Project Proposal

Project Title

The Chosen 11

Project Summary

The Chosen 11 is a web application designed to help users create optimal fantasy football teams based on their preferences and player statistics collected over the last 10 years. The application will analyze real-world player data and user-defined criteria to recommend the best players for a fantasy football team for the English Premier League. Users will be able to create, update, and manage their teams, with recommendations and insights provided by the system to maximize their chances of winning in various fantasy leagues. We also allow statistics on opponent teams they want to monitor and close focus on their favorite club.

Application Description

In recent years, fantasy football has gained immense popularity, transforming how fans engage with the sport. Fantasy football allows users to act as team managers, selecting real-life players to create a virtual team that earns points based on the players' actual performance in games.

Despite its popularity, one of the main challenges users face is the complexity of selecting the best players for their fantasy teams. With a plethora of player statistics and performance metrics to consider, making informed decisions can be difficult, especially for novice players. Our application aims to solve this problem by providing a user-friendly platform where users can easily build and manage their fantasy football teams based on customizable preferences and enhance their gaming experience.

Creative Component

A creative component that can significantly enhance the functionality of the application is the implementation of a customizable weighting system. Users will be able to assign weights to various performance metrics such as formations, accuracy, number of goals scored, clean sheets, etc. This system allows users to tailor their team selections based on personal preferences and opinions about football.

To achieve this, the application will include interactive sliders or input fields for each performance metric. For example, different users may prioritize goal-scoring ability vs.

defensive metrics like 0 goals allowed. Once the weights are set, the system will apply these preferences to the player data to generate customized recommendations for the best players to include in their team.

This feature ensures that users can create a team that not only performs well statistically but also aligns with their personal vision and understanding of the game, personalizing their fantasy football team and becoming more engaged as a result.

Usefulness

The Chosen 11 is a useful tool for fantasy football enthusiasts because it simplifies the complex process of team selection and management through a user-friendly, customizable platform. Users can create optimal fantasy football teams tailored to their personal preferences and player statistics collected over the last 10 years. The basic functions of the web application include:

- Player Search and Filtering: Users can search for players and filter them based on various criteria such as position, team, and performance metrics.
- Team Creation and Management: Users can easily create, update, and manage their fantasy football teams by adding, removing, and rearranging players.
- Customizable Weighting System: Users can assign weights to different performance metrics (e.g., formations, accuracy, number of goals scored, clean sheets) using interactive sliders or input fields. This allows for personalized team recommendations.
- Performance Recommendations: The application analyzes the user-defined weights and player data to recommend the best players for the team.
- Performance Analytics: Detailed performance analytics and comparisons between players help users make informed decisions.

Currently, similar applications such as FantasyPros and ESPN Fantasy Football provide predictions and recommendations, but their focus is primarily on individual players rather than offering a full team based on user preferences. Additionally, these platforms often require subscriptions or payments for comprehensive features and detailed analysis. In contrast, The Chosen 11 will be usable for free.

Users can tailor their team selections based on their unique football philosophies and preferences, ensuring a more engaging and satisfying fantasy football experience. By integrating with the official English Premier League (EPL) website, The Chosen 11 can offer real-time data and seamless interaction, further enhancing its utility and appeal to fantasy football managers looking to create a team that reflects their strategy and understanding of the game. This focus on the EPL, rather than multiple leagues,

ensures that the application caters specifically to fans and managers of the most popular and widely followed football league in the world.

Realness

Our application will use real datasets from sources like:

- **Kaggle Premier League Matches 1993-2023 (csv)**: This dataset captures comprehensive historical results of matches, including team names, match dates, scores, and the outcomes of each match (win/loss/draw).The dataset includes results of matches played over 30 years, amounting to several thousand rows.It includes details such as date, teams, scores, and locations, typically around 10-15 columns.https://www.kaggle.com/datasets/evangower/premier-league-matches-19922022

- **Footystats.org (csv)**: This dataset provides in-depth player statistics, capturing individual performances across various metrics which are essential for evaluating and selecting players in fantasy sports.Contains detailed player data for the last 10 years, which would include thousands of entries given the number of players in the league.Extensive attributes covering player performance such as goals scored, assists, minutes played, cards received, and more—usually over 20 columns.

- **Kaggle EPL Stadiums 23/24 (json)**-Links teams to their home venues, providing data on stadium names, capacities, and locations'.https://www.kaggle.com/datasets/jessicagreen1/epl-stadiums-2324

APIs from sports data providers like Sportradar or Opta would also be used in case we feel the need for more data to create the platform in json format.

Detailed Functionality

The website offers the following functionalities:

User Registration and Login: Users can create accounts and log in to access the features.

Team Generator: Users can create and manage their fantasy football teams. Users can set preferences and assign weights to different performance metrics such as accuracy, number of goals scored, clean sheets, and formations.

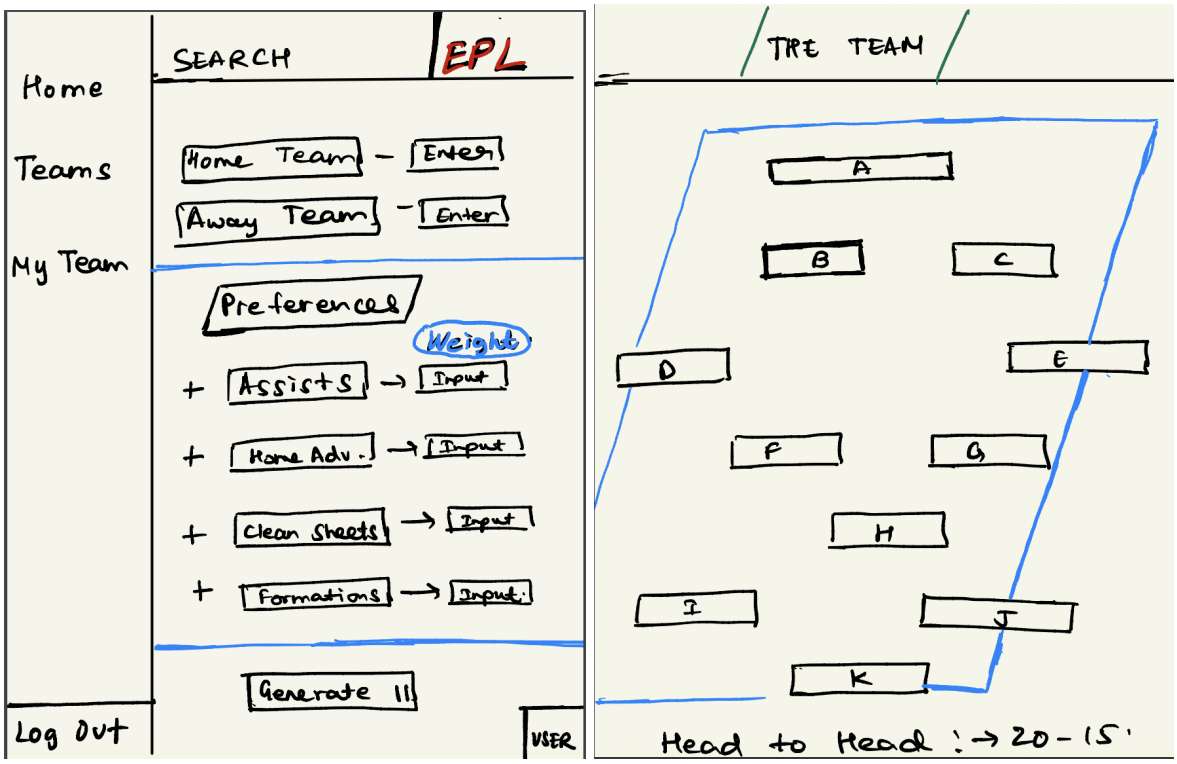
My Team: Users can view and manage their selected players. This section allows users to curate a team based on their favorite fan club, featuring detailed information about the chosen players from that fan club.

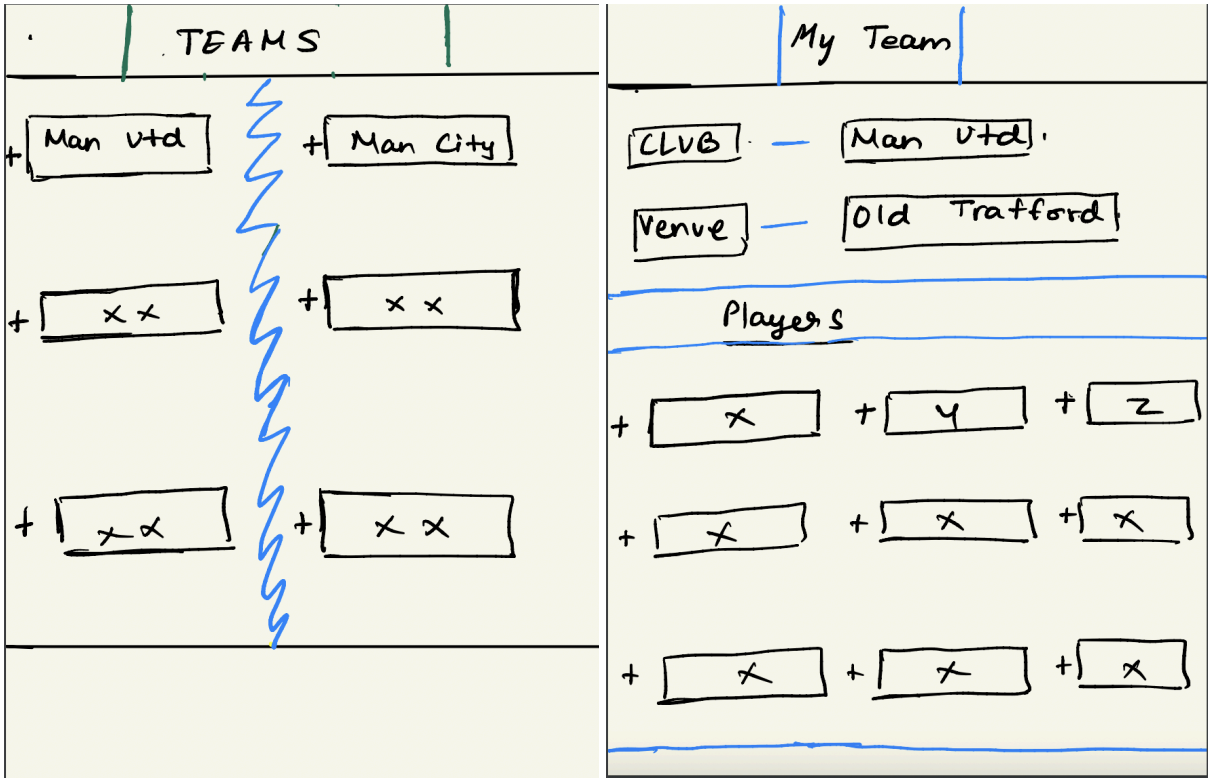
Teams: Users can keep an overview of other teams they want to monitor. This section provides details about these teams, including their home ground, key players, and other relevant statistics.

User Interaction

- **Create**: Users can create new fantasy football teams,which will have an interface similar to lineups broadcasted on television.
- **Delete**: Users can delete players from their teams.They can also delete teams that they don't want to monitor on the teams section.
- **Update**: Users can update their teams by adding new players or making changes based on recommendations.
- **Search**: Users can search for players and view their performance statistics.They can also look for individual tabs like Home or My team ,wherever they want to go.

UI Mockup





Project Work Distribution

Backend Systems

- Data Integration: Jimmy will work on developing the weighting algorithm to efficiently sort and apply user input data. His tasks will include:
    - Designing the algorithm to handle various user-defined weights for performance metrics.
    - Ensuring that the algorithm can dynamically adjust to different user preferences.

- Filtering and Managing the Database: Rhea will be responsible for creating and managing the database, including filtering and normalization. Her tasks will include:
    - Setting up the database structure to store player statistics, historical performance data, and user preferences.
    - Implementing data normalization techniques to ensure data consistency and integrity.
    - Developing efficient database queries to filter player data based on user criteria.

Frontend Systems

- UI/UX Design: Krish will design the user interface and ensure a seamless user experience for the front-end portion. His tasks will include:
    - Creating wireframes and mockups to visualize the user interface.
    - Designing intuitive and user-friendly navigation flows.
    - Implementing the UI designs using HTML, CSS, and JavaScript.

Integration and Testing

- Backend and Frontend Integration: Integrating the backend with the frontend and the use of APIs will be a collective team effort. This will include:
    - Collaboratively working to ensure seamless data flow between the frontend and backend systems.
    - Conducting integration tests to identify and fix any issues arising from the interaction between different system components.