# Cyclistic Bike-Share Case Study

## Business Task (ASK)

Cyclistic wants to increase annual memberships.
 The company believes casual riders represent a strong conversion opportunity.

The objective of this analysis is to understand how casual riders and annual members use Cyclistic bikes differently and identify strategies to convert casual riders into members.

Key question:

**How do casual riders and members use Cyclistic bikes differently, and how can these differences inform marketing strategy?**

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## Data Source (PREPARE)

The dataset contains historical trip data from Cyclistic bike-share usage.

It includes:

- ride timestamps

- station locations

- ride duration

- user type (member or casual)

The dataset spans 12 months and contains **5,400,008 rides**.

The data is appropriate because it records actual customer behaviour rather than survey responses, allowing reliable behavioural comparison.

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## Data Cleaning (PROCESS)

Data processing was performed in Google BigQuery.

Steps taken:

- Combined 12 monthly trip files into a single dataset

- Removed null timestamps

- Calculated ride duration in minutes

- Extracted date components (hour, weekday, month)

- Categorized rides into weekday/weekend and time-of-day buckets

A cleaned dataset, `trips_clean` was created for analysis.

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## Analysis (ANALYZE)

### Ride Volume

Members account for **64.52% of rides**
 Casual riders account for **35.48%**

### Ride Duration

Casual riders take longer rides on average than members.

### Time of Day Behaviour

Members show strong peaks during commuting hours (morning and evening).
 Casual riders show gradual increases during the daytime and the afternoon.

### Seasonal Behaviour

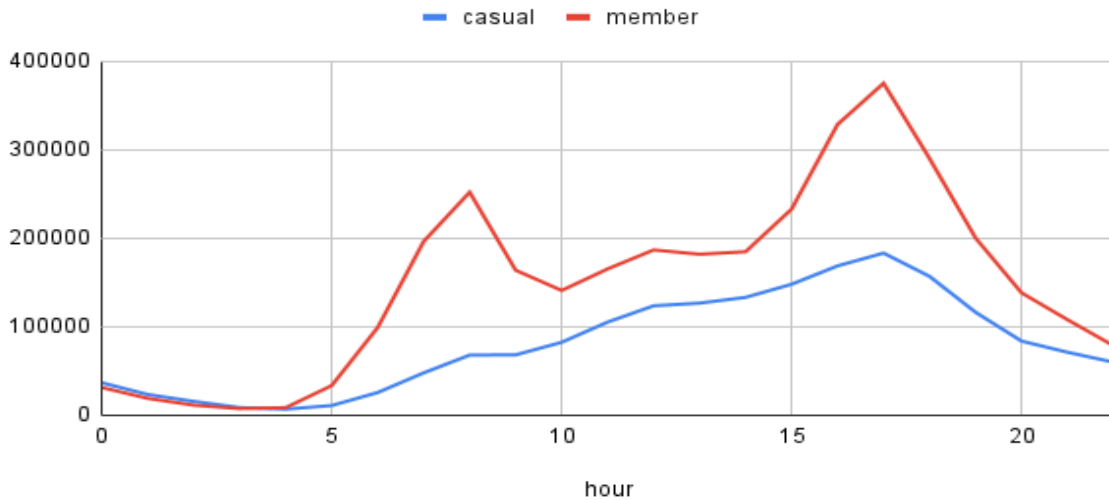Casual usage increases significantly in the summer months.
 Member usage remains consistent year-round.

### Weekday vs Weekend Behaviour
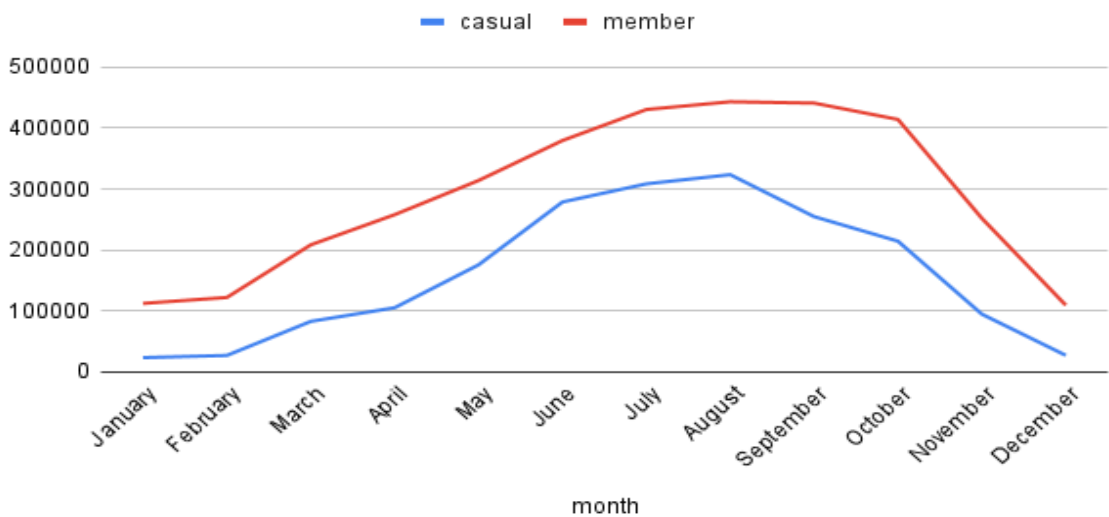
Members dominate weekday rides.
 Casual riders increase proportionally on weekends.
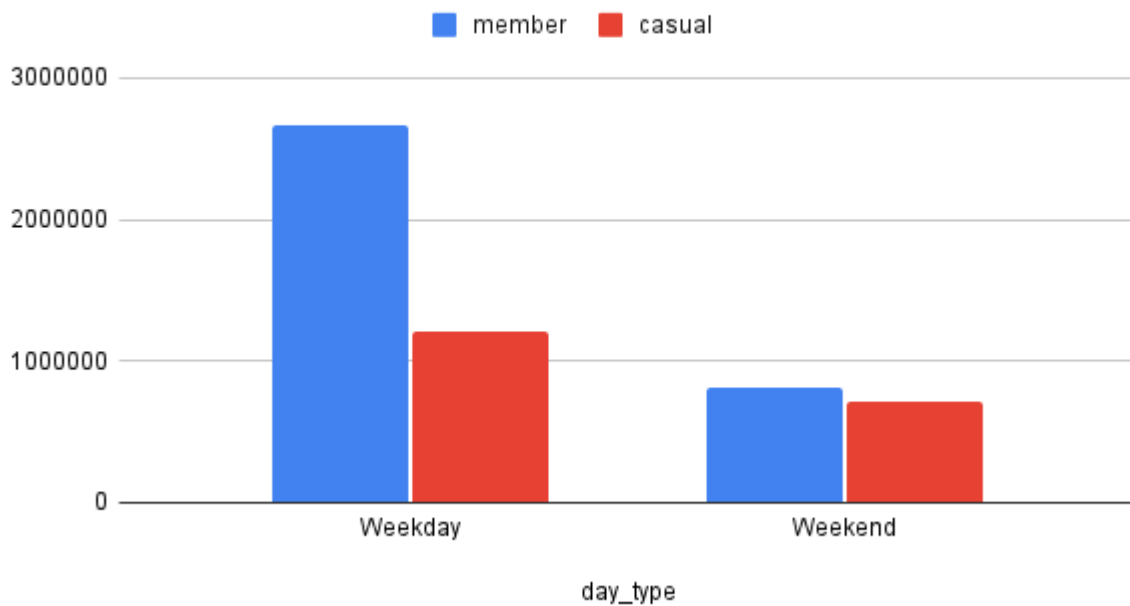
## casual and member



Member rides display clear peaks during traditional commuting hours (approximately 08:00–09:00 and 17:00–18:00), whereas casual rides gradually increase through the late morning and peak in the afternoon. This pattern indicates members primarily use Cyclistic bikes for routine transportation, while casual riders use bikes for leisure and flexible travel.

## casual and member



Casual ridership increases significantly during warmer months and peaks in summer, while member ridership remains relatively stable throughout the year. This suggests casual riders are influenced by weather and recreational opportunities, whereas members rely on the service for consistent transportation regardless of season.

## member and casual



## Key Behavioral Differences

Cyclistic members and casual riders demonstrate fundamentally different usage patterns. Members primarily use bikes during commuting hours, with clear peaks around 08:00–09:00 and 17:00–18:00. Casual riders instead show gradual increases throughout the late morning and peak usage during afternoon hours.

Members also ride consistently across the year, while casual usage increases significantly during warmer months, especially summer.

Weekday usage is dominated by members, whereas weekend usage becomes more balanced between the two groups.

## Business Insight

These patterns indicate two distinct customer segments:

**Members → transportation users**

- predictable daily travel
- commute-oriented
- routine behaviour

**Casual riders → leisure users**

- weather dependent
- weekend activity
- recreational trips

## Recommendations

### 1. Convert summer casual riders into members

Target casual users during peak summer months when engagement is highest. Offer limited-time membership discounts at docking stations and in-app prompts during rides exceeding 15 minutes.

### 2. Promote commuting value

Advertise the cost savings of membership for repeat trips. Highlight unlimited ride benefits during weekday commuting hours when members demonstrate highest reliance.

### 3. Weekend-to-weekday conversion campaign

Encourage weekend casual riders to adopt weekday commuting habits through trial weekday passes or first-month discounted memberships.

## Conclusion

The analysis shows casual riders are not low-value customers, but potential members. Their high seasonal engagement suggests conversion opportunities exist during peak usage periods. By targeting recreational riders at moments of highest engagement, Cyclistic can increase membership adoption while improving long-term revenue stability.

## Insights (SHARE)

Two distinct customer groups exist:

### Members

- Routine transportation users

- Commuting patterns

- Consistent year-round usage

### Casual Riders

- Leisure users

- Weather-dependent behaviour

- Weekend activity patterns

## Recommendations (ACT)

1. Convert summer casual riders into members
   Offer limited-time membership discounts during peak summer usage.

2. Promote commuting value
   Highlight cost savings and unlimited ride benefits during weekday commuting hours.

3. Encourage weekend-to-weekday conversion
   Provide trial weekday commuting passes for casual riders.

## Conclusion

Casual riders represent a strong conversion opportunity rather than a separate customer base. Their engagement patterns show they can become repeat transportation users if properly targeted. Marketing efforts should focus on moments of high engagement, particularly summer and weekend usage, to increase annual membership adoption.