

# NBA Efficiency Prediction



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# Background



- Collected data from “[2022-23 NBA Player Stats: Totals | Basketball-Reference.com](#)”
  - Data about 500 players (500 rows - 30 columns) from the NBA 2022-2023 season
  - Predict the MVP of the season before the end of it
  - Looking at a few different categories and relationships with efficiency
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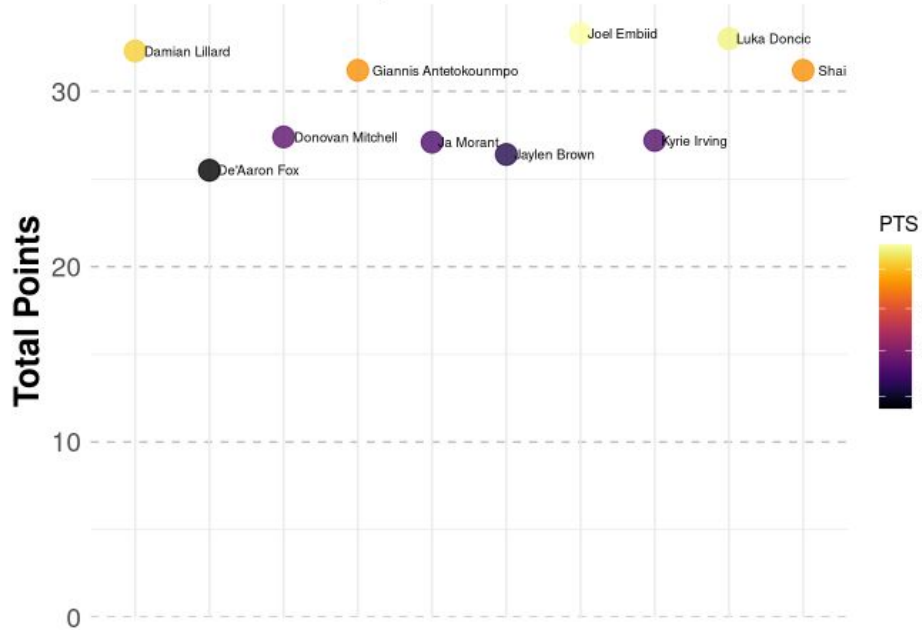


# Efficiency Formula

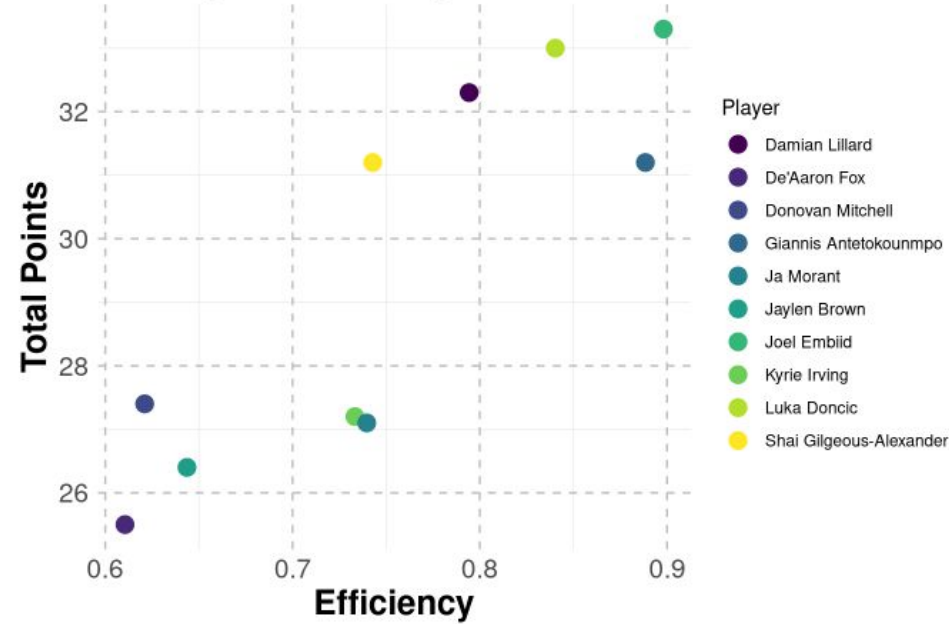
$$- \text{EFF} = (\text{PTS} + \text{REB} + \text{AST} + \text{STL} + \text{BLK} - \text{TO}) / \text{GP}$$

# Points - Efficiency

## Top 10 Scorers

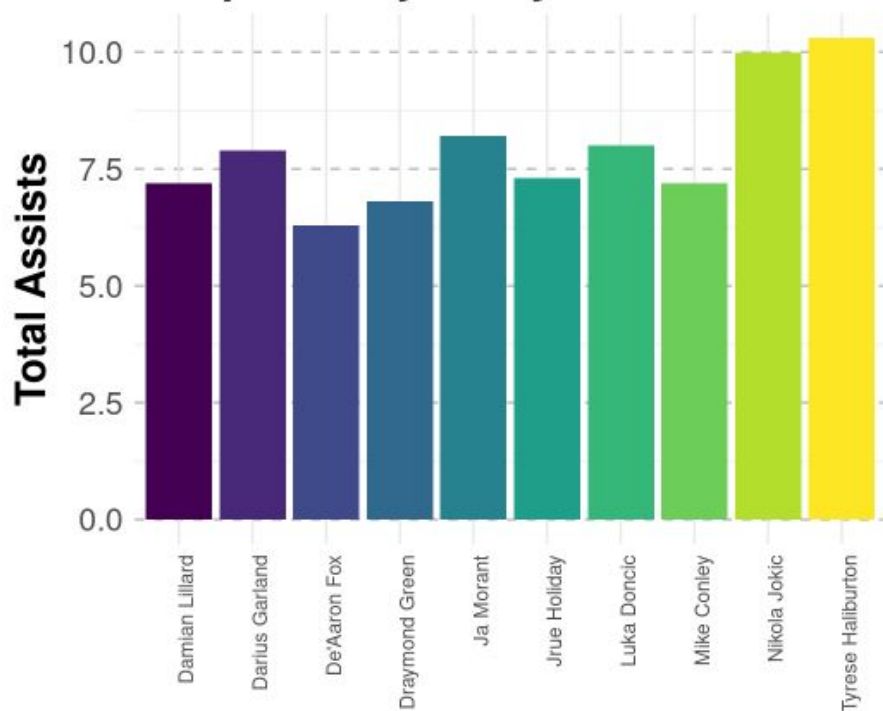


## Player Efficiency vs Points



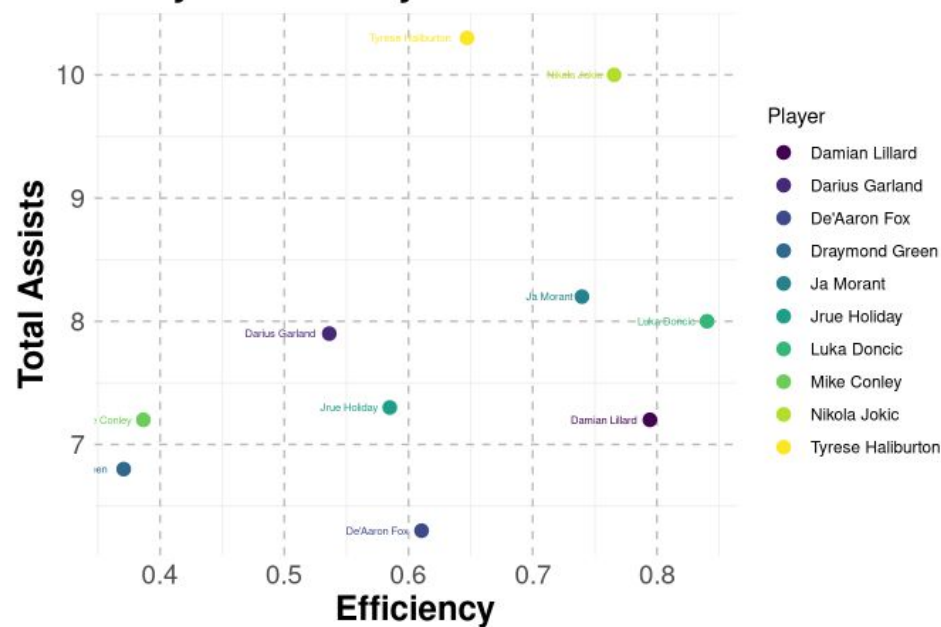
# Assists

## Top 10 Players by Total Assists



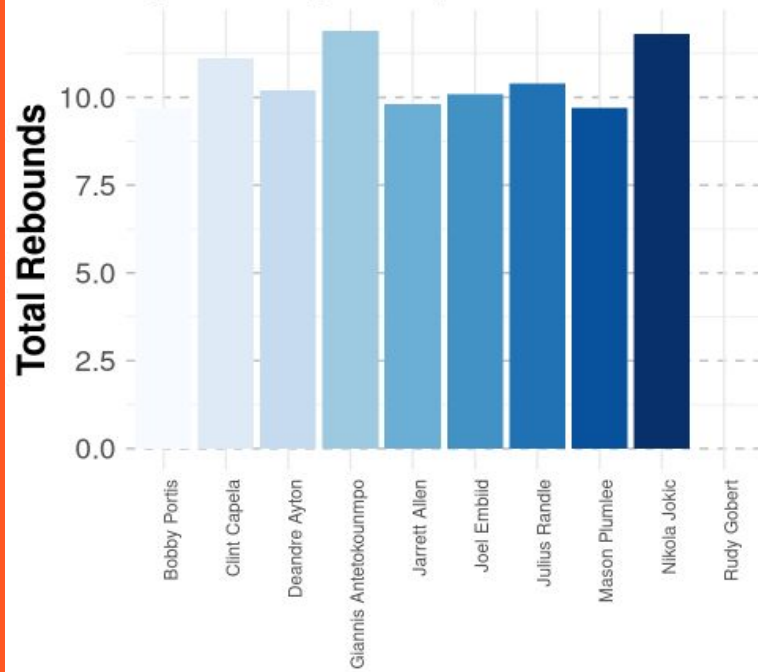
# Efficiency

## Player Efficiency vs Total Assists

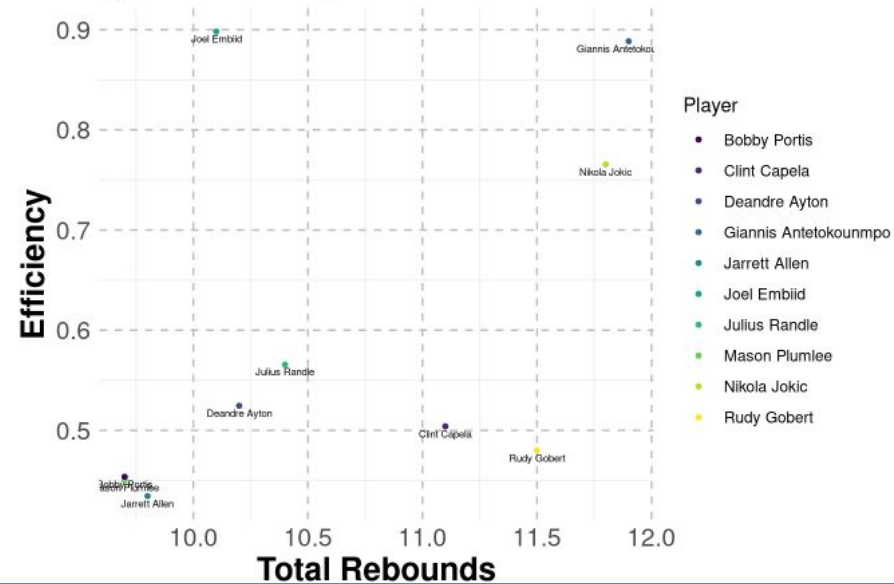


# Rebounds Efficiency

## Top 10 Players by Total Rebounds



## Player Efficiency and Total Rebounds

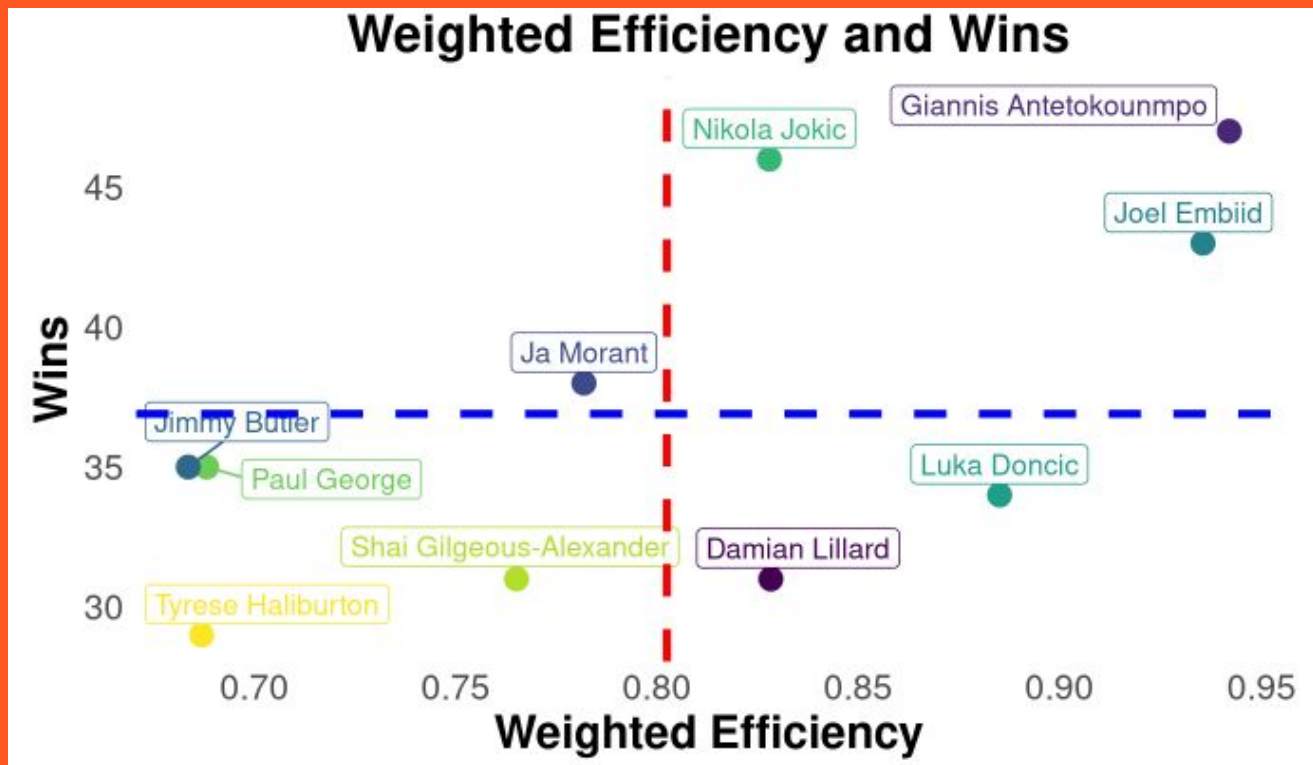




# Weighted Results

- Adding Weight to each category
- Categories differ
- The importance differs
- Formula for weighted efficiency
  - $WE = (PTS \times 1 + REB \times 1.2 + AST \times 1.2 + STL \times 0.8 + BLK \times 0.8 + T/O \times 1.1) / (\text{Games Played})$

# Weighted Efficiency - Wins





A dynamic action shot of three Milwaukee Bucks players in white jerseys with blue trim, celebrating on a basketball court. The player in the center, Giannis Antetokounmpo, is wearing jersey number 34 and has his mouth wide open in a shout. He is being embraced by two teammates, one on the left and one on the right, who are also shouting with their mouths open. The background is dark with bright, out-of-focus lights, creating a sense of a high-stakes game. The overall mood is one of intense celebration and team spirit.

**MVP Award Winner**

**Giannis Antetokounmpo**

# Conclusion

- Data was collected before the end of the season
- Slightly different efficiency formula
- The prediction likely to be wrong
- The MVP race changed in the last few weeks of regular season
- Need more precise formula

**Thank You!**

