SOCCER MATCH BETTING TOOL

Using Machine Learning to Influence Soccer Betting

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Objective

My goal is to predict the outcome of any given soccer match in the world. The training set focused on the “big 5” leagues in Europe, and the UEFA Champions League, but the model is designed to work with any club with a Soccer Power Index (SPI) rating.

This model is hosted online, with the goal being an intuitive, quick UI where the user can plug in match data and receive a prediction instantly.

Data

- I used a combination of SPI and match history data from the FiveThirtyEight soccer data collection and web-scraped data from the “Analyst Masters” collection. Most of the data is sourced from Opta.
- To keep the final model simple, the algorithm uses SPI to get a better look at how the match, beyond only bookmaker odds.
- SPI is a complex number invented by ESPN as a metric to rank soccer clubs. It takes in account competitiveness coefficients, match-based ratings for both clubs and individuals, and composite ratings for offense and defense.

Performance

- I tested the tool on Matchday 6 of the UEFA Champions League group stage (not present in training set).
- The model accurately predicted the match winner in 6 of the 8 matches that it was tested on for Matchday 6. 75% accuracy is good performance, given the context. The 2 matches it wrongly predicted were “upsets”.
- The tool will continue to be tested and improved upon when club soccer resumes in 2021.

Moving Forward

- Continue testing model accuracy on matches.
- Integrate drop down menus or text fields on the site to make club and SPI selection easier.
- Add an odds calculator to the site to make it easier to convert moneyline, fractional, and decimal odds to percentage.
- Test other models (Neural Network).

Questions?

Model

Github

SPI Background