FANTASY FOOTSCORES

Optimizing FPL Success with Predictive Analytics

By: Mu-izz Gbadamosi

Table Of Content

03 Problem Statement

04 Proposed Vision

05 Potential Impact

06 Preliminary EDA

07 Next Steps

Overview

- Fantasy Premier League(FPL)
- Largest fantasy football game
- About 11.5 million players worldwide
- Manage virtual football teams
- Based on real-life player performances in the English Premier League

Problem Statement

Managing a successful team can be challenging due to uncertainty in player performance and strategic decision making

Opportunity

- Predictive modelling using data science approaches
- Forecast player performances for upcoming gameweeks
- Taking into consideration: player statistics, team dynamics, fixture, etc
- Fantasy managers win prizes
- Betting companies can use model for their algorithm

Proposed Vision

Machine Learning Algorithms

Time Series Analysis

Regression Models

Data-Driven Approach

Predictive Modelling

Exploratory Data Analysis(EDA)

Potential Impact

01 Strategic Advantage for FPL Managers

02 Competitive Spirit

03 Platform Growth and Engagement

04 Improve Betting Companies Algorithm

DATASET

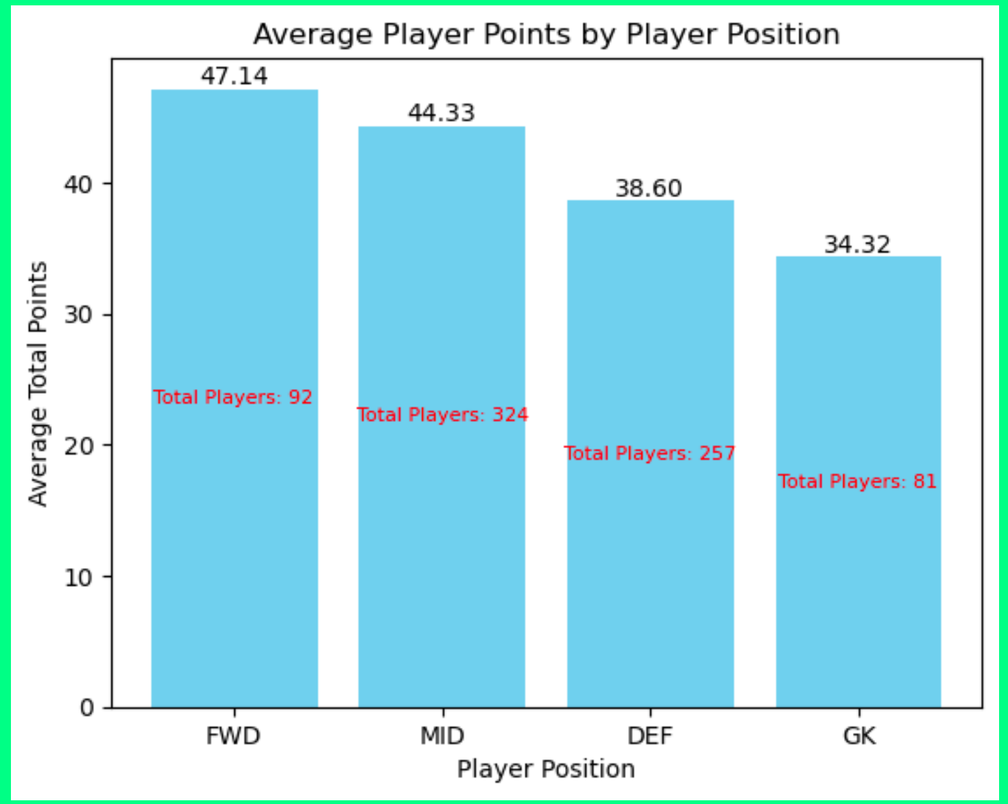
- Anand, Vaastav. (2023). FPL Historical Dataset.https://github.com/vaastav/Fantasy-Premier-League/
- 2022/2023 English Premier League Season
- 26505 rows and 41 columns

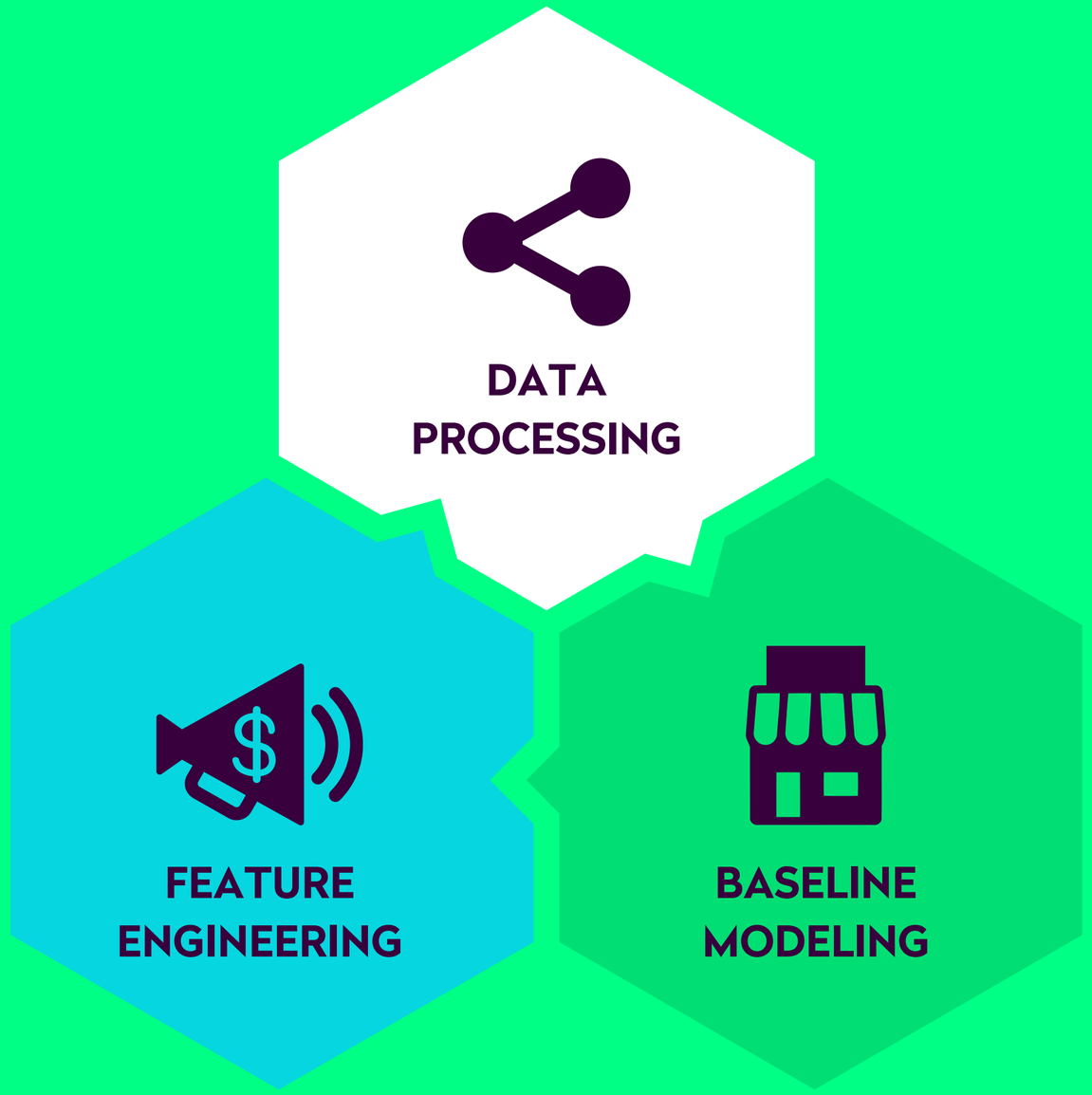
QUALITY CONCERNS

- Missing gameweek data
- No incremental data for each gameweek
- Rows with no information
- Player Transfers during the season

PRELIMINARY EDA

- Midfielders should be prioritized
- Forwards and Midfielders get the most points
- Low amount of Forwards and Goalkeepers
- PV ratio highly correlated with total points
- Linear relationship between minutes played and total points
- Midfielders contribute significantly to both attack and defending





NEXT STEPS

DATA PROCESSING

- Linear and Logistic Regression Model
- Variable Selection
- Collinearity & Multicollinearity

FEATURE ENGINEERING

- Player Consistency Metrics
- Exploit Time Trends
- Fixture Difficulty Dynamics
- Opponent Analysis

BASELINE MODELING

- Feature Scaling Optimization
- Algorithm Selecection