



Barclays Fantasy Premier League

Descriptive Analytics & Visualization Project

MSIS 5673

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Introduction

Barclays Premier League (BPL) is an English professional league for men's football association clubs. The Barclays Premier League is the top level of the English football league system, and the country's primary football competition. It is contested by 20 clubs and operates on a system of promotion and relegation with the English Football League.

Fantasy Premier League (FPL) is a game in which participants assemble an imaginary team of real-time footballers and score points based on those players actual statistical performance or their perceived contribution on the field of play. Fantasy premier league has evolved in recent years from a simple recreational activity into a significant business due to exposure via the internet.

The dataset I have chosen for the project contains a comprehensive list of all players competing in the Barclays Premier League 2017-2018 and their corresponding FPL market value. What makes up for it is the fiery transfer speculation that surrounds all major player transfers today. The players market valuations also lead to a few raised eyebrows making us curious to see how good a substitute player could fit into a new club, and the predictive power it would have in a model estimating a player's market value.

The primary objective of the project is to extract a story out of the dataset to help Barclays Premier League Organization and Football Clubs understand the factors that influence the players market value and to help the Fantasy League players to choose the right players in their team. The story contains descriptive analysis using various statistical visualizations of variables in the dataset. The following table summarizes the important variables in the dataset.

Column Name	Description
Name	Name of the Player
Club	Club of the Player
Age	Age of the Player
Position	The position of Player on the pitch
Position Category	Category for the position of the Player
Market Value	The market value of Player as on transfermrkt.com
Page Views	Average daily Wikipedia page views from September 1, 2016, to May 1, 2017.
FPL Value	The value in Fantasy Premier League as on July 20th, 2017
FPL selection	Percent of FPL players who have selected that player in their team
FPL Points	FPL points accumulated over the previous season
Region	The region of the Player
Nationality	Country of the Player
New Foreign	Whether a new signing from a different league for 2017/2018
Age Category	Category for the Age of the Player
Club Id	The id of the football club
Big Club	Whether one of the Top 6 clubs
New Signing	Whether a new signing for 2017/2018

Exploratory analysis

Representing my school football team as striker player and having won several gold medals in interschool football tournaments I have always been a football geek. I have continued the same enthusiasm in closely following Barclay's premier league matches almost every year since 2011 and even participated in Fantasy premier league matches in my leisure time. I thought I would analyze the FPL dataset when I happened to find it in on Kaggle (which was, in turn, picked from www.transfermarkt.com and FPL website) and aligns perfectly well with the topic of interest. The dataset was a perfect blend of both categorical and numerical variables which is important in analyzing the market value of BPL players and making critical decisions to football clubs and BPL organization. The dataset was pretty good with no null values but had a few challenges like missing data in few instances (players country information was missing), to which I resolved it manually by adding data taking help of Google and using my football knowledge instead of deleting the entire row with missing data. Since the dataset was already a completely comprehensive list of all the football players from the 20 teams playing Barclays premier league, I do not have to add any additional data to my existing dataset. All I had to do was filling the few instances of missing information. During the exploratory analysis, many combinations of variables have been tried out to determine the factors influencing the market value of players. The entire exploratory analysis is done keeping in mind the decision-makers of the FC Managers, Fantasy League players and BPL organization as the audience, thus adding value to their business. The following are the few of many cases which were tried out during exploratory analysis:

- Preliminary analysis was done to find the most valuable players in the BPL and how is the distribution of players different for the top 6 clubs.
- Preliminary analysis was done to find the most popular players in the BPL and how is the distribution of players different for the top 6 clubs.
- Preliminary analysis was done to find the distribution of market value and how is the distribution different for the top 6 clubs.
- Geographical Distribution of market value average for BPL players in a 2017-2018 season.
- Detailed analysis was done to find the correlation of market value and FPL value against the player's age.
- Detailed analysis was done to find the correlation of market value and FPL value against the player's position and how the distribution is different for top 6 clubs.
- Detailed analysis of FPL points and FPL value to determine the players you should put on your fantasy team.

Explanatory analysis

Audience

The analysis of my data would be in general for the Barclays Premier League organization, football clubs, fantasy league players, fantasy league organizers, and football fans.

Relationship to the audience

My role is assumed to be a Business Intelligence Analyst for the Barclays Premier League organization.

Expectation from audience

Through my analysis and data story, I am expecting:

- Football clubs to make better decisions in choosing players for their club in BPL 2018 season.
- Fantasy league players to choose better players for their team to enjoy the FPL experience.
- Barclays Premier League organization to better understand the factors that influence the market value of players.

Usage of my data to convey the point

Data wouldn't make sense by just looking at it. Data has plenty of information to be conveyed once it is put into the right form. I will be using the data in my dataset to compare and analyze several parameters that are influencing the market value of the BPL players and presenting that data visually to my audience and bringing out a new perspective to my audience thus helping them make better decisions for their endeavors.

Story Boarding



Visualization5

Detailed Analysis on the correlation of market value and FPL value against players position.

Visualization6

Detailed Analysis between FPL points and FPL values to determine and select the right players in your fantasy team.

Summary

Summarizing the insights drawn out of the analysis to provide recommendations to FC Managers, FPL players.

Final Thoughts

The precise motivation behind this data story is to understand the factors that influence the market value of the players. Application of descriptive analytics and visualization on data can extract an unfolding story. In the context of this dataset, football clubs spend a lot of time and money in choosing players without proper analysis. Analyzing the important indicators with the help of data can help managers buy and sell players wisely. This story is an attempt to find patterns and interesting facts thereby helping the FC Managers, FPL players to make better decisions in choosing players for their clubs.

About Data Story Teller



Chakradhar is a graduate student pursuing Master of Science in Management Information Systems with Data Science specialization from Spears School of Business, Oklahoma State University. He has 2.5 years of industry experience with Wipro and Deloitte in the field of Data Analytics and SAP Basis & HANA administrator respectively. He did his bachelor's degree in Computer Science engineering from Hyderabad, India.

