Cyclistic Bike-Share Analysis

Project Charter (July 24 – July 25)

A blue circle with a person on a bicycle

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# Introduction:-

Cyclistic is a bike-share company based in Chicago that offers both casual passes and annual memberships. Casual riders purchase single-ride or day passes, while members subscribe annually. The company’s future growth depends on increasing the number of annual members, since they provide more reliable revenue compared to casual riders.

# Purpose of the project: -

The purpose of this project is to analyze the differences between casual riders and annual members, identify patterns in their usage, and provide recommendations on how to convert more casual riders into annual members.

# Business Task:

* Understand how annual members and casual riders use Cyclistic bikes differently.
* Identify key factors that influence ridership behavior.
* Provide actionable recommendations for marketing strategies to increase membership conversions.

# Key Stakeholders:

* **Lily Moreno** – Director of Marketing (primary stakeholder, will use insights for campaigns).
* **Marketing Analytics Team** – supports analysis and dashboard creation.
* **Cyclistic Executive Team** – makes final decisions on marketing initiatives.

# Stakeholder Questions to Answer:

Three questions will guide the future marketing program:

1. How do annual members and casual riders use Cyclistic bikes differently?

2. Why would casual riders buy Cyclistic annual memberships?

3. How can Cyclistic use digital media to influence casual riders to become members?

# Scope of Work (SOW)

## Deliverables

* **Project Charter**: A document outlining the business task, project scope, key stakeholders, and objectives.
* **Cleaned Dataset**: The most recent 12 months of Cyclistic trip data (July 2024 – July 2025), prepared and ready for analysis.
* **Exploratory Data Analysis (EDA):** Summary of rider behavior patterns supported by descriptive statistics and visualizations.
* **Final Report**: A comprehensive report detailing the business task, methodology, key findings, and actionable recommendations.

# Milestone

Milestone 1: Project Charter & Initial Data Review (2 Days)

Description: Conduct a high-level review of the Cyclistic trip data to understand its structure, size, and key variables. Use this initial assessment to create the project charter, which defines the business task, stakeholders, scope of work, and project milestones.

Milestone 2: Data Collection & Validation (2 Days)

Description: Collect the most recent 12 months of Cyclistic trip data (July 2024 – July 2025) and store it in an organized manner. Verify the credibility and potential bias of the data by assessing its source, completeness, accuracy, and consistency (ROCCC framework).

Milestone 3: Data Importing & Cleaning (2 Days)

Description: import the dataset into SQL, validate and adjust data types, identify and handle missing values, detect and remove duplicates, and perform aggregation or summarization to uncover potential anomalies.

* Milestone 4 : Data Analysis (3 Days May change )

Description: With the data cleaned and prepared, we will perform the analysis using SQL to explore customer behavior. This includes comparing casual and member riders, analyzing ride counts, examining ride durations, and identifying trends over time, As well imported the data in R and connect it with SQL to create statistics analysis and plots

Milestone 5 : Visualize the Data (2 Days)

Description: After completing the analysis and running all necessary queries in SQL, the results and trends were imported into a spreadsheet. A dashboard was then created to present the findings in a clear and interactive format.

Milestone 6: Final Report and Insights (2 Days)

Description: In the final phase of the project, I compiled a comprehensive report that included the business tasks, key insights, visualizations, and actionable recommendations.

# References

* **Data Source**: Cyclistic trip dataset, provided through the Google Data Analytics Professional Certificate course. Data was originally collected and published by Cyclistic on their official website.
* **Course/Training Material:** Google Data Analytics Professional Certificate – Modules on data cleaning, exploratory data analysis, and visualization.
* **Tools & Software:** SQL – Excel – R