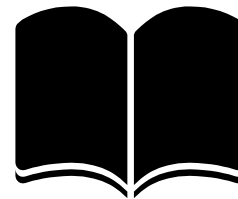# Cyclistic Data Analysis

Introduction

Unlocking Growth at Cyclistic

Data-Driven Strategies for Maximizing Annual Memberships

Welcome to Cyclistic's Data Analysis Project, where we embark on a journey to uncover actionable insights and drive growth. In the quest to maximize annual memberships, we delve into historical bike trip records, exploring user rides, durations, locations, and membership details. Join us as we navigate through the realms of data to design targeted marketing strategies, convert casual riders into annual members, and chart the path for Cyclistic's future success.

GitHub Repository: *https://github.com/JaimeEscoto/cyclistic-data-project*

This project is part of the Google Data Analytics Certificate from Coursera.

Ask

Uncover the key to Cyclistic's growth: converting casual riders into annual members. Explore the nuances between these groups, unveil patterns, and shape targeted marketing strategies.

Let's delve into the data to tackle this pivotal business challenge together.

>> *Design data-driven marketing strategies to convert casual riders into annual members.*

Prepare

Data Repository

The case study provides a repository with compressed CSV files, a valuable source for our analysis. These files contain records of bike trips for the years 2022 and 2023, with each file representing one month.

Organized Data

The data is structured in tabular form, making it accessible for analysis. Each row represents a bike trip, and the columns include essential details such as start time, end time, user type (casual or annual member), and trip specifics."

Data Credibility

We've ensured the credibility of the data using the ROCCC framework—Reliable, Original, Comprehensive, Current, and Cited. This involves evaluating sources for reliability, originality, completeness, timeliness, and proper citation."

Prepare (cont)

CSV Fields

Primary Fields

1. Ride ID: Unique identifier for each bike trip.

2. Rideable Type: Type of rideable used (e.g., standard bike, electric bike).

3. Start Time/End Time: Timestamps indicating the beginning and end of each trip.

Membership Details

4. User Type: Distinguishes between casual and annual members.

5. Start Station/End Station: Name of the station where the trip starts or ends.

6. Start Location/End Location: Latitude and longitude coordinates for trip start and end locations.

Prepare (cont)

Data Repository

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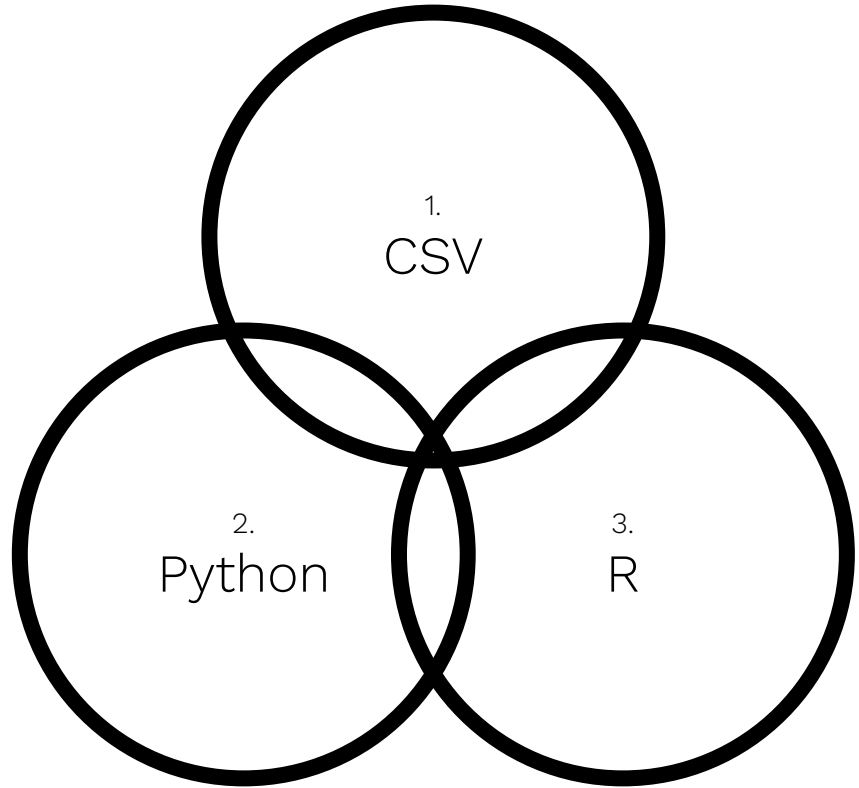
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Process

1.
CSV

2.
Python

3.
R

Data Processing Overview

1.

In this phase, we seamlessly transitioned from raw CSV files to actionable insights. The journey began by downloading monthly CSV files for the years 2022 and 2023, encapsulating the entire dataset.

Python Data Loading Routine

2.

A Python script was crafted to efficiently load CSV data into a local SQLite database. This step ensured a structured and accessible data environment, setting the stage for subsequent analysis.

R Data Cleaning Script

3.

Following data loading, an R script took the reins. This script navigated through the dataset, tackling challenges like missing values, outliers, and inconsistencies. The result? A clean and robust dataset, ready for in-depth analysis.
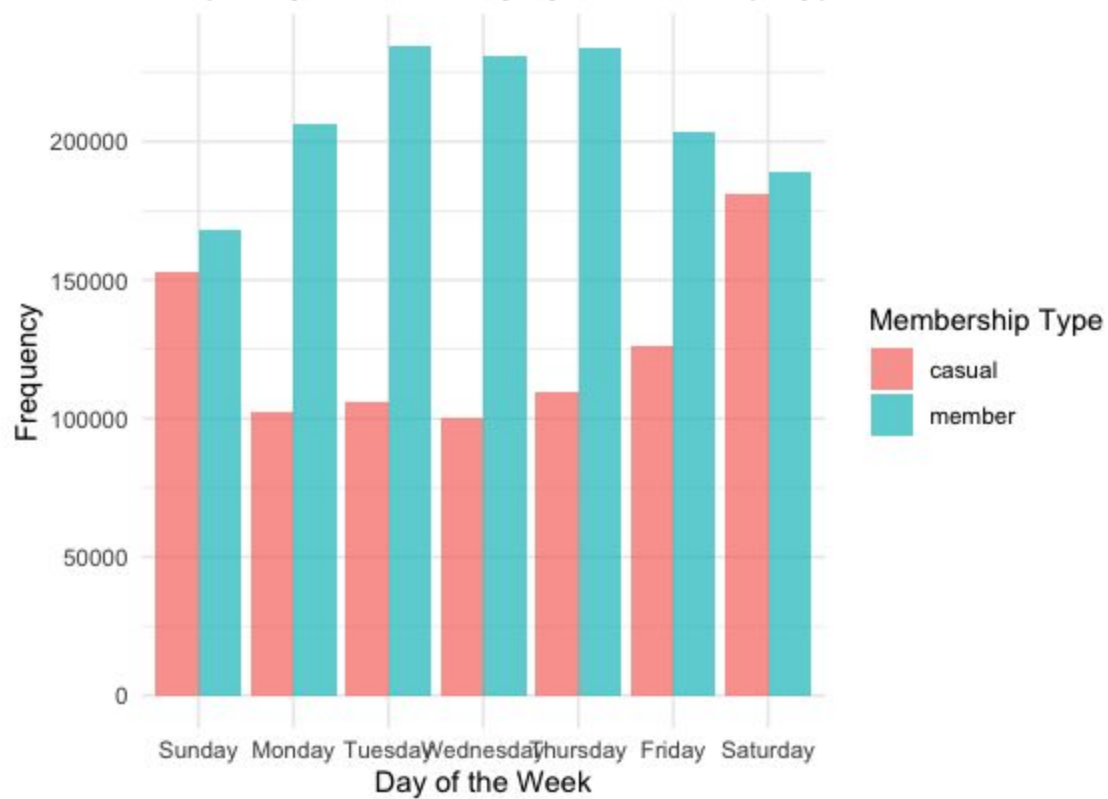
Analize!

Let's graph

As we transition into the heart of our analysis, let's illuminate the findings with a series of compelling graphics. These visuals will paint a vivid picture of the data, revealing nuanced patterns, correlations, and key insights. Get ready to embark on a visual journey that brings the Cyclistic bike data to life.
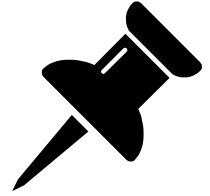
Trips on Saturday and Sunday for Top 5 Stations (Casual Users)
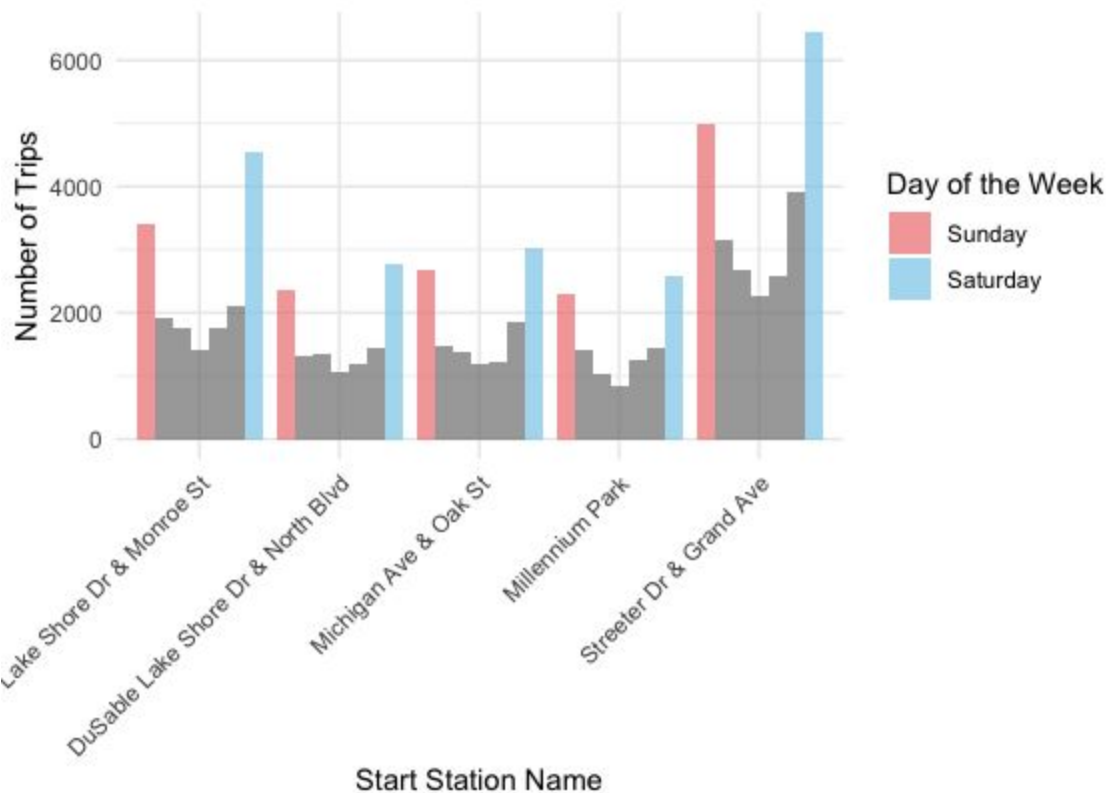
Proposal for Promotional Campaign

- We propose implementing a targeted promotional campaign aimed at increasing annual memberships among casual users. Our analysis reveals a significant concentration of casual riders during weekends, particularly on Saturdays and Sundays, at the following key stations:

| start_station_name	Sunday	Saturday	total_trips
\<chr\>	*\<int\>*	*\<int\>*	*\<int\>*
1 Streeter Dr & Grand Ave	4986	6447	11433
2 DuSable Lake Shore Dr & Monroe St	3423	4538	7961
3 Michigan Ave & Oak St	2676	3014	5690
4 DuSable Lake Shore Dr & North Blvd	2359	2783	5142
5 Millennium Park	2304	2597	4901

By strategically focusing our promotional efforts on these **stations during weekends**, we aim to encourage casual riders to convert into annual members. This initiative aligns with the observed user behavior and presents an opportunity to maximize membership sign-ups during peak usage periods.

Let's leverage these insights to design compelling **promotional strategies** that resonate with the unique preferences of weekend users.
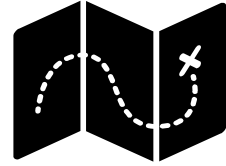
■

WeekendRide Access (Internal name)
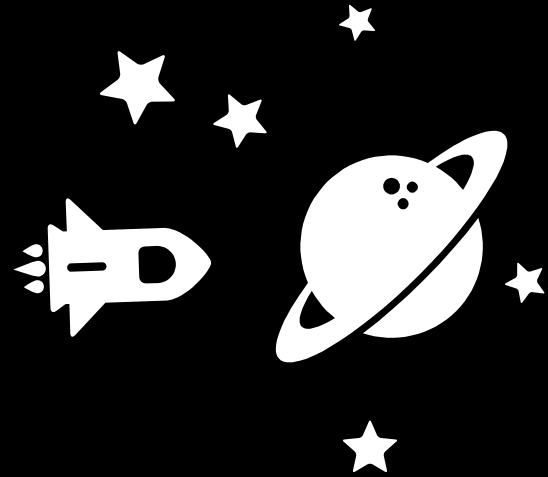
"Seizethe Weekend, Ride Every Day!"

Act

1. Weekend Membership Drive:

Host a special weekend event at popular stations, offering on-site annual membership sign-ups with exclusive discounts or promotional items for those who register during the event.

2. Free Guided Tours:

Organize free guided bike tours departing from key stations. Highlight the convenience of annual memberships for accessing bikes and exploring the city at any time.

3. Family-friendly Bike Day:

Create a family-oriented biking day with games, face painting, and activities at specific stations. Emphasize the benefits of annual memberships for families looking to enjoy weekend outings on bikes.

4. Referral Discount Bonanza

Recommend Cyclistic to friends! Get a discount when your referral signs up for an annual membership. It's a win-win!

5. Community Art and Music

Host a weekend celebration of art and music at prominent stations. Showcase local artists, musicians, and performers, and promote annual memberships for a hassle-free and enjoyable way to reach these cultural events.

What else?

...

Act (cont)

Monitoring Campaign Success

User Acquisition

1. **New Annual Memberships:** Track the number of new annual memberships acquired during and after the campaign.
2. **Referral Program Engagement:** Evaluate participation and success of the referral program, measuring the number of new sign-ups through referrals.

Usage and Engagement

1. **Weekend Usage:** Monitor changes in weekend usage for both casual and annual riders in targeted stations.
2. **Social Media Engagement:** Analyze social media metrics, such as likes, shares, and comments, to gauge community engagement and campaign reach.

Thanks!

Any questions?

You can find me at

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- me@jescoto.com

Jaime Escoto
Data Analyst

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