Cyclistic Bike-Share Analysis Case Study Report

1. Business Task
Analyze how annual members and casual riders use Cyclistic bikes differently in order to provide insights that support marketing strategies aimed at converting casual riders into annual members.

2. Data Source
This analysis uses 12 months of historical Cyclistic trip data provided by Motivate International Inc. The dataset includes ride ID, bike type, timestamps, station information, rider type, and geolocation coordinates.

3. Data Cleaning & Processing Summary
• Loaded each month's dataset into Excel.

• Added ride_length column using ended_at - started_at.

• Added day_of_week column using WEEKDAY(started_at, 1).

• Removed rows with missing start_station_name or end_station_name.

• Removed negative and zero ride lengths.

• Created summary pivot tables for: ride counts, average ride length, and weekly patterns.

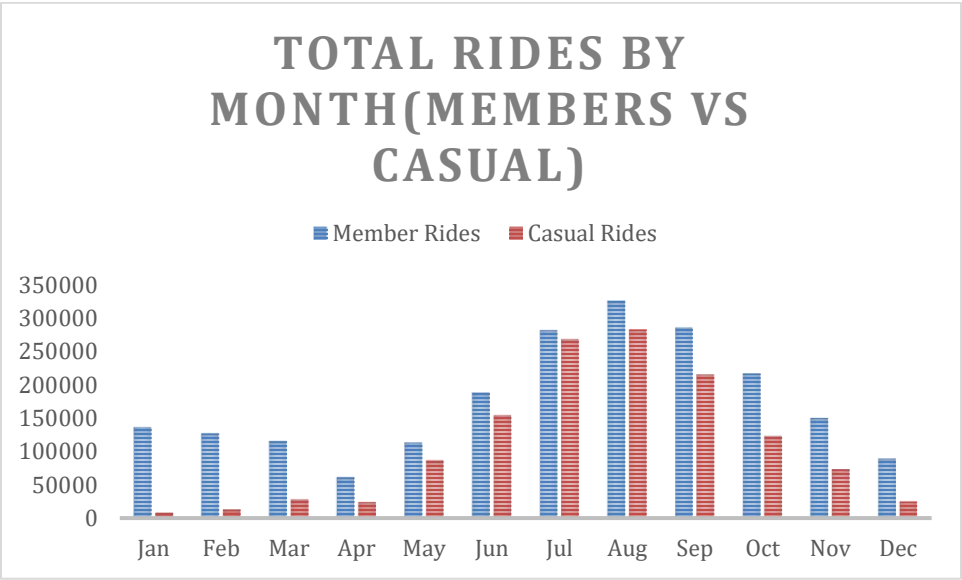• Combined monthly results into a Year Summary table.

4. Key Insights
1. Annual members consistently took more total rides across the year.

2. Casual riders had longer average ride lengths, suggesting leisure-oriented use.

3. Casual rider usage peaked on weekends, while members rode more consistently during weekdays.

4. Summer months (June–August) showed the highest ridership overall.

5. Members displayed stable year-round usage, indicating regular commuting behavior.

6. Casual riders appear more price- and experience-driven, suggesting opportunities for promotional marketing.
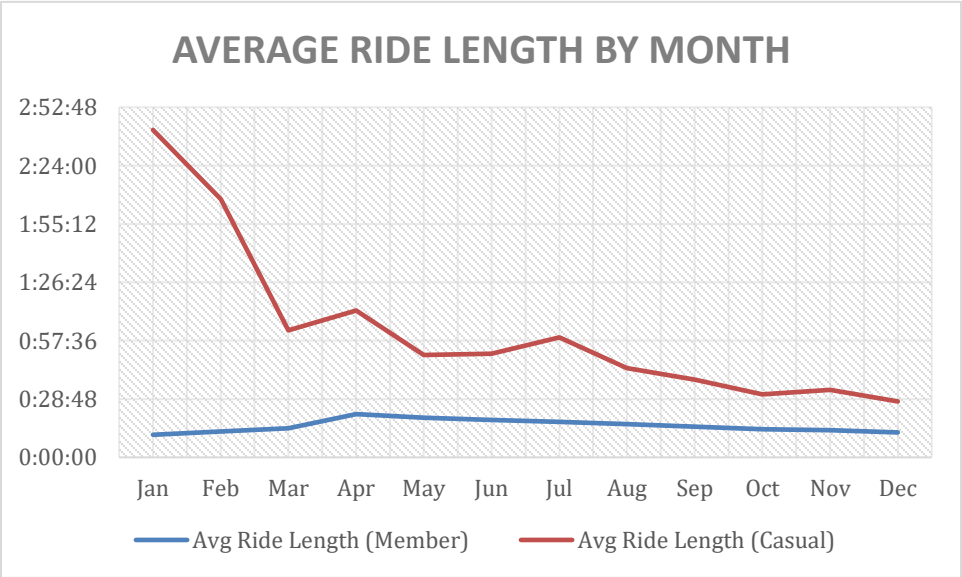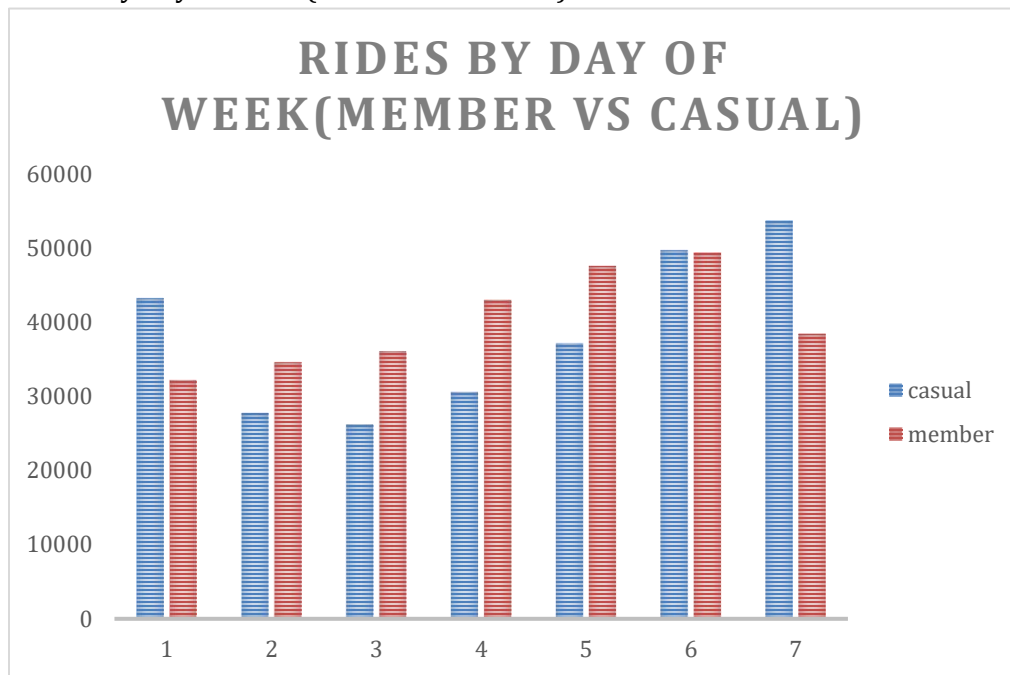
5. Visualizations

Insert charts here:

• Total Rides by Month (Members vs Casual)

TOTAL RIDES BY MONTH(MEMBERS VS CASUAL)

■ Member Rides ■ Casual Rides

• Average Ride Length by Month

AVERAGE RIDE LENGTH BY MONTH

— Avg Ride Length (Member) — Avg Ride Length (Casual)

• Rides by Day of Week (Members vs Casual)

RIDES BY DAY OF WEEK(MEMBER VS CASUAL)

6. Recommendations

1. Target casual riders with weekend membership promotions, since their usage peaks on weekends.

2. Offer seasonal or summer membership discounts aimed at high-activity casual riders.

3. Highlight the value and convenience of annual memberships to frequent leisure riders to encourage conversion.

7. Conclusion

This analysis reveals clear behavioral differences between annual members and casual riders. Members ride more frequently and consistently, while casual riders take longer recreational trips and ride more on weekends. These findings support strategies focused on converting casual riders into committed members by emphasizing value, convenience, and targeted seasonal promotions.