A Computational Approach to Predicting College Player Success in the NBA

Kothapalli, Shardul

Every year, NBA draft picks are wasted on seemingly generational talent. Front office executives enamor the raw talent that some players exhibit and inaccurately evaluate their draft stock - many of these players never pan out. Some may argue that success in the NBA is unpredictable and that the spirit of the Draft Lottery reflects the draft itself. However, the past 10 years of draft classes have shown general trends that can be evaluated through computational algorithms in order to predict each player's value in the NBA. Win Shares are effective statistics for measuring success, as they are comprehensive scales that estimate the number of wins each player adds to their team. Building a crawler to scrape, college stats, measurements, and NBA win shares allowed for the construction of a multiple algorithms to maximize the accuracy of the model. Amongst Principal Component Analysis, Deep Neural Networks, and Linear Regression, an accurate model was created. If executives across the league were to adopt a similar framework, teams could not only maximize their own profits by developing prototypical teams, but could also give chances to previously under-evaluated talent, paving way for their successful careers.

Awards Won: