USING MACHINE LEARNING TO HELP BASKETBALL TEAMS WIN MORE REGULAR SEASON GAMES

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With the game of basketball continuously evolving, teams are always finding ways to stay ahead of the competition, by winning more games and remaining a profitable/relevant franchise. This research tackles to questions: how do various basketball stats contribute to a team getting a win or loss (target variable)? How does a player’s twitter and Wikipedia popularity affect a team’s performance and attendance? To answer the research problem, regular season games data from the NBA website (2012 – 2018), and player Wikipedia page view data was collected. Initial steps will involve data pruning and data manipulation (coding categorical features such as team name, conference, and location into binary). Splitting the dataset will follow, which will be necessary for the feature selection portion. Various machine learning models will be trained, and whichever model has the best accuracy scores with the test data, will be used for feature importance graphs and used to predict wins and losses. Next step will be to analyzing the relationship between player popularity with their team’s performance and game attendance. This research can provide insights to basketball teams on two aspects. Based on a team’s current record and stats, they can know what stats they need to improve upon. Having better knowledge on the type of player they need to add to their roster to win more and improve attendance. This research can be applied towards different types of sports to improve a team’s winning rates and can recommend fantasy sports customers on what players they should get.