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Section: 02

Literature Review (CSE424)

Paper Title: Machine Learning Modeling to Evaluate the Value of Football Players

Paper Link: https://arxiv.org/ftp/arxiv/papers/2207/2207.11361.pdf

Literature Review:

The literature presents a comprehensive exploration of evaluating the value of football players in the market, primarily focusing on the use of machine learning techniques. It begins by highlighting the significance of accurately assessing player value in the highly commercialized football industry and the limitations of traditional methods. The motivation stems from the need for more sophisticated approaches to player valuation, given the continuous evolution of technology and the complexities of player markets.

Previous studies that found relationships between player attributes, performance, and market value support the research's innovative way of evaluating player worth through the use of player salary as a proxy. It is especially notable when the Random Forest method is used for predictive modeling since it has benefits including feature significance analysis, flexibility when dealing with non-linear and categorical data, and efficiency with smaller datasets.

In order to identify the factors impacting player salary, the study strategy comprises many key steps, including feature selection, data gathering from reputable football websites, model training using the Random Forest algorithm, and feature significance analysis. The study adds to our

understanding of player valuation techniques, uncovers new elements impacting player worth, and offers useful methods for calculating player compensation.

The study does, however, acknowledge a number of limitations, including sample size and data limitations, which may affect the findings' reliability and generalizability. Two notable areas for improvement are the narrow range of player leagues included in the research and the lack of player popularity statistics.

In summary, although the study provides insightful information on football player value, its limitations highlight the need for more research to solve data limitations, broaden the scope of features, and externally validate findings. All things considered, the study advances player valuation techniques in the football market and lays the groundwork for more studies in this field.