

Project Brief

MTA Daily Ridership Data Analysis and Forecasting Project – Week One

Project Manager : Ahmed Shacker

Project Date: Week One (Initial phase completed as per project timeline)

Project Overview:

Our company is committed to sustainability and reducing our environmental footprint. The launch of our new eco-friendly product line aims to align with this vision by introducing innovative, sustainable products to our market. This project will focus on developing, marketing, and distributing a range of eco-friendly products that meet our customers' needs while promoting environmental responsibility.

Deliverables:

- A cleaned, consistent dataset ready for further analysis.
- A detailed data preprocessing notebook (using Python with pandas and visualizations via Matplotlib).
- A set of initial analysis questions addressing key business challenges.
- Early visualizations supporting the data insights.

Objectives:

- Data Modeling & Preprocessing:
 - Structure the raw ridership dataset for analysis.
 - Clean the data by handling missing values, duplicates, and inconsistent formats.
- Initial Business Analysis:
 - Develop initial questions to explore business insights (e.g., impacts of COVID-19, service-specific trends, peak ridership patterns).
- Documentation:
 - Record all cleaning and preprocessing steps in a Jupyter Notebook for reproducibility.

Project Team and Responsibilities:

- Python (Data Cleaning & Analysis):
 - Mina Magdy: Led data cleaning and preprocessing using Python; formulated initial business questions.
 - Mina Samir: Assisted in Python-based data transformation and contributed to business question development.
- SQL (Data Cleaning & Analysis):
 - Ahmed Shacker: Managed data cleaning and preprocessing using SQL; executed initial data queries.
 - Moustafa Khattab: Collaborated on SQL data transformation and helped define key analysis questions.

Success Criteria:

- Completion of a fully cleaned and preprocessed dataset with documented steps.
- Clear formulation of initial business analysis questions ready for further exploration.
- Establishment of a repeatable process for data transformation that underpins future forecasting models.

Contact Information:

For any queries or additional information, please contact:

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<https://github.com/AS2812/DEP>