

SCOPE OF WORK

Data Analysis Cyclistic Bike-Share Project

Data Analyst: Tauan Oliveira

Client/Sponsor: Cyclistic

Purpose:

This project aims to identify how casual users and annual members use Cyclistic bikes differently, intending to create a new marketing strategy to convert casual users into Annual members. The project aims to analyze historical data from a bike-sharing program that features more than 5,824 geo-tracked and locked bikes in a network of 692 stations in the city of Chicago. After identifying patterns and trends, the project will investigate customer behavior to generate insights that will be used as the basis for recommendations to maximize the number of annual plans.

Scope / Main Project Activities:

Activity	Description
Identify the business task	Identify the business task to understand the problem or question that data analysis will deal with.
Consider key stakeholders	Know the main stakeholders involved in the project so that we can have a clear and effective communication.
Collect historical data	Collect Cyclistic's historical trip data from the last 12 months.
Store the data properly	Keep collected data stored in secure locations.
Identify how data is organized	Check the structure of the data, the columns contained in the set, their respective data types, create naming conventions, foldering and archiving old files.
Sort and filter the data	Sort the data so that we can analyze it efficiently and filter the

	relevant data in question.
Determine the credibility of the data	Ensure that data is reliable, original, comprehensive, current and cited.
Maintain data privacy	Maintain data privacy while preserving personal identification.
Check data for errors	Examine the dataset for duplicate, empty, incomplete, inconsistent, or misspelled data.
Format data into the right type	Manipulate the data to maintain the correct data types in their respective columns.
Document the cleaning process	Create a changelog to record all changes made to the project.
Choose the tools	Select the tools that will be used in the analysis process.
Verify data integrity	Examine the dataset to confirm that the data is consistent, accurate, integrity, reliable, and aligned with the business objective.
Merge the data	Merge the datasets together so we can make them useful and accessible.
Organize and format your data	Sort the relevant columns and format the data types of certain columns.
Analyze the data	Use calculations, formulas, and functions to identify trends and relationships with the goal of generating insights to answer the question or solve the problem at hand.
Create an effective data visualization	Develop compelling data visualizations to help stakeholders understand the difference between casual users and annual members.
Present the findings	Perform a presentation with a clear narrative showing the main metrics that were used in the analysis to arrive at the recommendations generated.
Ensure the work is accessible to your target audience	Make the analysis project available to stakeholders so that they can use it as a basis for future analyses.
Define three recommendations	Make three recommendations available based on the analysis.
Deliver the final report	Deliver the final report with the deliverables.

This project does not include:

- The project does not involve the implementation of the marketing strategy.
- This project does not involve knowing which digital media would be ideal for influencing casual passengers to become members.

Goods:

Delivery	Description/ Details
A clear statement of the business task	Description of the problem or question that the analysis will handle with.
A description of all the data sources used	Describe the structure of the dataset, its columns, and use summary statistics.
Documentation of any data cleanup or manipulation	Document all changes made to the project.
A summary of the analysis	A summary with the main insights generated.
Key Insights and Visualizations	Effective visualizations describing key findings.
Three recommendations.	Three main recommendations to be used as a basis for decision making.
Final report	A final report describing all the deliverables made in the analysis project.

Schedule Overview / Key Milestones:

Milestone	Expected completion date	Description/Details
<i>Understanding of the current situation</i>	<i>5/1/23</i>	<i>The current situation of Cyclistic</i>
<i>Effective questions with stakeholders</i>	<i>5/1/23</i>	<i>Answers to questions annotated and understood</i>
<i>Clear statement of the business task</i>	<i>5/1/23</i>	<i>Understanding the problem/question to analyze</i>
<i>Data collection</i>	<i>5/2/23</i>	<i>Historical data available</i>

<i>Description of data sources</i>	<i>5/2/23</i>	<i>Description of datasets</i>
<i>Aggregation and cleansing of data</i>	<i>5/3/23</i>	<i>Aggregated data sources and complete, correct, and consistent data</i>
<i>Change log</i>	<i>5/5/23</i>	<i>Changelog available</i>
<i>Data analysis</i>	<i>5/5/23</i>	<i>Data analysis completed</i>
<i>Data visualization</i>	<i>5/5/23</i>	<i>Effective data visualization</i>
<i>List of recommendations</i>	<i>5/6/23</i>	<i>List of recommendations</i>
<i>Present the findings</i>	<i>5/6/23</i>	<i>Shared findings for stakeholders</i>
<i>Final report</i>	<i>5/7/23</i>	<i>Report detailing the entire project, analysis and findings.</i>

Estimated date for completion:

May 7, 2023