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Using Machine Learning to Predict the Rank of Offensive Players in the NFL for Fantasy Football Drafting

Introduction:

Fantasy Sports is a multi-billion dollar industry. It spans a host of sports and has spawned leagues and even a TV show revolving around the sport. My project specifically focused on fantasy football and selecting (aka drafting) the players that would be most likely to create a winning team. My question of interest is: Is it possible to predict the rank of offensive players in the NFL for fantasy sports based on their statistics from a previous season?

(Notes, will need to add in what kind of estimator to use)

Fantasy Draft:

There are many ways to draft your fantasy team but in most leagues there are specific spots to fill. In my case, I was looking at a team roster made up of the following positions: Quarterback (QB), Running back (RB), Wide Receiver (WR), Tight End (TE), and Kicker (K). Team defense can also play an important role in, but since it is less important than star QBs or WRs, I did not consider them at this point in the project. The data I collected also did not lend itself to scoring an entire team's defense well.

Players earn points based on their stats. For example, a QB throwing or running in a touchdown will earn 6 points. The receiver of that touchdown would also earn 6 points. Players also earn points for every 10 running or passing yards. And depending on the league you can score extra points for exceeding 100 yards in a game. The goal of your draft is to amass the highest scoring players on to your team.

The object of my project is to come up with a way to rank players so I can increase my probability of picking great starters and finally win my league.

Data Collection:

My data is pulled from <https://github.com/BurntSushi/nflgame>, an API to read and retrieve NFL Game Center JSON Data. So far I have downloaded entire season stats for 2010 and 2016. I read this into a dataframe and selected only offensive players with the following designations: QB, WR, RB, TE, K.

Progress to date:

I am still working on cleaning my data, my next steps will be to map the player stats to the points they would potentially earn over the season and then come up with a model/estimator that can learn and predict where a player would rank.