

Case Study 1: How Does a Bike-Share Navigate Speedy Success?

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Problem Statement

- Question: How do annual members and casual riders use Cyclistic bikes differently?
- Compare and contrast Members and Casual riders to drive business decisions that would cater to the respective rider.

Data Cleaning and Manipulation

- Used Excel for 12 months of 2021
- Removed rows with duplicate “ride_id” which are unique values
- Created “ride_length” variable which is the “end_time” minus the “start_time” of the ride
- Created “day_of_week” variable that shows what day(Sunday through Saturday) the ride took place. Uses the “start_time” variable.

Ratio of Rides between Casual and Member Riders

- Members have about 9.6% more rides than Casual riders throughout the year.

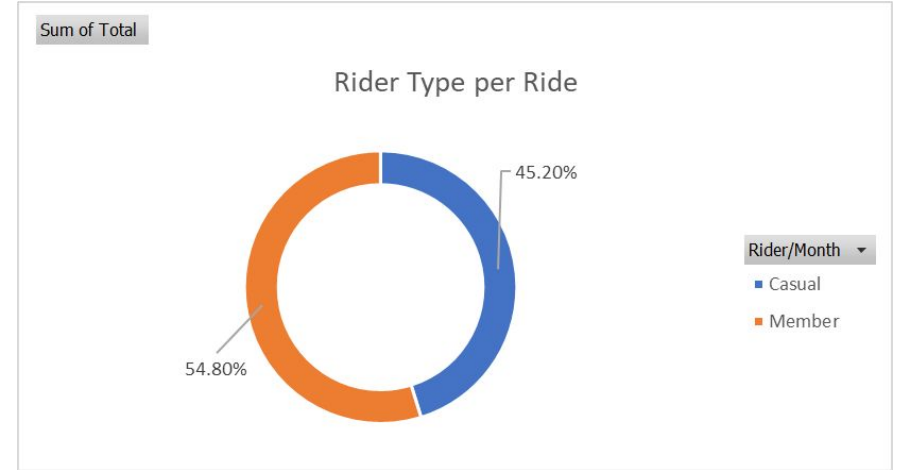


Fig 1. Shows the percentage of rides that Casual riders and Member riders have throughout the year.

Ride Type used for Rider

- Classic Bikes are the most commonly used bike by all riders, followed by the Electric Bike.
- Member riders do not use the Docked Bike.
- Member riders are consistently riding throughout the year.
- Casual riders ride more between May and September, than between October and April.
- Member riders had an increase in electric bike usage between October and December.

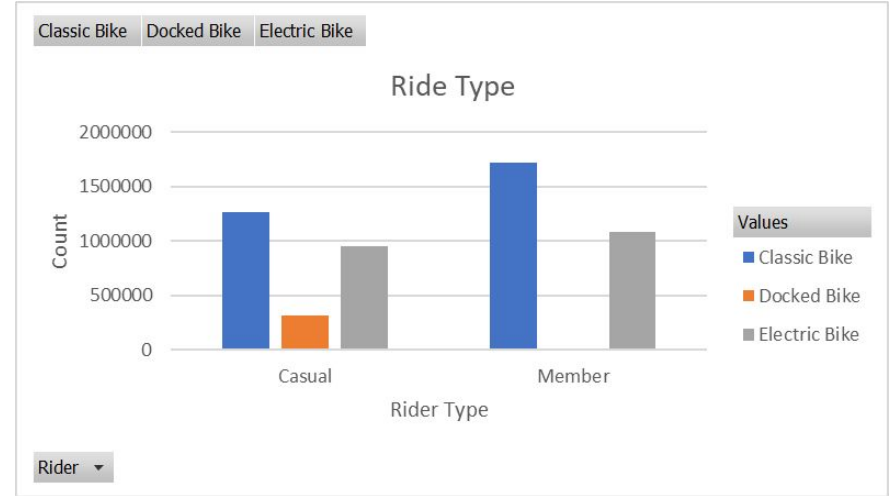


Fig 2. Show the total amount of rides for each ride type throughout the year.

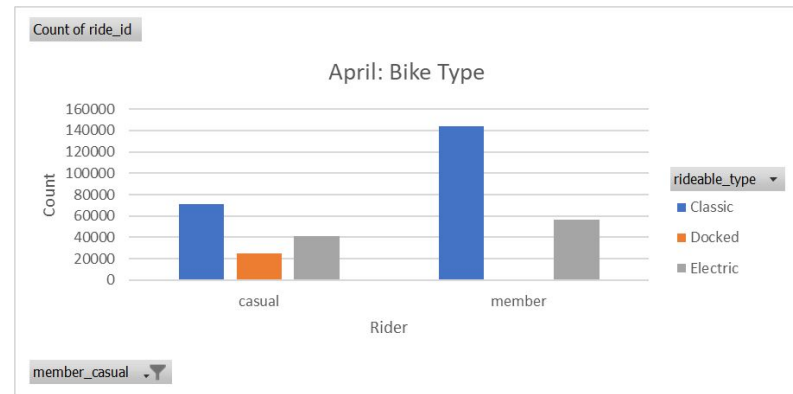
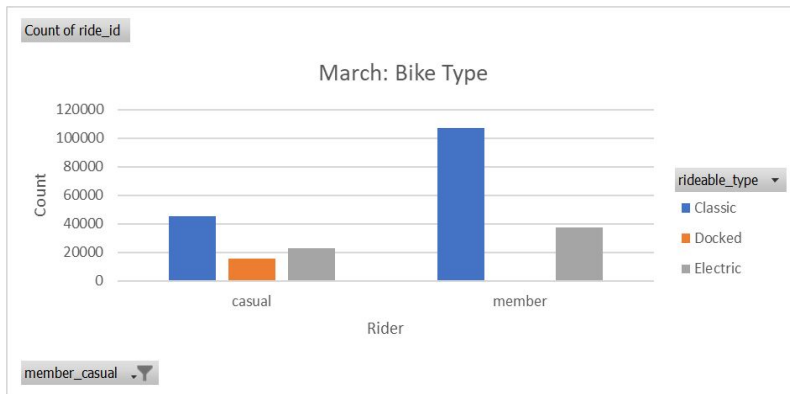
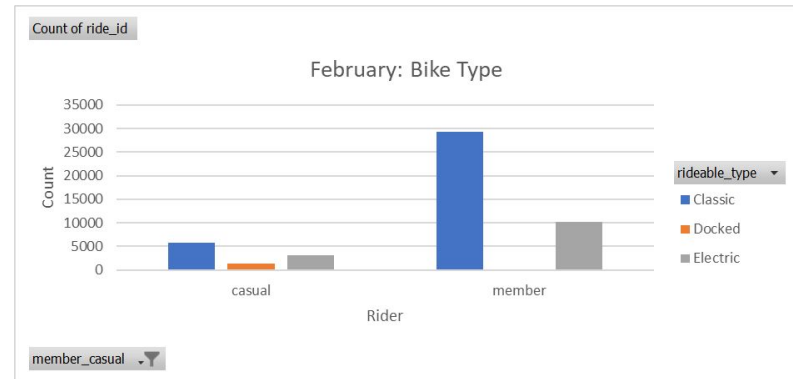
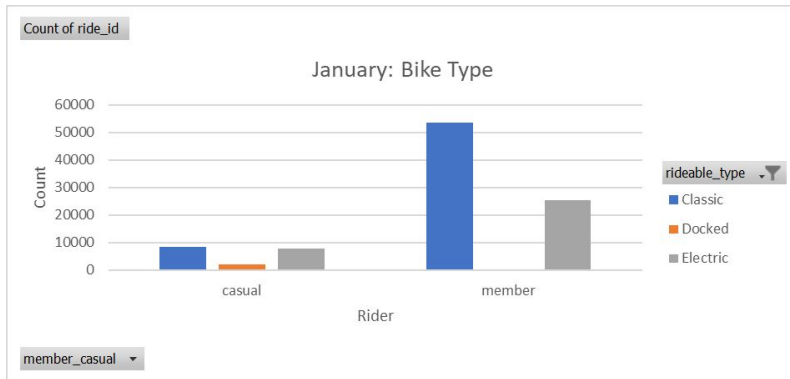


Fig 3. Shows the usage of Bike Types for Casual and Member riders between the months of January to April. Casual riders had an increase in usage for all bike types in March and April.

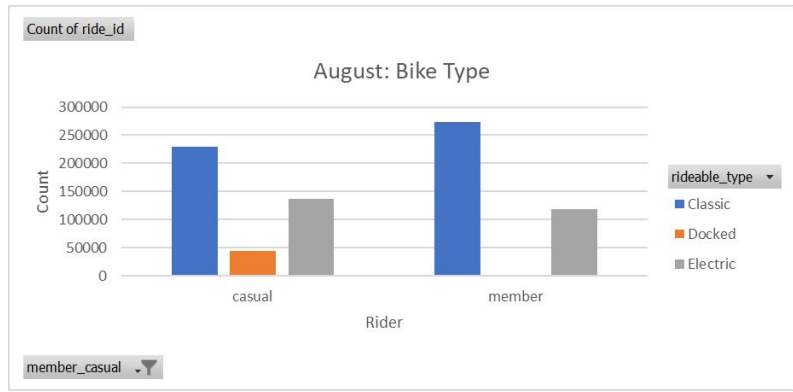
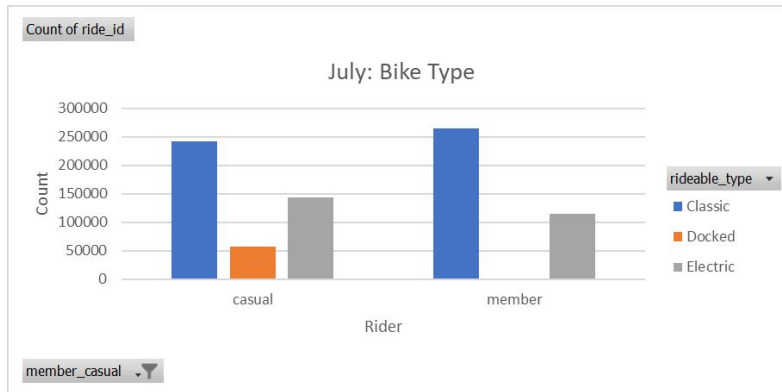
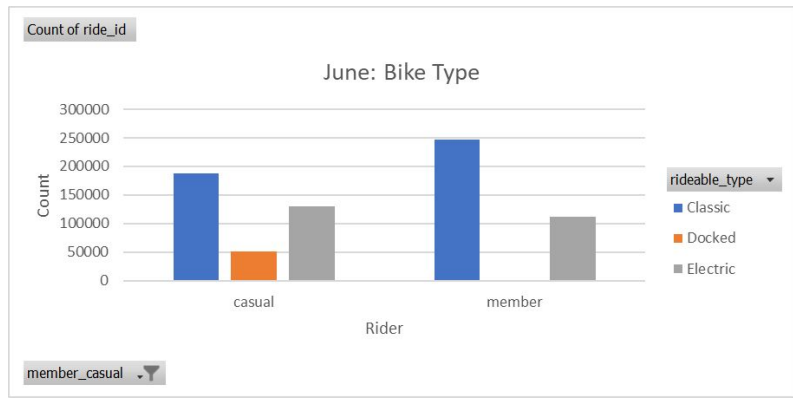
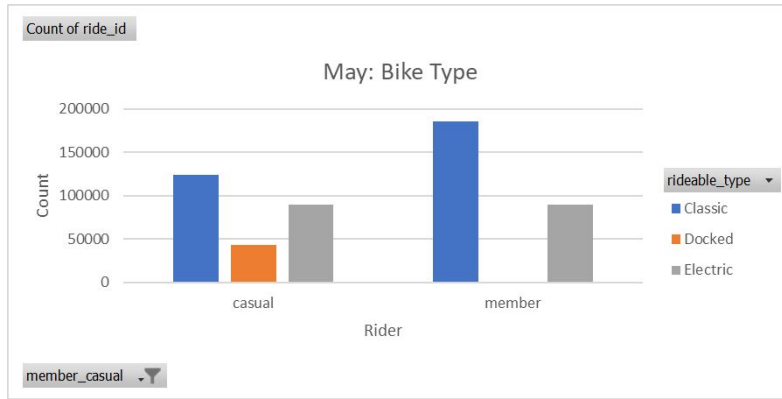


Fig 4. Shows the usage of Bike Types for Casual and Member riders between the months of May to August. Bike type usage remains the same.

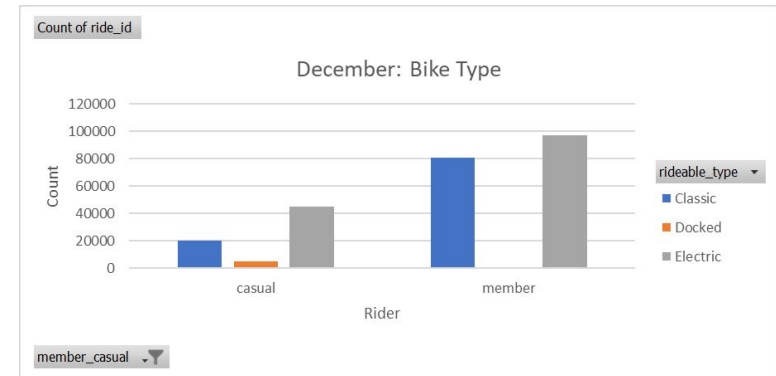
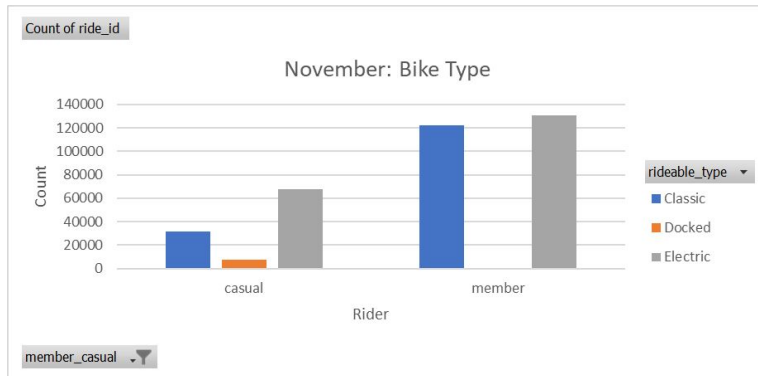
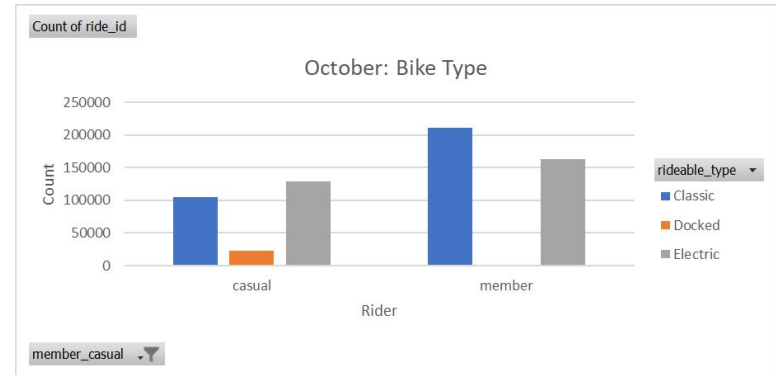
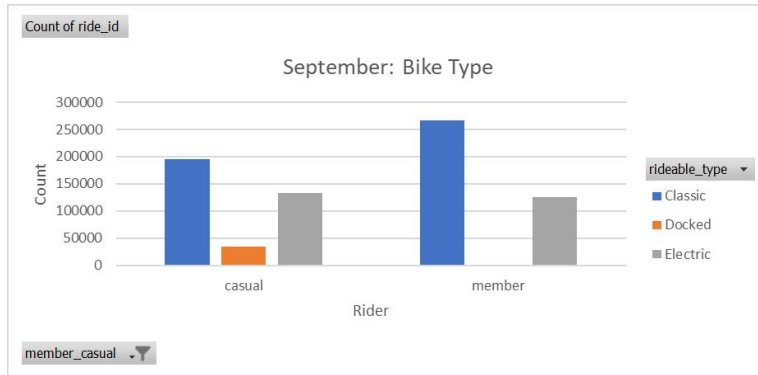


Fig 5. Shows the usage of Bike Types for Casual and Member riders between the months of September to December. Bike type usage is reduced as December approaches.

Average Ride Time per Day

- Casual riders have longer ride times than the Member riders.
- Casual riders have longer ride times on the weekends than during the week.
- Member riders have consistent ride times at about 14 minutes throughout the week.
- Casual rider time gets shorter as the year progresses

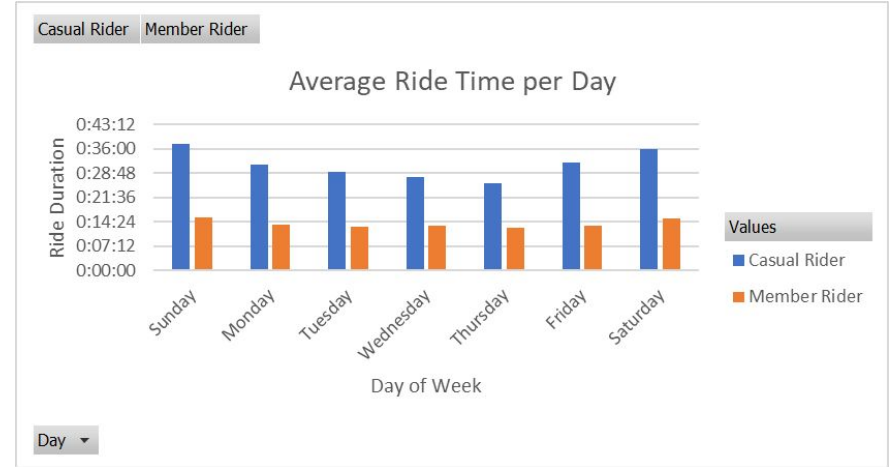


Fig 6. Shows the average ride time per day throughout the year for the Casual riders and Member riders.

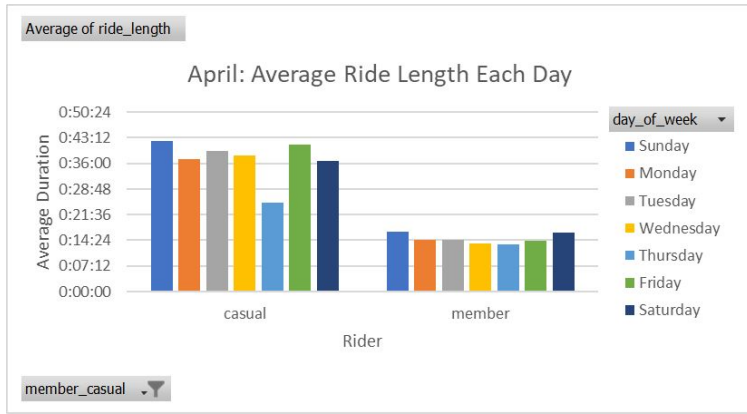
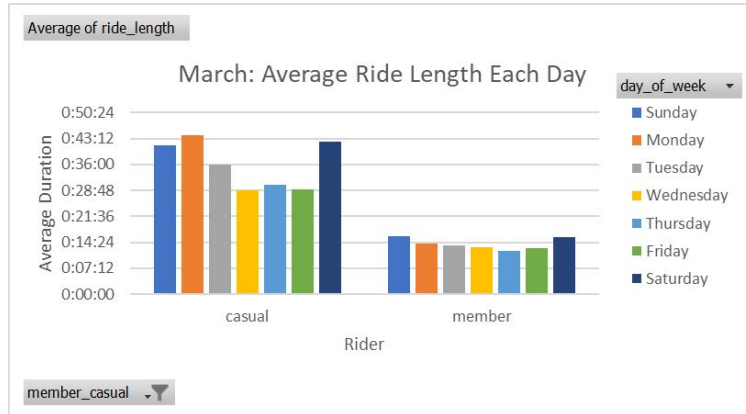
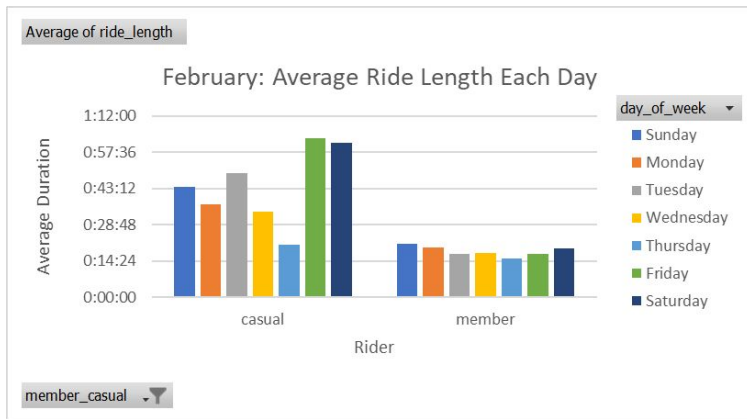
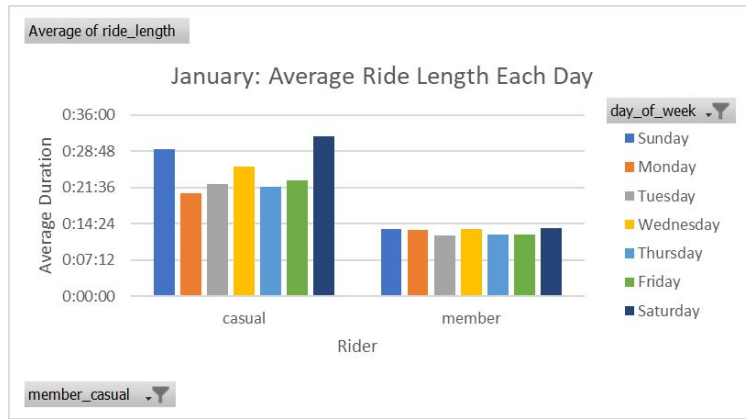


Fig 7. Shows the average ride time for Casual and Member riders between the months of January to April. February has the longest average ride times. January has the shortest average ride times.

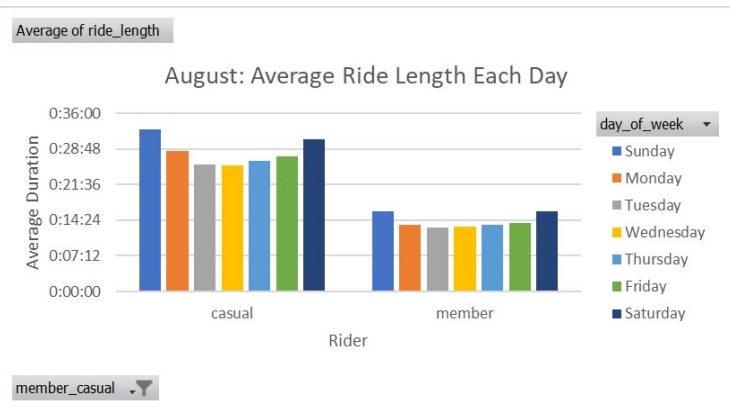
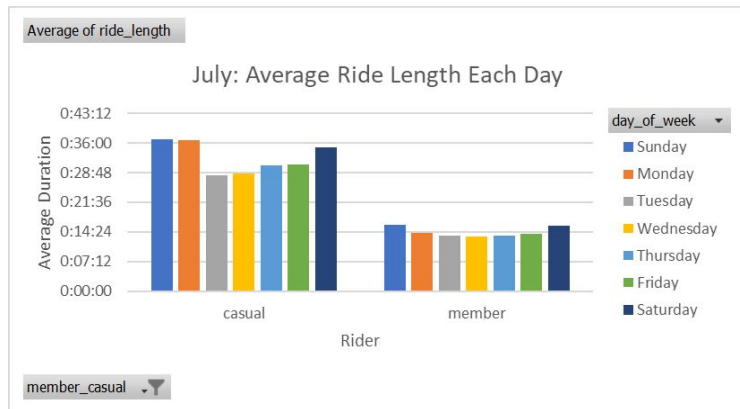
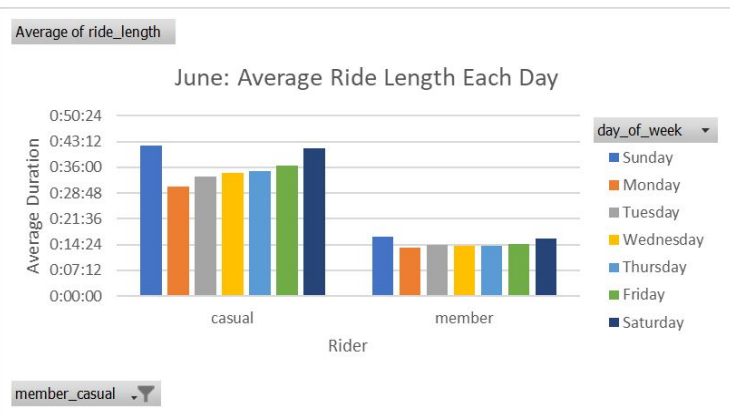
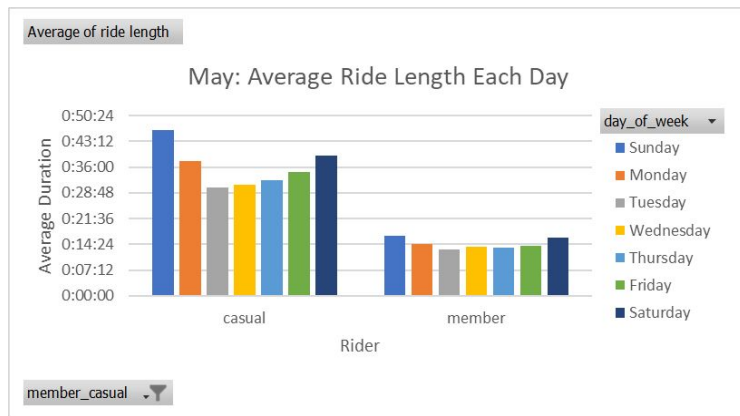


Fig 8. Shows the average ride time for Casual and Member riders between the months of May to August. Member riders have the same average ride times throughout these months. Casual riders have lower ride times in August compared to May.

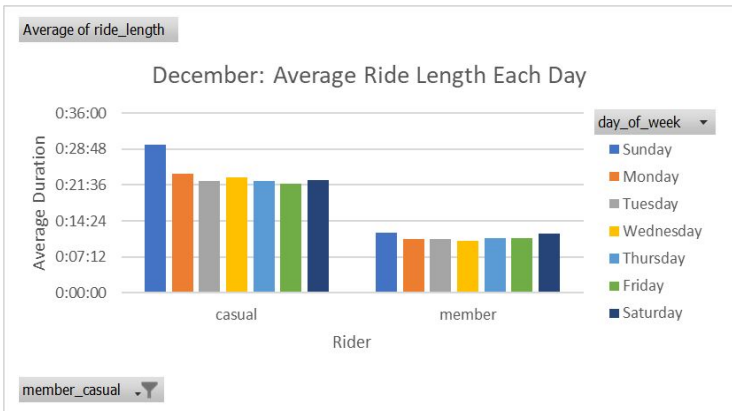
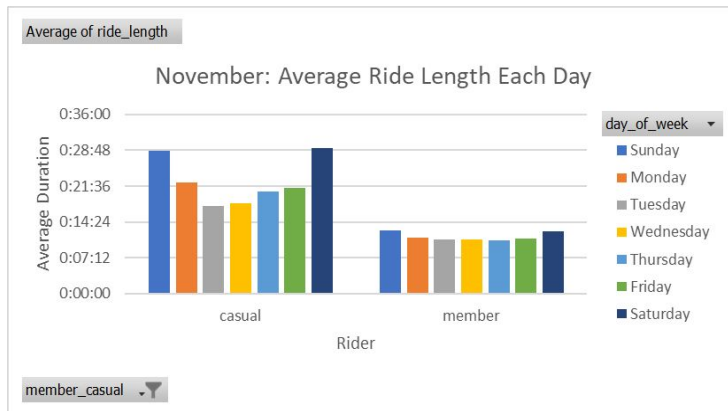
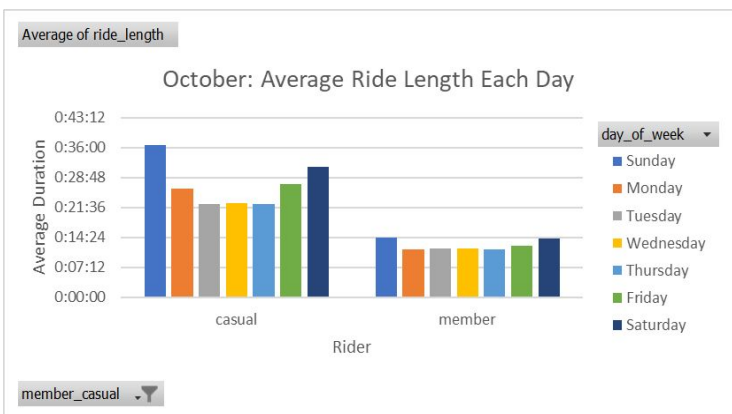
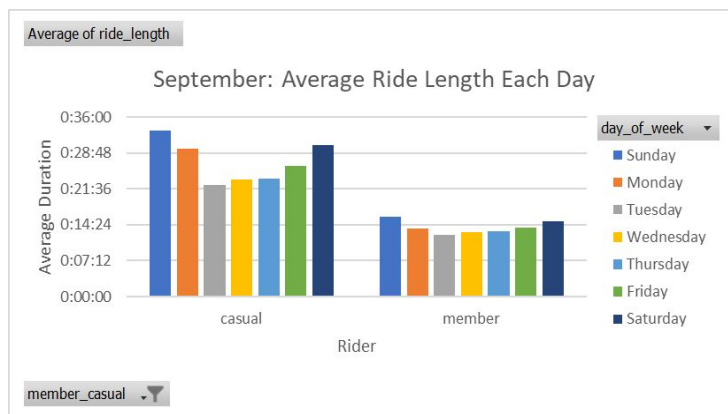


Fig 9. Shows the average ride time for Casual and Member riders between the months of September to December. November and December have the lowest average ride times for both Casual and Member riders.

Average Rides in a Week

- Casual riders have more rides on the weekends
- Member riders ride slightly more during the week than on weekends.
- Casual riders ride more from March to September.

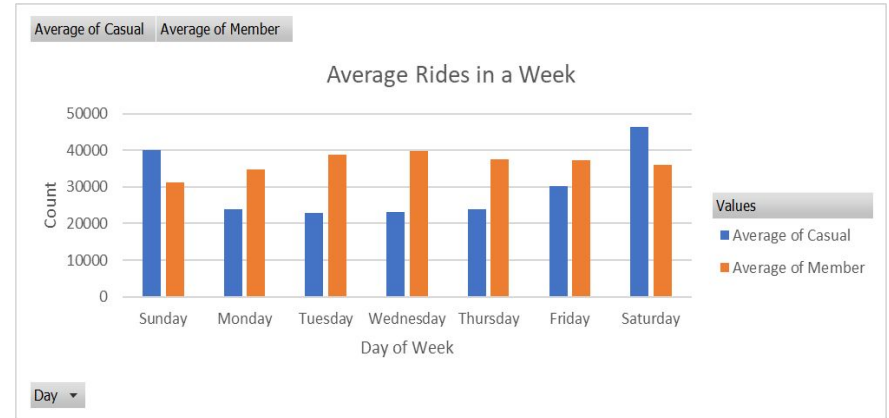


Fig 10. Shows the average amount of rider per day throughout the year for the Casual riders and Member riders.

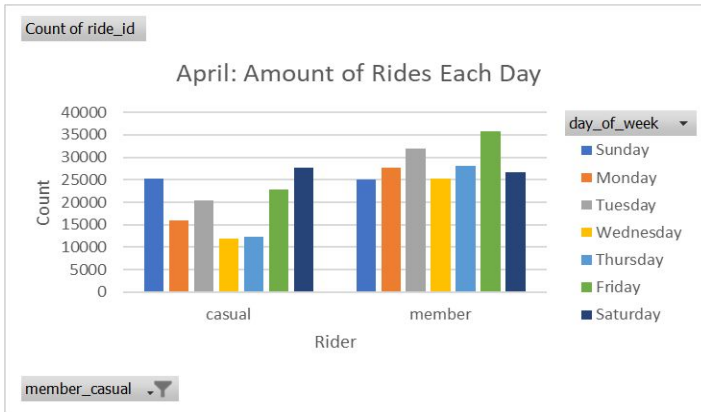
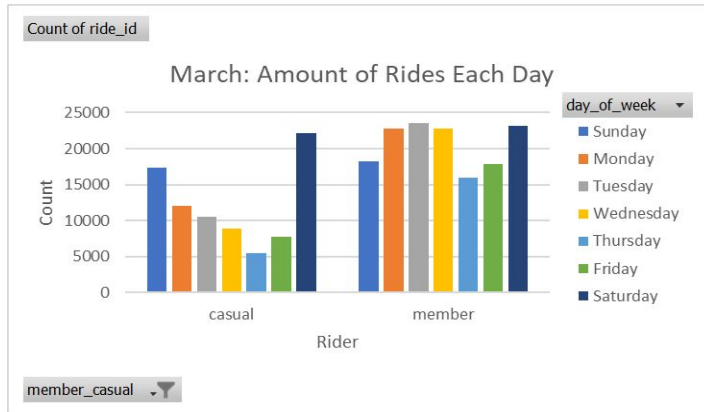
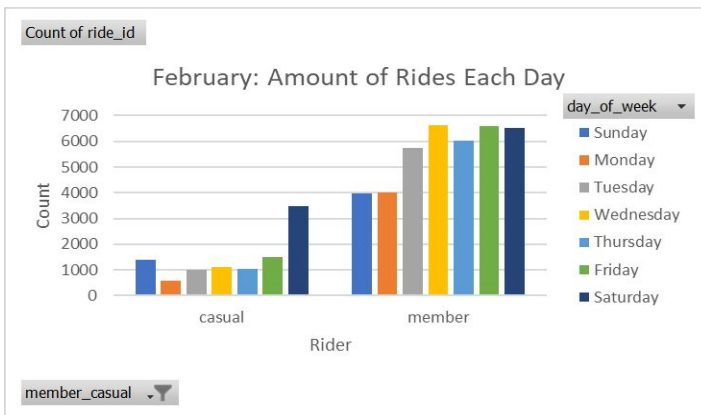
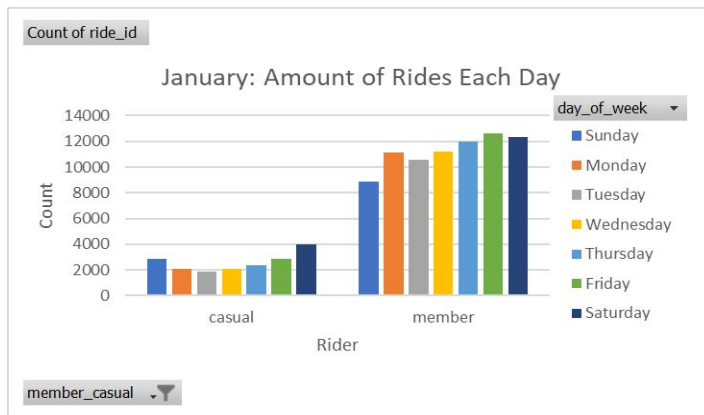


Fig 11. Shows the average amount of rides for Casual and Member riders between the months of January to April. February has the least amount of rides for both Casual and Member riders.



Fig 12. Shows the average amount of rides for Casual and Member riders between the months of May to August. Casual and Member riders have the same amount of rides in June, July, and August.

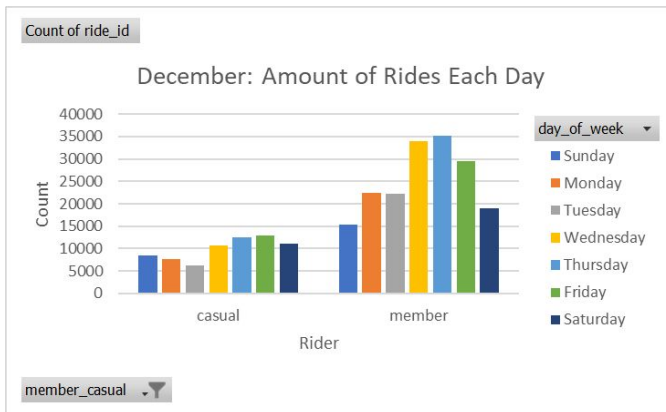
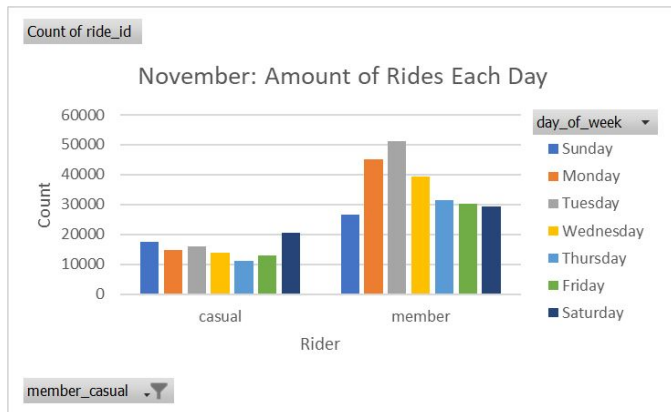
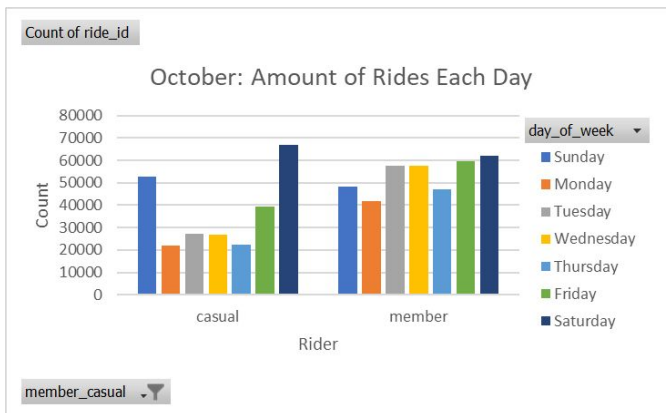
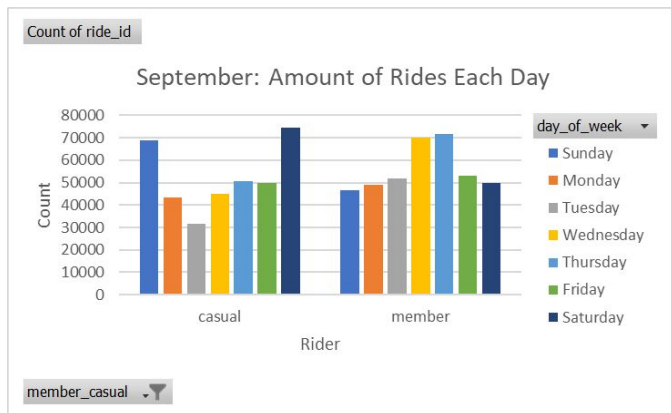


Fig 13. Shows the average amount of rides for Casual and Member riders between the months of September to December. The amount of rides decrease in November and December.

Recommendations

- Increase advertising to Casual riders from March to September.
- Increase advertising of Classic Bike and Electric Bike to the Casual and Member riders or reduce focus on Docked Bikes
- Create program that promotes consistent bike usage. This would reward members and encourage casuals to ride more.

Thank You
