Project Handover Document

**Company ---- Redback Operations**

Project ----- User Ranking - Engagement

*Trimester 1, 2023*

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# Project Information

## Company Acting Director

**Name**

*Title*

Email

List multiple if applicable.

## Project Team

**Project Name: User Ranking - Engagement**

Company: Redback Operations

Team Members: Saeed Alnaqeeb (Lead)

# Project Overview

In general, this is a ranking system project that make use of the data produced from rides to evaluate riders’ engagement and based on that, creates a competitive fun environment by ranking them. Each rider can either earn or lose points, depending on how they engage within the application and how regularly they ride. In this project, we aim to analyse the produced data, use that to build the system, and analyse users progress by building machine learning models. The deliverables of this project consist of a brief analysis extracting data that relates to users’ engagement and a ranking system based on points.

# User Manual

This project is currently being developed using Python and can be navigated by viewing the created files under project 15 of the Data/AI team repository on GitHub. There will be two files demonstrating the approach followed while working on this project, a python file containing analysis of the sample dataset, and another python file where the system’s algorithm is developed. Also, a folder that holds the documentation of the project.

Available at:

<https://github.com/redbackoperations/data-analysis/tree/main/Trimester_1_2023/Project%2015%20User%20Ranking%20Engagement>

# Completed Deliverables

* Data analysis of users’ activities and finding produced data do be used for evaluating a user’s score.
* Ranking Criteria definitions.
* Algorithm that assigns points to users based on their engagement.
* Produced dataset of the users with their score and rank
* Post-ranking analysis to find patterns and trends for future ML implementation

All available at:

<https://github.com/redbackoperations/data-analysis/tree/main/Trimester_1_2023/Project%2015%20User%20Ranking%20Engagement>

# Roadmap

**Roadmap for Trimester 2, 2023:**

* More analysis on the produced dataset
* Search machine learning models to implement
* Build different ML models for user progress prediction and projected path

# Open Issues

* The system needs more testing, as it was only tested on a sample dataset.
* Not yet implemented on the original dataset.
* Ranking criteria can be modified in the next trimester.

# Lessons Learned

One of the main lessons learned is that the continuous use of Trello board would absolutely help organize both individual and team’s work. Recommended technology for future machine learning models is skickit-learn library in Python.

# Product Development Life Cycle

## New Tasks

We do have two weekly meetings where we discuss the ongoing work. One of the meetings is at the start of the week which is a stand up meeting to present your plan for the week, and another meeting later for the progress and any encountered issues.

## Definition of Done

Work is considered done if it is reviewed with the lead and committed successfully to GitHub.

## Task Review

Tasks are generally reviewed by the team lead.

## Testing

In this project, all the work and testing were on a sample dataset, so I runned different methods to test if the product works as it intended to work or not.

## Branching Strategy

In GitHub, every member commits their work to a forked repository of the team’s repo. With each update, we create a pull request so that it gets reviewed and branched to the main repo.

# Product Architecture

## Tech Stack

* Python: analysis, visualisation and algorithms
* SQL: Querying data
* GitHub
* Trello Board

# Source Code

All available at:

<https://github.com/redbackoperations/data-analysis/tree/main/Trimester_1_2023/Project%2015%20User%20Ranking%20Engagement>

# Appendices

Documentation of the project and approach along with some important files are available to view on the project GitHub repository:

<https://github.com/redbackoperations/data-analysis/tree/main/Trimester_1_2023/Project%2015%20User%20Ranking%20Engagement>

Showcase Video:

<https://video.deakin.edu.au/media/1_blu17zp1>