

SmartScore Research Poster

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INTRODUCTION

SmartScore is a machine learning-powered fantasy football web application designed to give managers more informed recommendations on a week-to-week basis

Users can create leagues with custom rules to compete with friends, while receiving recommendations such as suggested transfers, team selection tips, and points predictions. The app's algorithm factors in player form, injury risks, fixture difficulty, and more, delivering insights that help managers optimize their teams.

With SmartScore, users can make data-driven decisions to maximize their team's potential and improve performance throughout the fantasy season.

PROBLEM STATEMENT

A big problem in the fantasy football space with managers is that for the casual players who don't dedicate a lot of time to playing, it can be extremely hard to keep up with avid fantasy football players.

SmartScore's aim is to level the playing field for the average manager so that they can maintain their enjoyment by being able to stay competitive with their peers throughout the season.

In fixing this problem SmartScore aims to make a more even and fair playing field for friends to compete against each other despite their differing levels of knowledge

MAIN FEATURES

- AI transfer recommendations
- Custom league rules
- AI team selection
- Points per week predictor
- Player comparisons
- Fixture analysis

RESEARCH

FANTASY PREMIER LEAGUE

The most popular fantasy football by far is Fantasy Premier League^[1] (FPL). The FPL app has over 10 million players as of the 2024/2025 season. The FPL app doesn't utilise any form of AI or machine learning throughout the application. They have player comparisons but it is just a higher or lower system for comparing their stats. The main selling point of the FPL app is their simple and easy league creation system and live price changes to players based on how many other managers have brought them in and their current form. This gives the playerbase a fresh outlook on team selection as you have to account for form more as it isn't a static price for the season.



CHAMPIONS LEAGUE FANTASY

Another major fantasy football app that rivals the FPL app would be the UEFA Champions League^[2] (UCL) fantasy app. This app is very similar to the FPL app in the aspect of league creation and the fact that it doesn't utilise AI in any aspect of its app. The UCL fantasy app also doesn't give the statistics that the FPL app gives about players and teams, its only main selling point is that it is the only one that has the fantasy aspect for the Champions League so there isn't any alternatives. It also integrates the fluctuating player pricing system similarly to the FPL app.



FANTASY FOOTBALL HUB

Fantasy Football Hub^[3] (FFH) is a newer addition to the fantasy football world. FFH's main focus is on using AI to analyse teams, players and transfers. It is good at analysing teams and gives them a rating out of 100%, most of their features are behind a paywall such as the transfer selectors, team selections, price changes and fixture analyser. The thing that FFH excels in is its use of AI however, it doesn't provide its own league format so you can't make a league with friends or actually play fantasy football through their site, it is purely a learning tool to improve your team. FFH also only focuses on the Premier League for their database as it was created to aid FPL managers rather than managers in apps such as the UCL fantasy app.



TECHNOLOGIES

MACHINE LEARNING MODELS

As this is a heavily machine learning based project there will be a few different types of models that will be used to build the features for this application.

- Upon further research, Decision Trees^[4] are a model that I will be using for my application as they are great for binary results and working with numerical data.
- Random Forests^[5] could be used for features such as points per week predictions as it will be based off historical data which has multiple aspects to it
- After reading more information, I believe that Neural Networks^[6] will be key for this project as they are great at picking up smaller details and recognising patterns which for predictions will be extremely helpful.

FINDINGS SUMMARY

In conclusion, there are a lot of apps out there which provide different aspects of the fantasy football experience but there aren't any which combine all of them. SmartScore aims to combine the enjoyment of the custom league formats and the knowledge of the AI systems to make a competitive and fresh experience for fantasy football managers.

REFERENCES

- [1] - [FPL Website](#)
- [2] - [UCL fantasy website](#)
- [3] - [Fantasy Football Hub](#)
- [4] - [Decision Trees](#)
- [5] - [Random Forests](#)
- [6] - [Neural Networks](#)
- [7] - [Template For The Report](#)