**Final Project – NBA MVP Prediction**

**DSC530-T302 Data Exploration and Analysis**

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Statistical/Hypothetical Question:

Every year at the end of the regular season in the NBA, end of season awards are handed out. These awards include best offensive player, best defensive player, best coach, and the grandest one of them all, the Most Valuable Player (MVP) award. This award is given by a committee of voters to the player that they deem the best during that season.

However, there is the running question on how this committee determines what the qualities are that the player has to exhibit to win the MVP award. This study’s goal is to determine what qualities a player can exhibit to make them more likely to win the MVP.

Using a Kaggle database that contains the shot metrics for every season from the 2003-2004 season to the 2023-2024 season, this study will analyze if there is any correlation between a player’s shot metrics and their success in winning the MVP award.

Outcome of EDA:

To start this EDA, the dataset was split up into three different seasons, the 2003-2004 season, the 2013-2014 season, and the 2023-2024 season and the winner and runner up were compared each season. After performing the analysis for each season, it was determined that the common trend between MVP finalists were that they were all considered clutch performers.

Clutch performers in the NBA are defined as players who tend to make a lot of their shots in the last five minutes of the game. All three MVP winners showed great ability in doing so. Therefore, this was the statistic that was deemed the most influential by this study when determining the MVP of the season.

Next Steps:

While this study was well versed in shot metrics and the offensive side of the player, a key component in basketball is how well the player can play defense. Therefore, the next steps in this study would be to gather the defensive statistics of each player and compare to see how much they affect the MVP decision.

These newly introduced variables could help develop this decision even more or possibly uncover a different trend that was not noticed. However, there was an assumption made in this study that would need to be explored more if this study is to continue. This study used the assumption that all voters value the same exact thing. However, the committee is from different backgrounds, therefore there might be differing opinions when it comes to the choice.

The biggest challenge that was fought through this study was the correlation plots. The data set that was used was all the shot metrics for every player, however each data point only had a specified number of outcomes. Therefore, in the future this study would need to explore more complex variables or incorporate more seasons to truly discover a trend.

Conclusion:

While this study is not perfect, I do believe that a strong conclusion was found that the most clutch players of each season will be in the running for the MVP. Recently the NBA has created a new award called the Clutch Player of the Year which is awarded to the player that is most successful during that clutch time in a game. I can confidently predict that the person who wins this award will also be in the running for the MVP as well.