Sprint 6 Individual Report

**Name**: Bindiya Vundavalli

**Email Address:** [bvundav1@asu.edu](mailto:bvundav1@asu.edu)

**ASU ID:** 1221958478

**Team Number:** 29

# Log file

The below screen shot has my log entries highlighted

A screenshot of a computer

Description automatically generated

This sprint log file can be found at : https://docs.google.com/spreadsheets/d/1z73tQRD6mPiXbFgi63AAyYD6N-5YO5au/edit#gid=1579418581

**Part 2: User Stories/Tasks/Contributions/Roles**

Link to Taiga: <https://tree.taiga.io/project/msbodavula-ser-517-capstone/timeline>

Link to GitHub: <https://github.com/Bindiyaa5/SER517team29>

**User Story #203: Finding the impact of various factors on the ride sharing tendency of users**

As a developer, by using regression models like Linear regression, Gradient boosting regression, Logistic regression, I want to analyze which factors among "Distance, trip duration, Elevation Change, member casual casual, member casual member, TMIN, TMAX, season Fall, season Summer, season Spring, day of week Friday, day of week Sunday, season Winter, day of week Saturday, day of week Monday, member casual Unknown, day of week Thursday, day of week Tuesday, day of week Wednesday " would affect how and what kind of bikes would the users prefer

Taiga link - <https://tree.taiga.io/project/msbodavula-ser-517-capstone/us/203?milestone=385255>

## Task #204 - Linear regression against all factors where the dependent variable is rideable\_type

## Taiga link - https://tree.taiga.io/project/msbodavula-ser-517-capstone/task/204

## Github commit link – <https://github.com/Bindiyaa5/SER517team29/commit/4be3041fd78f24deb976f9bc9c93a740fa75cefd>

## Task #205 - Gradient boosting regression against all factors to find out the importance of all , where the dependent variable us rideable\_type

## Taiga link - <https://tree.taiga.io/project/msbodavula-ser-517-capstone/task/139>

## Github commit link – <https://github.com/Bindiyaa5/SER517team29/commit/4be3041fd78f24deb976f9bc9c93a740fa75cefd>

## Task #206 - Linear regression against Elevation, trip duration and distance where the dependent variable is rideable\_type

## Taiga link – [https://tree.taiga.io/project/msbodavula-ser-517-capstone/task/206](https://tree.taiga.io/project/msbodavula-ser-517-capstone/task/2060)

## Github commit link – <https://github.com/Bindiyaa5/SER517team29/commit/e7228cdb87ae3741ba936bf5d3af594cd22ae100>

## Task #207 - Logistic regression against Elevation, trip duration, distance where the dependent variable is rideable\_type

## Taiga link - <https://tree.taiga.io/project/msbodavula-ser-517-capstone/task/207>

## Github commit link – <https://github.com/Bindiyaa5/SER517team29/commit/e7228cdb87ae3741ba936bf5d3af594cd22ae100>

## Task #208 - Linear regression against Elevation, trip duration and distance, season and day of the week, where the dependent variable is rideable\_type

## Taiga link – <https://tree.taiga.io/project/msbodavula-ser-517-capstone/task/208>

## Github commit link – <https://github.com/Bindiyaa5/SER517team29/commit/a3148b5b3d626f04a8ef509b39178be9404b8629>

## Task #209 - Logistic regression against Elevation, trip duration and distance, season and day of the week, where the dependent variable is rideable\_type

## Taiga link - <https://tree.taiga.io/project/msbodavula-ser-517-capstone/task/209>

## Github commit link – <https://github.com/Bindiyaa5/SER517team29/commit/a3148b5b3d626f04a8ef509b39178be9404b8629>

## Task #252 - Random forest regression against user type, day of the week, time of the day and season

## Taiga link – <https://tree.taiga.io/project/msbodavula-ser-517-capstone/task/252>

## Github link - <https://github.com/Bindiyaa5/SER517team29/commit/6bcb75b386ec1f990f79fbf2fba657c3cce19101>

## Task #210 - Exploratory data analysis - Data visualization

## Visualizations on ride counts by seasons for electric and classic bikes ,  hourly ride counts for electric and classic bikes,  average trip duration, monthly trends 2022 vs 2023

## Taiga link – <https://tree.taiga.io/project/msbodavula-ser-517-capstone/task/210>

## Github link - <https://github.com/Bindiyaa5/SER517team29/commit/cef2d330fb556f2fadb1607be94749e6cc844899>

## Task #211 - Interactive map visualization for both classic and electric bike station locations

## Taiga link - <https://tree.taiga.io/project/msbodavula-ser-517-capstone/task/211>

## Github commit link – <https://github.com/Bindiyaa5/SER517team29/commit/366e4371482055cf02ee31a26fb1994a5c90c62d>

## <https://github.com/Bindiyaa5/SER517team29/commit/5858ff4c17f739f3381acb28d8a56db0b6ee09e3>

## Task #217 - Working on non-technical report to be submitted to our sponser

## Taiga link - <https://tree.taiga.io/project/msbodavula-ser-517-capstone/task/217>

## Github commit link –

## Task #218 - Working on Final technical report - Implementation strategy, Outlook and PPT

## Taiga link - <https://tree.taiga.io/project/msbodavula-ser-517-capstone/task/218>

## Github commit link –

## Non function requirements

* + 1. **Related Documentation**

Performance Analysis Report: I documented the system's responsiveness and efficiency in managing data analysis tasks, ensuring that interactive features such as filtering operate smoothly even under varying data loads.

UI/UX Design Specifications: I outlined the design principles and guidelines for the user interface, focusing on simplicity and ease of use to facilitate the analysis of scooter usage trends.

**Related Tasks:**

Optimized Data Loading and Processing: I improved the performance of the Data Loader and Preprocessor to handle large datasets more efficiently, reducing load times and enhancing the overall user experience.

Implemented Interactive Filtering: I developed a user interface allowing dynamic selection of time frames, utilizing Streamlit widgets for seamless user interaction without compromising performance.

## Roles

# Developer - As a developer, I played a key role in the project's codebase, where I implemented vital features for data analysis, optimized performance, and improved the user interface. My responsibilities involved writing efficient code and ensuring that our dashboard was intuitive and offered powerful analytical capabilities.

# Part 3 – Problems Encountered

# 3.1 Time

# Challenge: Managing the ambitious scope of the data analysis feature within the sprint timeframe posed a challenge, creating prioritization dilemmas.

# Solution: Adopted agile time management strategies by breaking tasks into smaller, manageable chunks and holding daily stand-ups to reassess and reprioritize tasks. This ensured the timely delivery of essential functionalities.

# 3.2 Resources

# Challenge: Limited access to comprehensive scooter usage datasets impeded the depth of analysis initially envisioned.

# Solution: Explored alternative data sources where feasible

# 3.3 Personnel

# Challenge: Skill gaps in data visualization techniques and efficient handling of large datasets presented challenges for the team.

# Solution: Discussed among team members and shared our knowledge and explored things

# 3.4 Personal

# Challenge: Team members faced personal issues and emergencies, resulting in unexpected absences and impacting sprint progress.

# Solution: Cultivated a supportive team environment, encouraging open communication about personal commitments. Implemented flexible working schedules

**Solution**: Fostered a supportive team environment, encouraging open communication about personal commitments. Implemented a flexible working schedule