Qeios

Peer Review

Review of: "Accuracy Without Profit: A Statistical Evaluation of Machine Learning Profitability in the English Premier League"

John Fry[1]

1. Mathematics, University of Hull, United Kingdom

I think this is an interesting and thoughtful paper on the application of machine learning models to football betting markets.

The basic message is that in efficient markets, prices reflect available information. It is hard to trade profitably in these markets - especially once transaction costs are taken into account. Profitable trading may also be different from just making accurate predictions per se. Further, if bookmakers are viewed as an “adverserial agent”, you would expect, as reported, that the ability to trade profitably using machine learning methods has decreased over time.

Some questions for the authors:

Page 7. Model breakdown during 2020. Is this due to the pandemic and matches being played behind closed doors with no fans? Does this period then “pollute” later forecasting efforts?

Page 9. I think it would be good to have some more of the maths details here so that the paper is self-contained and could, for instance, be given to project students to follow up on. For example, what does it mean for the flat betting strategy to “like a bet”? When does the Kelly criterion “like a bet”? Does the Kelly strategy bet too often?

doi.org/10.32388/H14KV1

Page 14. Problem with the Kelly strategy? Could this be resolved by combining a Kelly-type approach with parameter uncertainty?

Declarations

Potential competing interests: No potential competing interests to declare.