Analyzing Member vs. Casual Rider Behavior

Data-Driven Insights to Increase Membership Conversions

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Problem & Objective

Goal: Identify behavioral differences between casual riders and members to develop strategies that **increase membership conversions.**

- **Why: Casual riders generate revenue, but members provide long-term value** through consistent, recurring usage.

Key Business Questions:

1. **How do annual members and casual riders use Cyclistic bikes differently?**
2. **What factors influence casual riders to become members?**
3. **How can Cyclistic optimize its marketing efforts using data?**
4. **How can Cyclistic improve tracking of frequent casual users to enhance membership targeting?**

Data Source & Methodology

Dataset:

- Source: **Motivate International Inc.**
- Time Range: **January 2024- December 2024**
- **Total Rides Analyzed: 5.86M**

- **Tools & Techniques:**
  - **Google BigQuery (SQL)** → Data Cleaning & Transformation
  - **Tableau** → Data Visualization

Ride Distribution

Insight:

- Members **account for 64%** of total rides, casual riders **36%**.
- Members ride **consistently year-round**, casual riders are **more seasonal (summer)**

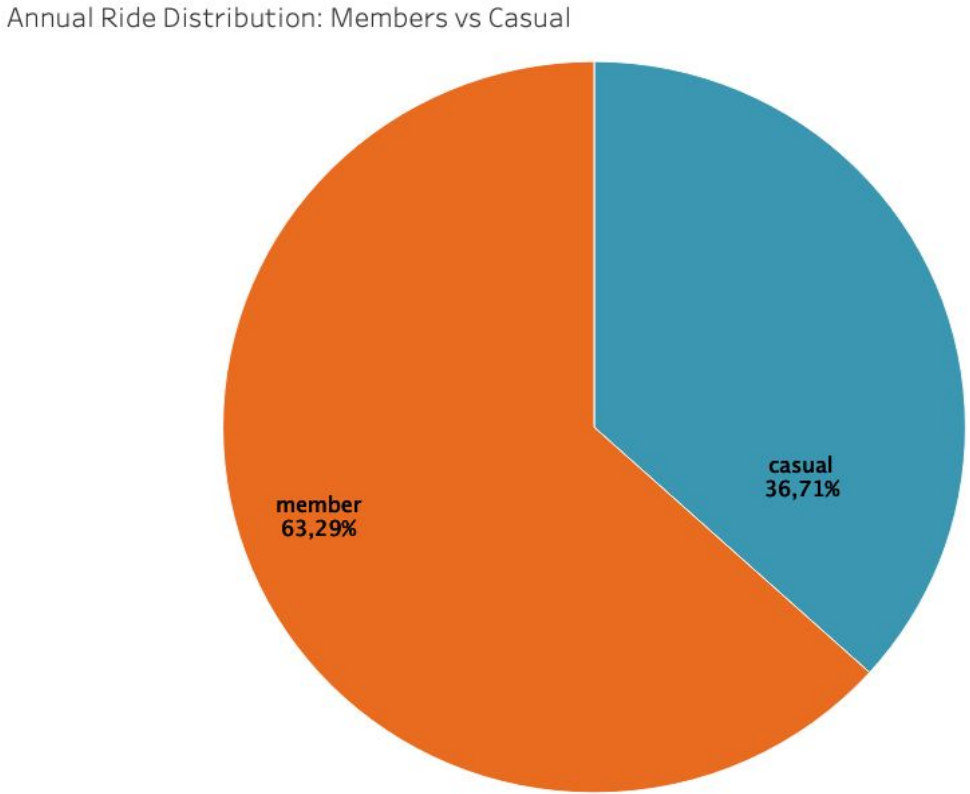
More memberships = **more revenue stability**.

Target casual riders during **peak months (July - October)** to increase conversions.

Action Plan:

Run **targeted promotional campaigns** during peak casual months.

Offer a **"Trial Membership"** for frequent casual users.



Ride Preferences – How Members and Casual Riders Choose Their Rides

Key Insights:

- Electric bikes are the most popular choice for both members and casual riders.
- Classic bikes are the second-most used mode and are preferred slightly more by members.
- Casual riders are 2.5 times more likely to use scooters than members, suggesting different usage behaviors

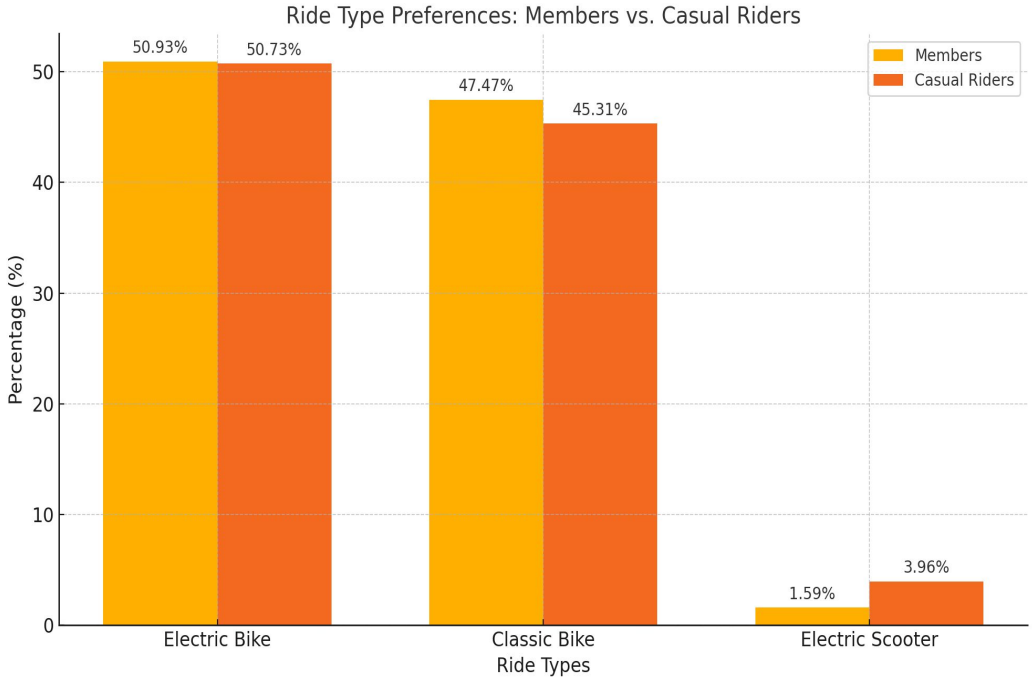
Scooters have a clear appeal to casual riders, suggesting an opportunity for scooter-specific membership packages or pricing adjustments.

Action Plan:

Introduce an **Electric Bike Membership** tier offering unlimited electric bike rides.

Test a **Scooter Pass** option targeting casual riders who frequently use scooters.

Highlight commuter benefits for classic bike users, including **station priority for members during peak hours**.



Ride Duration

Insight:

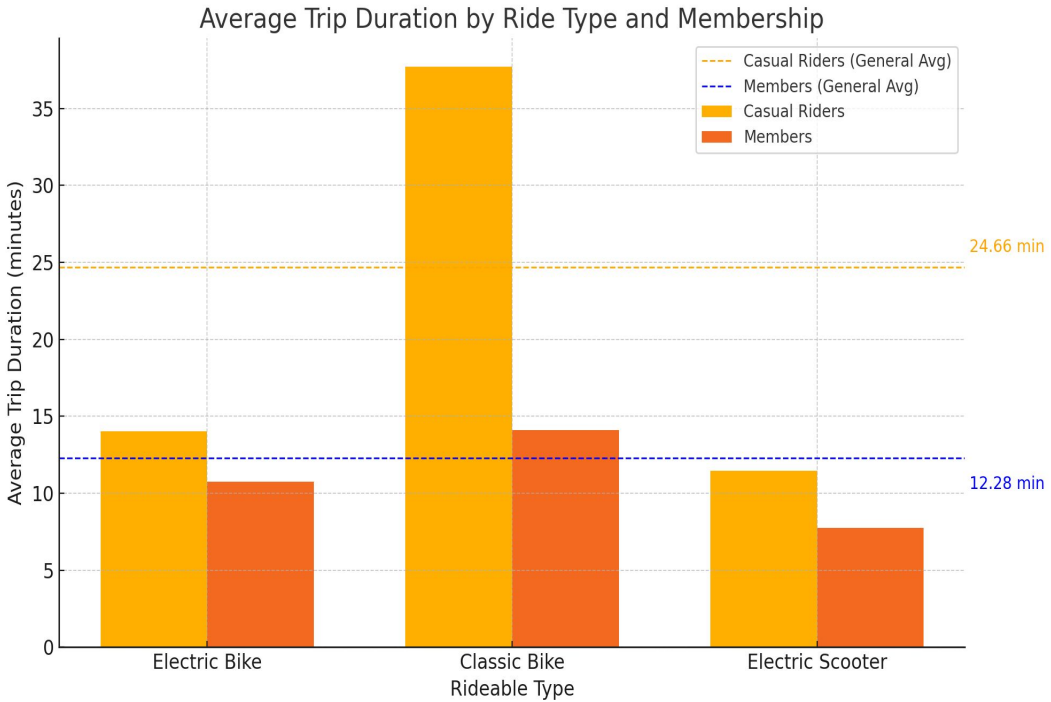
- Casual riders **take 2x longer trips (24.66 min)** than members **(12.28 min)**.
- Casual riders **prefer scooters & electric bikes more than members**.
- Casuals prefer classical bikes for long duration rides

Casual riders **already take long rides**, meaning **a membership could save them money**.

Scooters & electric bikes are **conversion opportunities**.

Action Plan:
Introduce a **"Scooter & E-Bike Membership or Discount for the first month"** for casual riders.

Market **"Unlimited Ride Membership Trial"** targeting long-trip casual riders.



Peak Ride Hours – When Riders Use Cyclistic the Most

Insights:

- The **peak time for both groups is between 4-6 PM**, making up **53%** of total rides
- **Members:** Most active from **12 PM - 7 PM**, accounting for **57.26% of total rides for members**, with the highest usage at **5 PM (10.6%)**.
- **Casual Riders:** Most active from **11 AM - 8 PM**, accounting for **66.65% of total rides**, with the highest usage at **6 PM (9.48%)**.

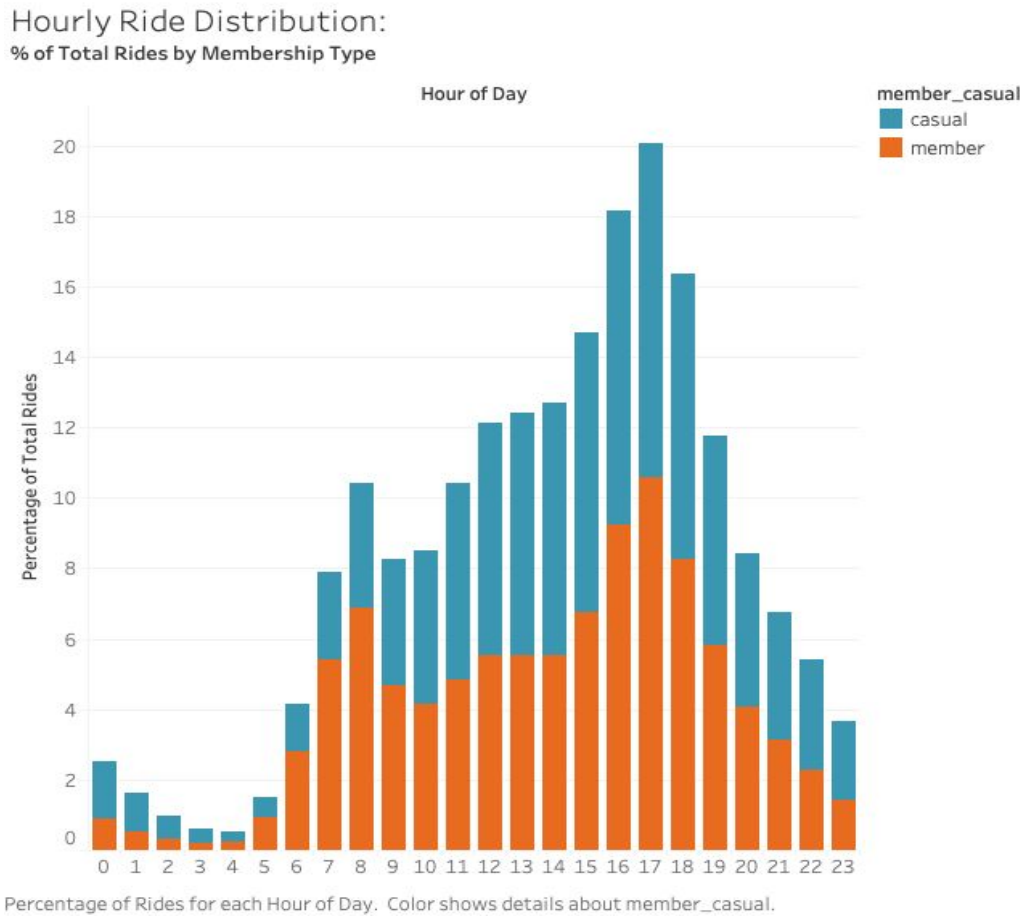
Members follow commuter behavior, with high demand in the morning and evening rush hours.

Casual riders are more leisure-oriented, riding later in the day and peaking in the early evening.

Action Plan:

Introduce **commuter-based incentives for members**, such as priority docking and discounted rush-hour passes.

Launch **evening and weekend promotions for casual riders** to encourage more off-peak usage.



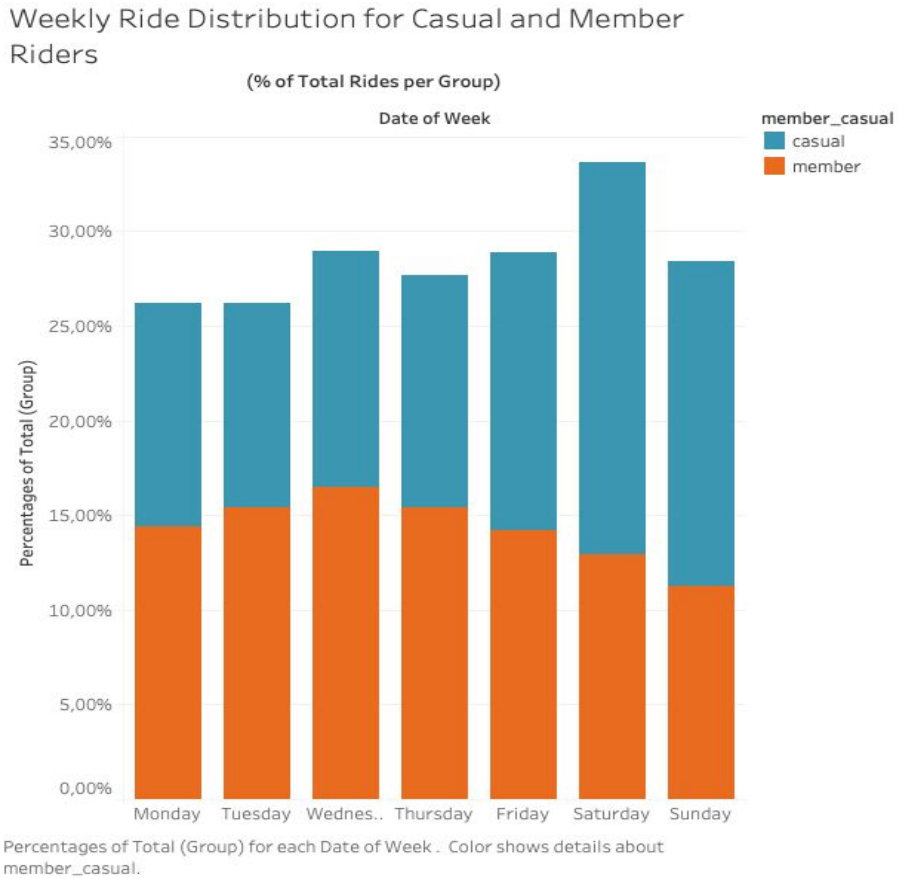
Weekly Ride Trends

Insight:

- Members **ride consistently but peak midweek (Tuesday - Thursday)** 47% of total rides
- Casual riders **peak on weekends(50%** of total rides), members **peak on weekdays**

Highlights the suggestion that casuals use the services more of leisure

Action Plan:
Offer **weekday commuter discounts for members**.



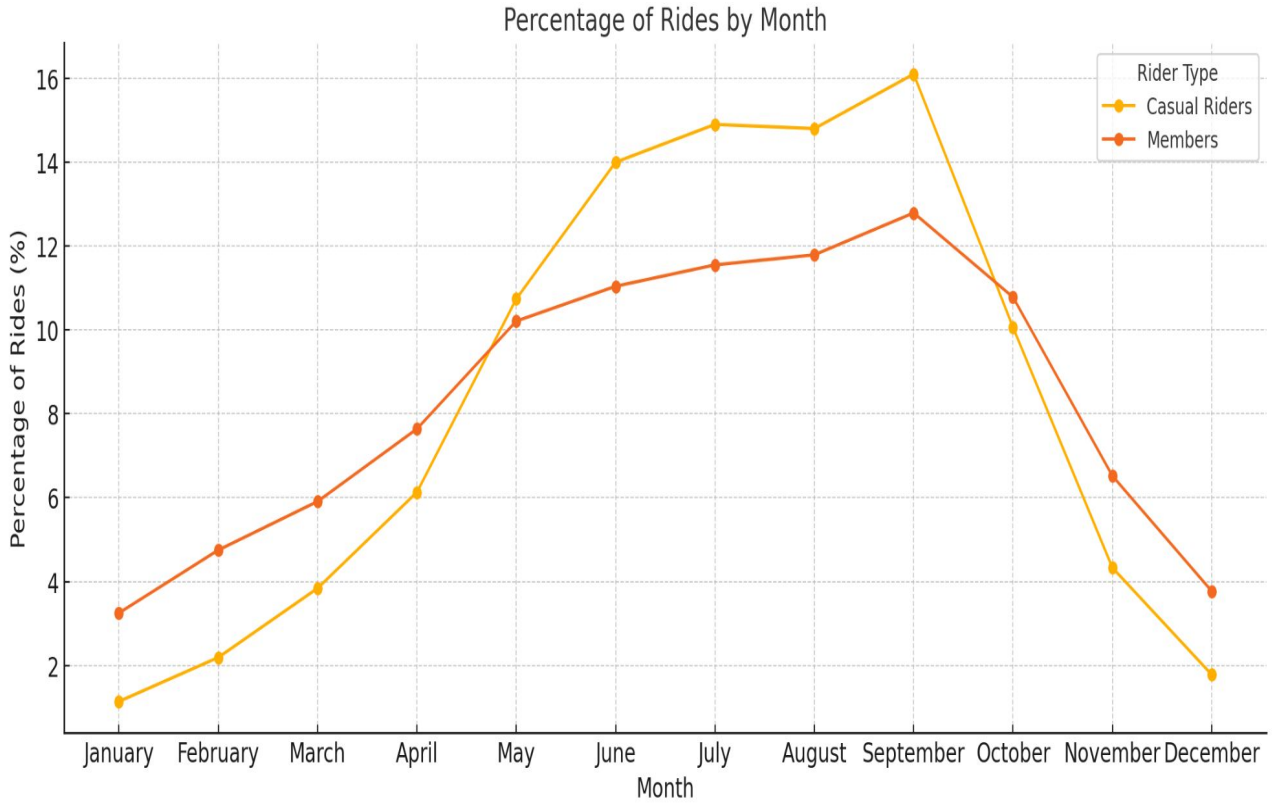
Monthly Distribution

Key Insight:

- **Casual riders are most active from July - October**, with **a clear peak in September.**
- **Members ride more consistently, but their ridership slightly increases in summer.**

Action Plan:

- **Launch summer promotions** to **convert casual riders to members.**
- **Offer "Seasonal Membership Discounts"** (target high-use months).
- **Ensure high bike availability in peak summer months.**



Geographic Insights

Insight:

- Top zones **differ for members & casuals**.
- Casuals prefer **tourist-heavy areas**, members prefer **commuter zones**.

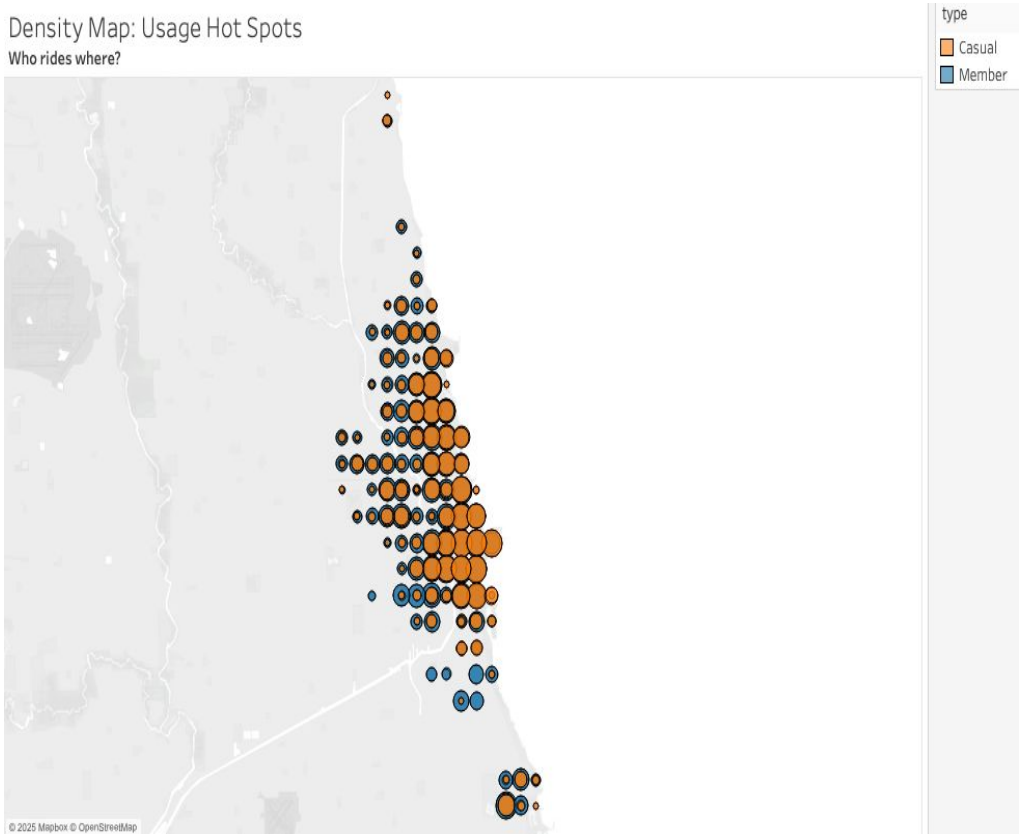
Target casual riders with promotions in tourist zones.

Improve bike availability in high-traffic commuter areas.

Action Plan:

Increase **membership marketing in top casual zones.**

Ensure **high bike availability in peak member zones**



Business Recommendations

Insight	Business Impact	Plan of Action
Members take **1.81x more trips** than casual riders.	Members generate **more revenue over time**.	**Launch limited-time membership discounts** for frequent casual riders.
Casual riders take **longer trips** (24.66 min vs. 12.28 min).	Casuals might convert if offered **cost savings on long rides**.	**Offer trial memberships after long rides** (e.g., "Enjoy unlimited rides for a week for $5!").
Casuals prefer **scooters & e-bikes** more than members.	They **value convenience & speed** and are **willing to pay more**.	**Introduce a "Scooter & E-Bike Membership"** with unlimited scooter rides.
Casual riders **peak on weekends**, members **peak midweek**.	Different behaviors require **different marketing strategies**.	**Create a "Weekend Warrior" membership** with discounted weekend rides.
Casuals prefer **scenic/tourist-heavy routes**, members take **short commuter routes**.	Different use cases mean **different membership messaging**.	**Promote scenic ride memberships** to casuals & commuter benefits to members.
Cyclistic does **not track frequent casual riders.**	Can't identify or retarget high-value casual users for conversion.	**Implement guest profiles or loyalty tracking** to collect ride history & offer personalized membership incentives.

Next Steps & Closing Statement

Next Steps for the Marketing Team:

- **Pilot test targeted promotions.**
- **Optimize pricing & introduce membership tiers for scooters.**
- **Evaluate customer feedback & iterate on membership models.**

Final Statement:
Cyclistic can maximize revenue by strategically converting casual riders into members.

Data Cleaning & Processing

Key Steps Taken:

Schema Validation → Ensured column consistency across 12 months.

Filtered Dataset → Retained only relevant columns for analysis.

Handled Missing Data → Found 18-23% missing values in station names.

Checked for Duplicates → Verified unique ride IDs.

Created a Clean Dataset → Used for Tableau visualization.

Find This Project Online

Links to Project Files:

GitHub Repository (SQL & Documentation) → Cyclistic_project/SQL_Quieries
Full Report & Presentation PDF → Github/cyclistic_project

How to Use These Files:

- **SQL Queries** → View **data cleaning, transformation, and analysis code**.
- **Project Report** → Full methodology & recommendations.