Release Plan

Product: Soccer Match Predictor
Team: Forecast FC
Release Name: MVP for Soccer Match Predictor
Release Date: 7/24/2024
Revision Number: 1
Revision Date: 7/7/2024

High level goals:

- The user should be able to select one of the Bundesliga teams to follow.
- The user would be able to see the planned out schedule for the entire upcoming "season".
- Be able to select a specific fixture to simulate.
- Be able to view the results for a specific simulation.

User stories defining the scope of the release:

A. Sprint 1
    - User Story 1: As a user I want to be able to select a Bundesliga club, so that I can see who they will be playing against this season.
        A. Task 1: Develop a UI skeleton to display the 18 possible teams. [4 pts]
        B. Task 2: Style UI and mock methods for connection to a backend AI model. [3 pts]
        C. Task 3: Deploying base frontend material to Github. [1 pt]
    - User Story 2: As a user I want to be able to view the upcoming 2024-2025 Bundesliga schedule so that I can plan my schedule accordingly.
        A. Task 1: Find the 2024-2025 Bundesliga Schedule. [1 pt]
        B. Task 2: Convert the PDF schedule to CSV files (matchday/team). [4 pts]
        C. Task 3: Push calendars to Git for frontend work. [1 pt]
    - User Story 3: As a sports gambler, I want to be able to predict the outcome of matches so that I can make smarter betting decisions.
        A. Task 1: Gather match data for each team for every league match played over the last 3 seasons. [2 pts]
        B. Task 2: Clean gathered data and determine what specific statistics will be used to train the model. [4 pts]
        C. Task 3: Begin research on Scikit-learn models that best fit the scope of this project. [2 pts]
        D. Task 4: Begin initial development of a basic prediction model. [4 pts]

B. Sprint 2
    - User Story 1: As a user, I want to be able to view the team calendar for my club of choice to see the hardest stretch of matches.
        A. Task 1: Integrate team calendars for each Bundesliga club. (Clicking on any club should reveal their 34 matchday schedule) [4pts]
        B. Task 2: Integrate matchday calendars for the entire 2024-2025 Bundesliga schedule. (Option to view the entire schedule at once. Something like this) [3 pts]
    - User Story 2: As a user, I want to be able to view the head-to-head record of a fixture to get an idea of the competitive nature between two clubs
        A. Task 1: Obtain the head-to-head statistics for each fixture. [3 pts]
        B. Task 2: Convert head-to-head reports into CSV files. [2 pts]
        C. Task 3: Push reports to Github for frontend use. [1 pt]
    - User Story 3: As an analyst, I want to be able to compare my own predictions with the predictions of a machine learning model to see how realistic it can be.
        A. Task 1: Continue development of prediction models [4 pts]
        B. Task 2: Compare different models on accuracy based on test data [2 pts]
        C. Task 3: Decide on a model/implementation to fine tune for sprint 3.

C. Sprint 3
    - User Story 1: As a user, I want to simulate match outcomes for each fixture to experiment with different scenarios and anticipate possible results.
        A. Task 1: Integrate head-to-head records for each fixture in the UI. [3 pts]
        B. Task 2: Implement the simulate feature for each fixture in the UI. [4 pts]
        C. Task 3: Connect frontend to backend for testing. [5 pts]
    - User Story 2: As a user, I want to have highly accurate match predictions so I can trust the predictions and use them effectively.
        A. Task 1: Fine tune prediction model for better accuracy when prediction matches [4 pts]
        B. Task 2: Adjust the model so that it can predict a specific fixture [4 pts]
        C. Task 3: Ensure model requirements are complete and push to Git [2 pts]

Product backlog:

- A working interface
- Being able to select one of 18 Bundesliga teams
- Users can view the entire schedule for their selected team
- Users can view the entire season schedule for all teams
- Users can select specific matches to simulate
- Users can view head-to-head records for a fixture.
- Gather historical data from the past three seasons
- Clean gathered data
- Develop an initial machine learning model