



Cyclistic Data Analysis

Google Capstone Project



Business Task

The business task is to understand how annual members and casual riders use Cyclistic bikes differently.

This is crucial because Cyclistic aims to design a marketing strategy to convert casual riders into annual members. The success of this strategy relies on compelling data insights and professional data visualizations.

Data Sources Used

Multiple datasets obtained from Cyclistic's internal records are used, including historical bike trip data.

These datasets contain valuable information about ride details, rider profiles, bike types, and more, which are essential for our analysis.

Cleaning and Manipulation of Data

As part of the data preparation process, data cleaning has been performed to ensure the accuracy and reliability of our analysis.

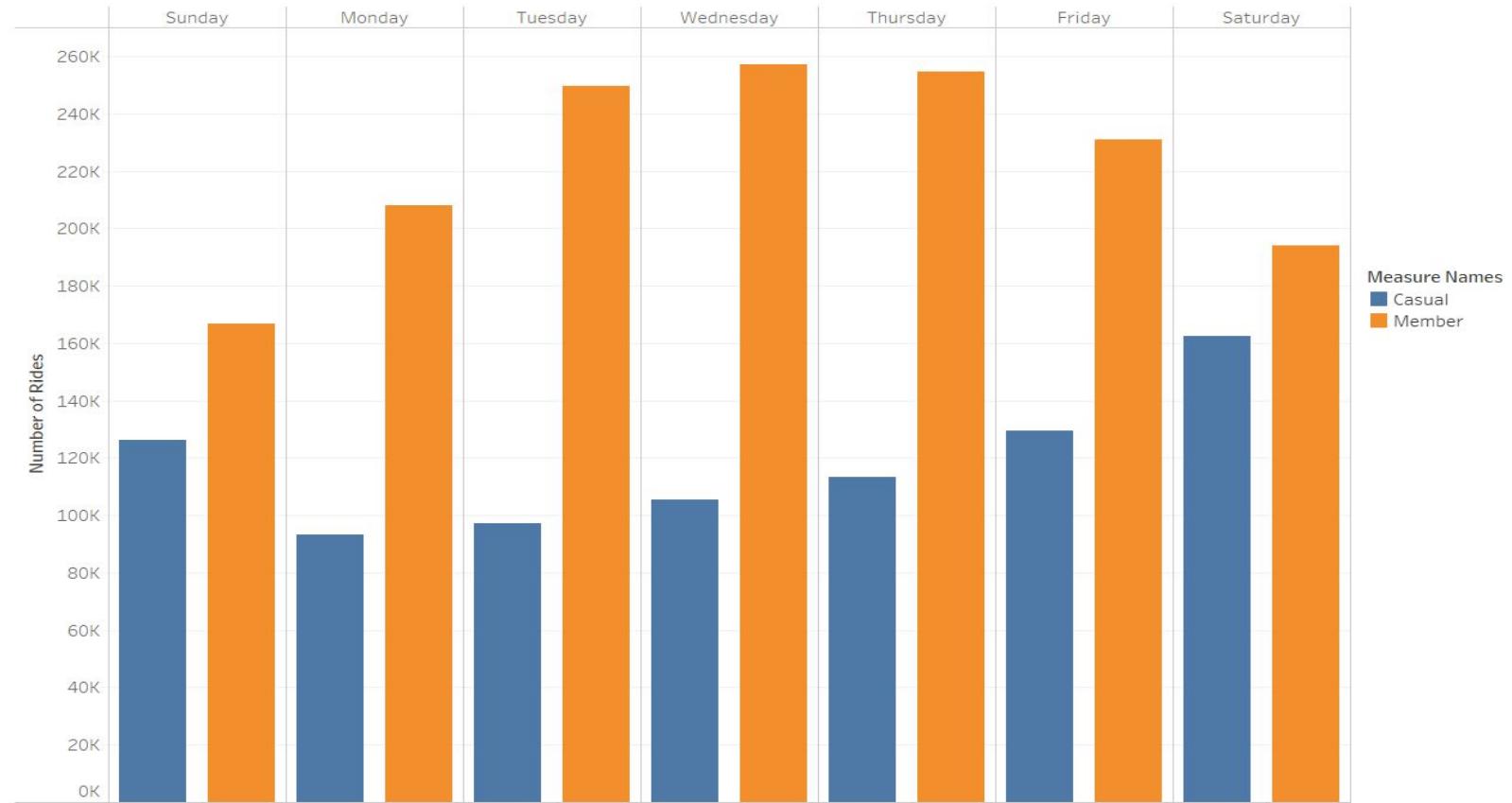
This included addressing repeating ride IDs, which could skew the results and create data inconsistencies. By resolving this issue, the quality of dataset has been improved.

Summary

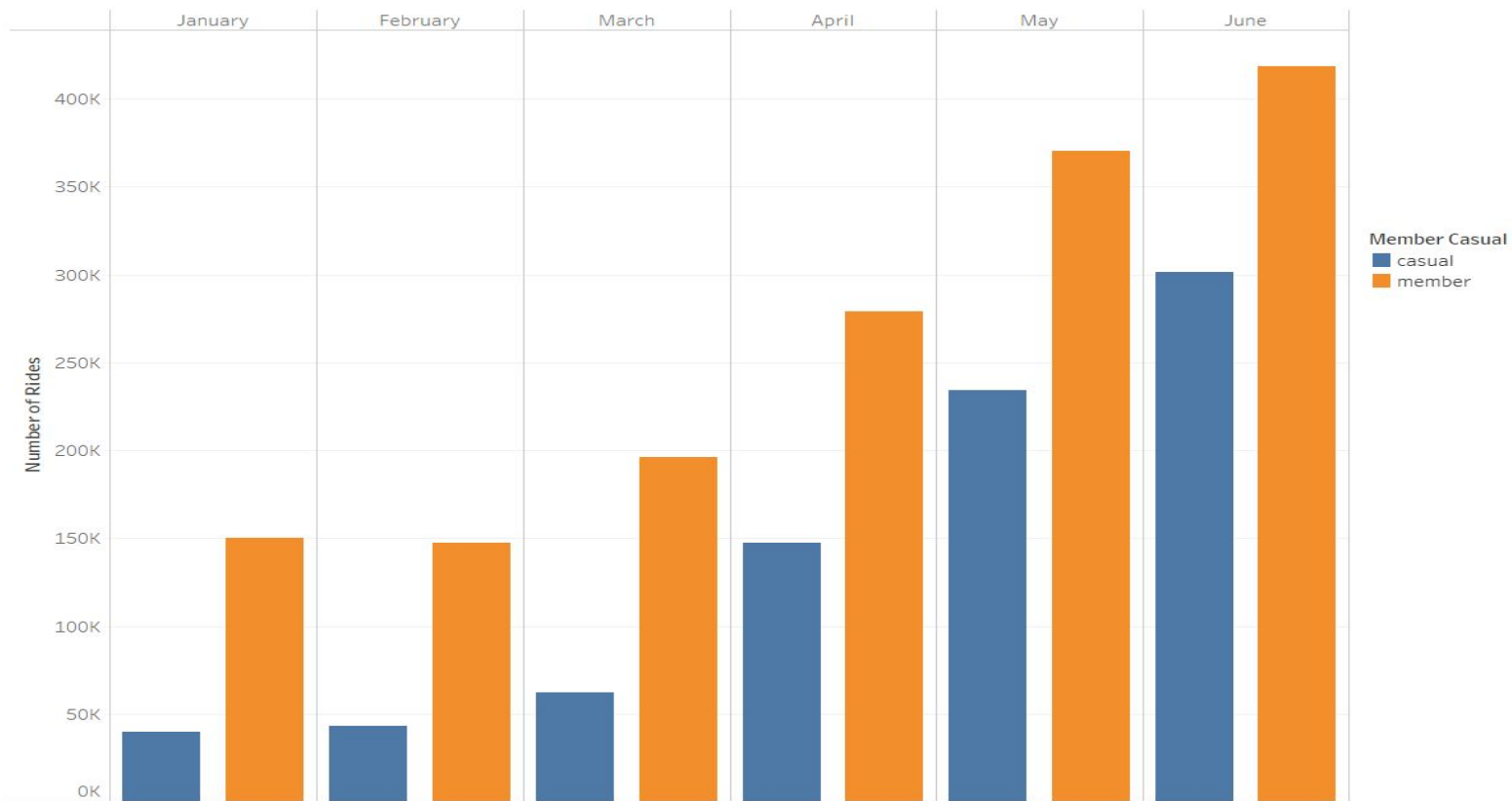
The analysis focused on identifying differences in how annual members and casual riders use Cyclistic bikes.

Statistical and exploratory data analysis techniques have been used to uncover trends, patterns, and insights within the data.

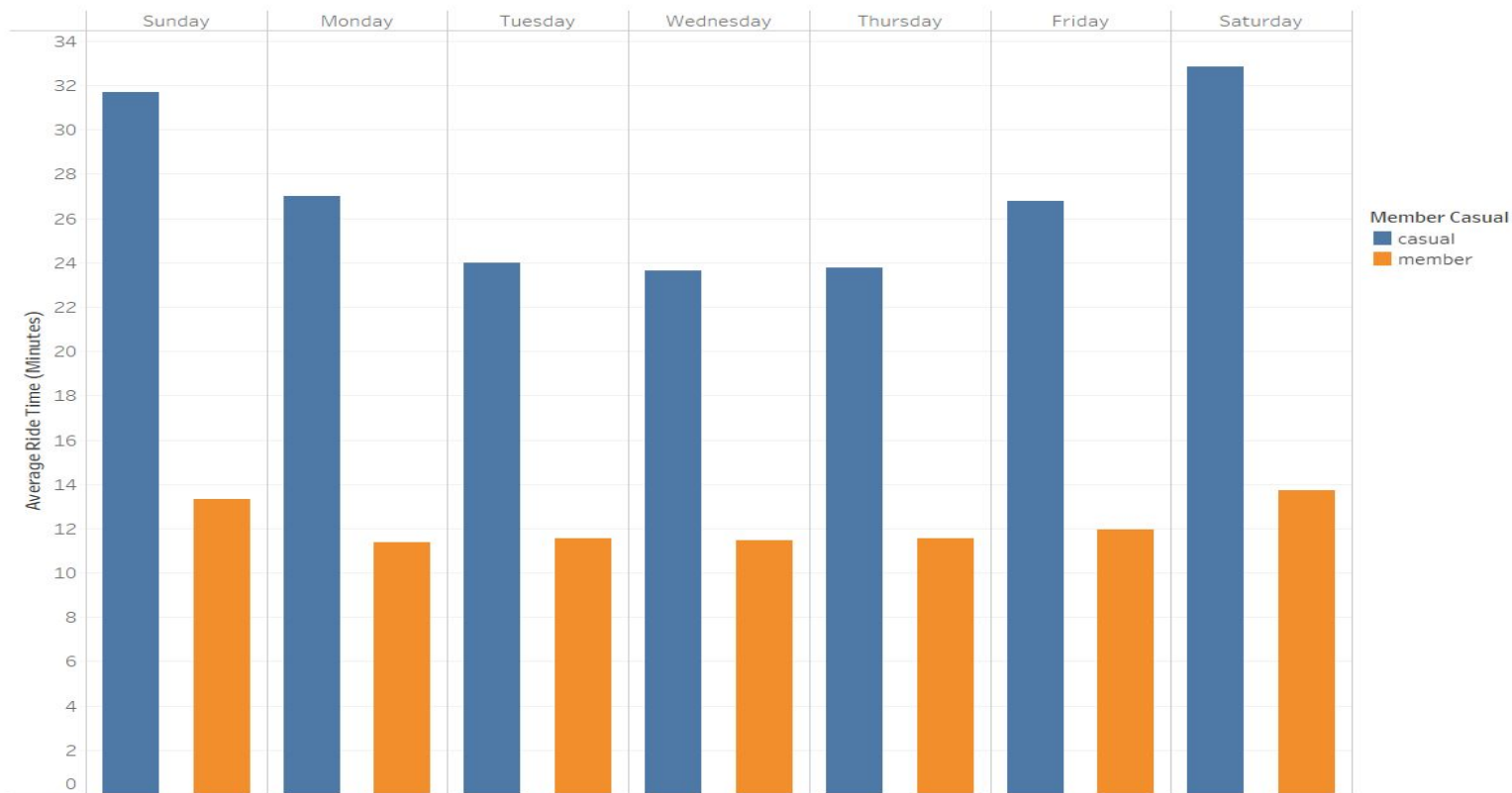
Number of Rides by each day of the Week



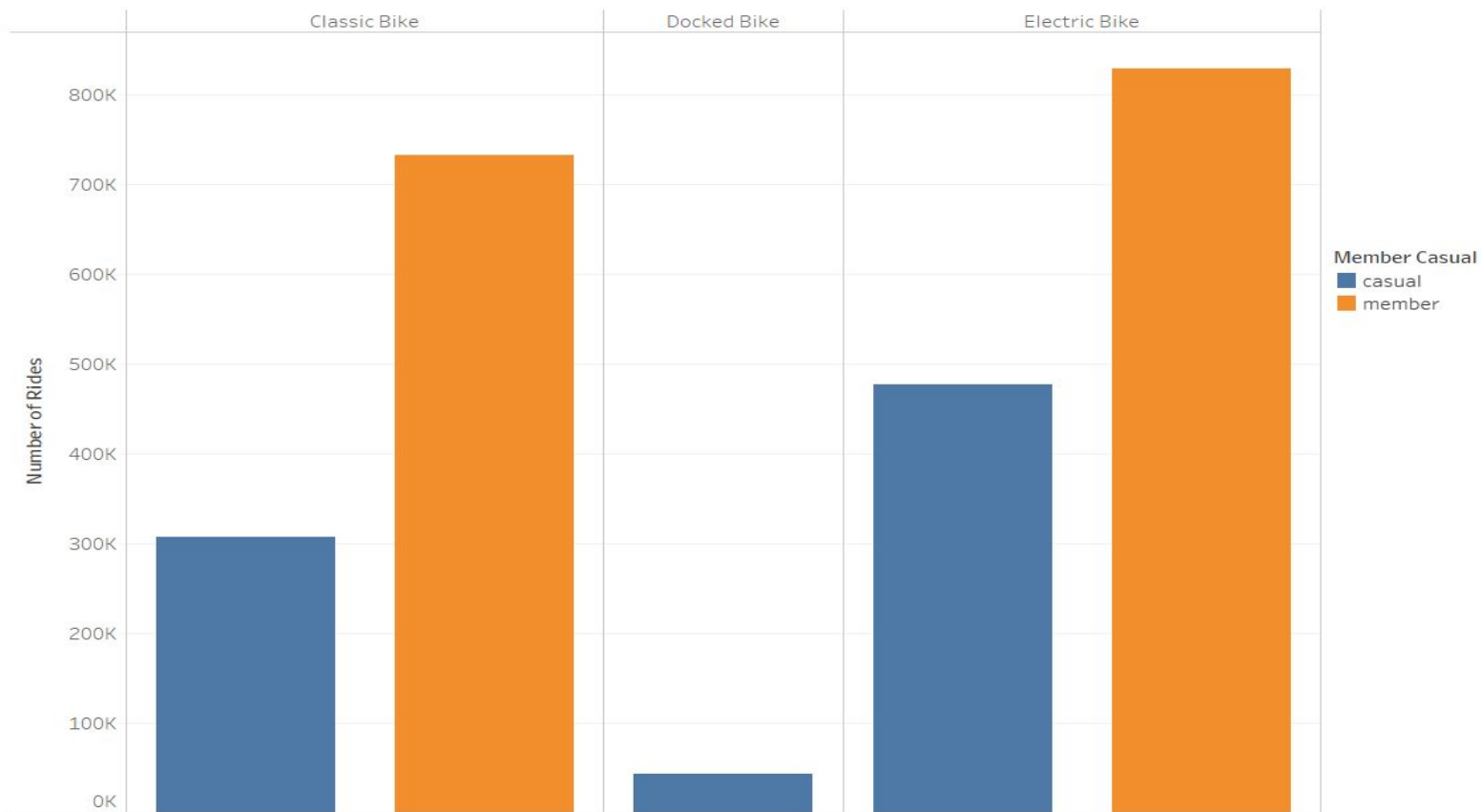
Number of Rides by Month



Average Ride Time



Number of Rides per type of bike



Key Findings

- Casual riders tend to have a higher number of rides on weekends, indicating recreational use. Annual members prefer weekdays, using Cyclistic bikes for commuting. This distinction is critical for targeted marketing.
- As we approached the summer months, the average ride time increased for both annual members and casual riders. This suggests an opportunity to promote longer rides during the warmer seasons.
- There's a significant potential for converting casual riders into annual members due to their awareness of Cyclistic. Focusing on the benefits of annual memberships in marketing can be effective.

Recommendations

- Capitalize on the increased average ride time during the summer by introducing seasonal promotions or extended ride packages.
- For casual riders, introduce weekend-specific promotions and events to further enhance the leisure and recreational aspects of bike usage, encouraging more weekend rides.
- Launch targeted marketing campaigns specifically tailored to casual riders, highlighting the benefits of annual memberships, such as cost savings and convenience.