Saturdays having the highest usage numbers while Tuesdays had the lowest numbers.
* Casual usage continued to drop in total users on Mondays but continued to supersede member users predominantly on Mondays and Tuesdays with close numbers on Sundays and Wednesdays but lower on remaining days compared with member usage as seen in previous month with numbers ranging from 31,818 and dropping to 74,322 with Mondays and Tuesdays continuing to record the highest and Thursdays recording the lowest.
* There is still a noticeable trend of low figures on Sunday and a sudden steep rise on Monday and slow or sudden decline from Tuesday onward for casual riders but slight rise again towards the weekend but member users showed close usage figures throughout the week with a steep rise on Fridays and Saturdays.

1. For rideable types

* Classic bikes were still significantly the most used rideable type for members recording a slight drop at a total of 266,787, electric bikes being next at 125,413 and docked bikes still with no users for the entire month.
* For casual users, classic bikes continued having significantly higher patronage than electric bikes with usage numbers but again recording a general drop in numbers of each bike type to 195,448 and 133,055 respectively with docked bikes though being the least at 35,337 and further decreasing still remains significantly higher than docked bike usage by members
* Further breakdown revealed
* Classic bikes are still the most used bikes for each day of the week for members followed by electric and no user for docked bikes
* Slight decrease in the number of casual customers using classic rides with significant lower figures compared to member users. For electric bike types though lower than classic bikes, casual riders continue to use more electric bikes than member riders with a significant decrease in the number of casuals also using docked rides though still higher.

OBSERVATIONS FOR OCTOBER

1. The month of October recorded a further drop in total bike rides at 631,156 with significant drop in casual users and Member users having higher patronage compared to Casual patronage. Member patronage pegged at 373,953 similar to previous month and casual patronage dropping again to 257,203.
2. Average ride durations remained similar to values recorded in the previous months with a slight drop for member riders but significant increase for casual riders. Member users continue to record lower but consistent averages dropping slightly to 12.38 minutes compared to causal users which rose to 45.81 minutes.
3. For each day of week

* With a further drop in patronage, close values were recorded for Mondays and Tuesdays with Casual users having slightly higher values but significantly lower values across remaining days compared to Member users. Member riders had numbers between 41,658 and 61,970 with Sundays and Mondays having the highest usage numbers while Wednesdays had the lowest numbers but still significantly high patronage.
* Casual usage continued to drop in total users on Mondays but remained slightly higher than member users on Mondays and Tuesdays with significantly lower numbers on remaining days compared with member usage numbers ranging from 22,051 and dropping to 66,735 with Mondays and Tuesdays continuing to record the highest and Wednesdays and Saturdays recording the lowest.
* There is still a noticeable trend of low figures on Sunday and a sudden steep rise on Monday and slow or sudden decline from Tuesday onward for casual riders but slight rise again towards the weekend but member users showed close usage figures throughout the week with a drop on Wednesday.

1. For rideable types

* Classic bikes were still significantly the most used rideable type for members though the difference between classic and electric bike types has decreased recording a slight drop again at a total of 210,538, electric bikes being next at significant rise to 163,415 and docked bikes still with no users for the entire month.
* For casual users, classic bikes usage dropped significantly causing electric bike usage numbers to pass classic bike usage but again recording a general drop in numbers of each bike type to 105,577 for classic types and 128,742 respectively with docked bikes though being the least and decreasing in usage at 22,884 still remains significantly higher than docked bike usage by members
* Further breakdown revealed
* Classic bikes are still the most used bikes for each day of the week for members but closely followed by electric with slight difference compared with previous months and no user for docked bikes
* Significant decrease in the number of casual customers using classic rides with significant lower figures compared to member users. Electric bike types recorded higher patronage than classic bikes for most days. Members usage of electric bike types have superseded Casual bike users for first time in a long time with a significant decrease in the number of casuals also using docked rides though still higher.

OBSERVATIONS FOR NOVEMBER

1. November recorded a significant further drop in total bike rides at 359,892 with significant drop in both users but Member users having higher patronage compared to Casual patronage. Member patronage dropped to 253,008 lower than previous months and casual patronage dropping again to 106,884.
2. Average ride durations remained similar to values recorded in the previous months with a slight drop for member and casual riders. Member users continue to record lower but consistent averages dropping slightly to 11.45 minutes compared to causal users which dropped to 39.70 minutes.
3. For each day of week

* With a further drop in patronage, Casual users recorded significantly fall in values across all days compared to Member users. Member riders had numbers between 26,531 and 51,158 with Thursdays and Wednesdays having the highest usage numbers while Tuesdays had the lowest numbers but still significantly higher compared to casual users.
* Casual usage fell considerably in total users across all days but Mondays and Tuesdays remained peak days for casual users even though values were significantly lower than Member users with numbers ranging from a low of 11,191 to 20,560 with Saturdays recording the lowest.
* There is still a noticeable trend of low figures on Sunday and a sudden steep rise on Monday and slow or sudden decline from Tuesday onward for casual riders but slight rise again towards the weekend but member users showed close usage figures in the first few days and a sudden rise on Wednesdays and Thursdays.

1. For rideable types

* Electric bike types superseded Classic bike types for both Member and Casual users with slight difference for Members but significant difference for Casual users. Usage data for members revealed 130,846 for Electric bike usage and 122,162 for Member bike usage but nothing for docked bikes.
* For Casual riders, Electric bike usage recorded a low of 67,417 and Classic bikes recorded a low of 31,858 and docked bikes recording 7,609.
* Further breakdown revealed
* Electric bikes being the most used bikes for each day of the week for members but closely followed by Classic bikes with slight differences and no user for docked bikes
* Significant decrease in the number of casual customers using classic rides with significant lower figures compared to member users. Electric bike types continued to recorded higher patronage than classic bikes for most days. Members usage of electric bike types have superseded Casual bike users again with a significant decrease in the number of casuals also using docked rides.

OBSERVATIONS FOR December

1. December recorded another significant further drop in total bike rides at 247,519 with significant drop in both users but Member users having higher patronage compared to Casual patronage. Member patronage dropped to 177,790 lower than previous months and casual patronage dropping further to 69,729.
2. Average ride durations remained similar to values recorded in the previous months with a slight drop for member users but significant rise for casual riders. Member users continue to record lower but consistent averages dropping slightly to 11.19 minutes compared to causal users which rose to 46.92 minutes.
3. For each day of week

* With a further drop in patronage, Casual users recorded another significant fall in values across all days compared to Member users. Member riders had numbers between 15,393 and 34,037 with Saturdays and Fridays having the highest usage numbers while Tuesdays again had the lowest numbers but still significantly higher compared to casual users.
* Casual usage fell considerably in total users across all days with peak days on Sundays and Saturdays for even though values were still significantly lower than Member users with numbers ranging from a low of 8,436 to 12,951 with Thursdays recording the lowest.
* The days recorded close usage for casual users with a decrease towards the middle of the week but member users showed low figures in the first few days and a sudden rise on Wednesdays towards the weekend.

1. For rideable types

* Again Electric bike types superseded Classic bike types for both Member and Casual users with notable difference for Members but significant difference for Casual users. Usage data for members revealed 96,964 for Electric bike usage and 80,826 for Member bike usage but nothing for docked bikes.
* For Casual riders, Electric bike usage recorded a low of 44,995 and Classic bikes recorded a low of 19,806 and docked bikes recording 4,928.
* Further breakdown revealed
* Electric bikes being the most used bikes for each day of the week for members but closely followed by Classic bikes with slight differences and no user for docked bikes
* Significant decrease in the number of casual customers using classic rides with significant lower figures compared to member users. Electric bike types continued to recorded higher patronage than classic bikes for most days. Members usage of electric bike types have superseded Casual bike users again with a significant decrease in the number of casuals also using docked rides.

KEY OBSERVATIONS FOR THE YEAR

TOTAL BIKE USAGE

The total bike usage recorded for the year was 5,594,410 out of which 3,065,746 (55%) were by Members and 2,528,664 (45%)were by Casual users.

A monthly breakdown revealed

* There is a trend of low figures from the beginning of the year which rises significantly and peaks towards the middle and falls again towards the end of the year.
* February having the lowest patronage for both Members and casual users with higher usage for members and lower usage for casual riders.
* From January to May recorded a higher patronage for members compared to Casual users with significant differences from January to April and a close difference in May.
* This changed in June to August where Casual users recorded higher figures notably in July and close in June and August. June to September recorded the peak seasons for Casual riders with July being the highest.
* Numbers change again towards the end of the year with Member riders recording higher numbers from September with substantially increasing difference towards the end of the year. June to October recorded peak seasons for Member riders with August and September being the highest.

AVERAGE BIKE USAGE

The average ride duration is fairly consistent throughout the year with Casual riders recording significantly high averages throughout the year even when patronage was low. Average ride duration for casual users for the year was 32.61 while members recorded 13.81.

Monthly breakdown revealed

* Slightly higher average in February for member users and quiet consistent average ride durations for the entire year. Casual users also had a significantly high average in February and higher consistent averages for the subsequent months compared with Member users.

Weekly breakdown revealed

* Highest averages of about 322 hours and 275 hours on the 6th and 8th week respectively for causal riders but the other weeks maintain significantly higher consistent averages compared to Member averages which were fairly consistent throughout the weeks.

Day of week breakdown

* Consistently significant difference in Averages for all days of week with Casual users maintaining higher averages and member users having low consistent averages. Tuesdays recorded the highest average for the entire year for Casual users.

MAX RIDE DURATION

The highest recorded maximum ride duration was 932 hours for Casual users and 25.99 for member users for the entire year.

Monthly Breakdown revealed

* Casual users recorded consistently high maximum ride durations throughout the year with January having the lowest at 330 hours and June having the highest at 932 hours. Member users recorded a maximum ride duration of about 25 hours each month for the entire year.

Weekly Breakdown revealed

* The weekly trend shows sharp peaks and sharp falls for Casual users throughout the year with the lowest fall being on the 7th week and 2nd week. Other notable falls occurred on the 5th, 35th, 44th, 50th and 53rd week.
* Highest peaks for casual users were on the 23rd and 19th weeks while Member users had consistent maximum ride duration for the entire timespan at 25 hours.

Day of the week Breakdown revealed

* Mondays recorded the maximum ride duration at 932 hours and Sundays and Tuesdays had a close second at 928 hours and 898 hours respectively for casual users. Wednesdays recorded the lowest figures at 528 hours.
* Figures for Member usage remained the same for each day of week.

RIDEABLE TYPE (BIKE TYPE) ANALYSIS

Total Usage for bike types

* Classic bike types had the highest usage for the entire year at 35.47% for member users and 22.64% for Casual users.
* Electric bike types were the next highly patronized bike type for Members and Casuals at 19.33% for Members and 16.98% for Casual users. It showed close difference between figures for Classic and electric bike use for casual members.
* Docked type bike were the least preferred with patronage only from Casual riders at 5.58% and one recorded usage throughout the year.

Maximum and Average ride duration for Bike Types

* Docked bike types had the maximum ride duration for the entire year at 932 by Casual users. Classic bikes had equal maximum duration for both casual and member users at 26 hours and likewise electric bike usage at 8 hours for both member and casual riders.
* High averages recorded each week for docked bike types with exception of 7th week.
* Docked type bikes were driven the longest distances while all other bike types showed similar average and maximum bike durations.

Day of Week Breakdown revealed

* Docked type bikes remaining the longest ridden bikes for each day of the week with significantly high values for all the days with casual bikes but with very large difference and electric bikes being the shortest ridden bikes

SUMMARY

TARGET GROUP POTENTIAL

45% of Cyclistic bike users are Casual users which is equivalent to about 2.5 million potential members.

AVERAGE BIKE DURATION

Average ride duration for casual users for the year was 32.61 while members recorded 13.81.

The average ride duration is fairly consistent throughout the year with Casual riders recording significantly high averages.

MAX RIDE DURATION

The highest recorded maximum ride duration was 932 hours for Casual users and 25.99 for member users for the entire year.

Docked bike types had the maximum ride duration for the entire year by Casual users.

Monthly Data

There is a trend of low figures from the beginning of the year which rises significantly and peaks towards the middle and falls again towards the end of the year.

WEEKLY BIKE USAGE

The weekly trends show sharp peaks and sharp falls in Maximum ride duration for Casual users throughout the year

Highest averages on the 6th and 8th week respectively for causal riders but the other weeks maintain significantly higher consistent averages compared to Member averages which were fairly consistent throughout the weeks.

DAY OF WEEK BIKE USAGE

Consistently significant difference in Averages with Casual users maintaining higher averages and Tuesdays recording the highest average.

Mondays, Sundays and Tuesdays recorded the maximum ride duration at 932 hours

RIDEABLE TYPE (BIKE TYPE) ANALYSIS

Classic bike types had the highest usage for the entire year at 35.47% for member users and 22.64% for Casual users.

Casual bikes are predominantly the most used rideable type throughout the year with a slight decrease in patronage at the end of the year.

Electric bike types were the next highly patronized bike type for Members and Casuals at 19.33% for Members and 16.98% for Casual users.

Patronage increasing above classic bike types towards the end of the year.

Docked type bike were the least preferred with patronage only from Casual riders at 5.58%.

Docked type bikes were driven the longest distances while all other bike types showed similar average and maximum bike durations.

KEY FINDNGS

1. Trends show seasonal influence in bike usage as similar usage patterns are visible for both member users and casual users hence marketing should as the winter period show significant decline in patronage and Spring, Summer and Fall having good patronage with summer being the highest.
2. Superseding casual user patronage may be due to Summer vacations and inflow of tourists during the summer season and many outdoor events like hiking and cycling taking place in summer.
3. Consistent Maximum and Average bike use for most member and casual users excluding docked types show people mostly use it for commuting or for normal riding over short distances for routine activities.
4. There is a huge potential to get Docked bike type users as all users are casual. Maximum ride duration for docked type users suggest they mostly use it for long periods before returning the bikes which show great potential to make them members.
5. Electric bike users had very significant numbers as there was consistency in their patronage for both casual and member users hence a good source of potential members.
6. Further investigation is required to understand why Docked type bike users had so high averages and maximum duration since usage patterns are similar with the exclusion of docked type bikes.

RECOMMENDATIONS

1. Marketing should factor in seasonal trends and Seasonal memberships should be considered to target seasonal users as data evidently shows
2. Marketing should be tailored to different bike type users especially Dock type users as our member users don’t like docked type bikes.
3. Marketing should target the everyday people like commuters or people having routine schedules traveling over short distances or people who like to keep bicycles as a main commuting means (docked type users)