



THE BEST NBA ALL-STARS

The data I chose to focus my story on comes from FiveThirtyEight, an American website focusing on opinion poll analysis, politics, economics, and sports blogging in the United States. However, the data comes explicitly from FiveThirtyEight's NBA statistic/metric, RAPTOR. RAPTOR stands for Robust Algorithm (using) Player Tracking (and) ON/OFF Ratings.

RAPTOR is a plus-minus statistic based on publicly available NBA data and statistics. It then measures the number of points a player contributes to his team's offense and defense per 100 possessions relative to a league-average player.

RAPTOR consists of two significant components combined to curate a rating for each player. First is a "box" (as in "box score") which is contrived of the player's individual game statistics. Second is the "on-off" component, which evaluates a team's performance when the player is on the court, versus when they are not.

FiveThirtyEight's article "The Best NBA Players According to RAPTOR" analyzes the statistics of every current active NBA player.

I decided to do some preliminary data exploration for my data story and limit this data to exclusively active NBA All-Stars. Through this, I was able to limit the number of players from over 500 to 68.

Like FiveThirtyEight, I began visualizing my data through a scatterplot, including each all-star.

Using Datawrapper, I could plug in my data of all 68 all-stars. I focused on the offensive and defensive raptor totals, measured by the points above average per 100 possessions added by the player on offense/defense, using both the box and on-off components. In addition, I used the RAPTOR total score, which is the points above average per 100 possessions added by a player on both offense AND defense, using both box and on-off components.

Best NBA All-Stars

Where every NBA All-Star stands according to his offensive and defensive RAPTOR rating.

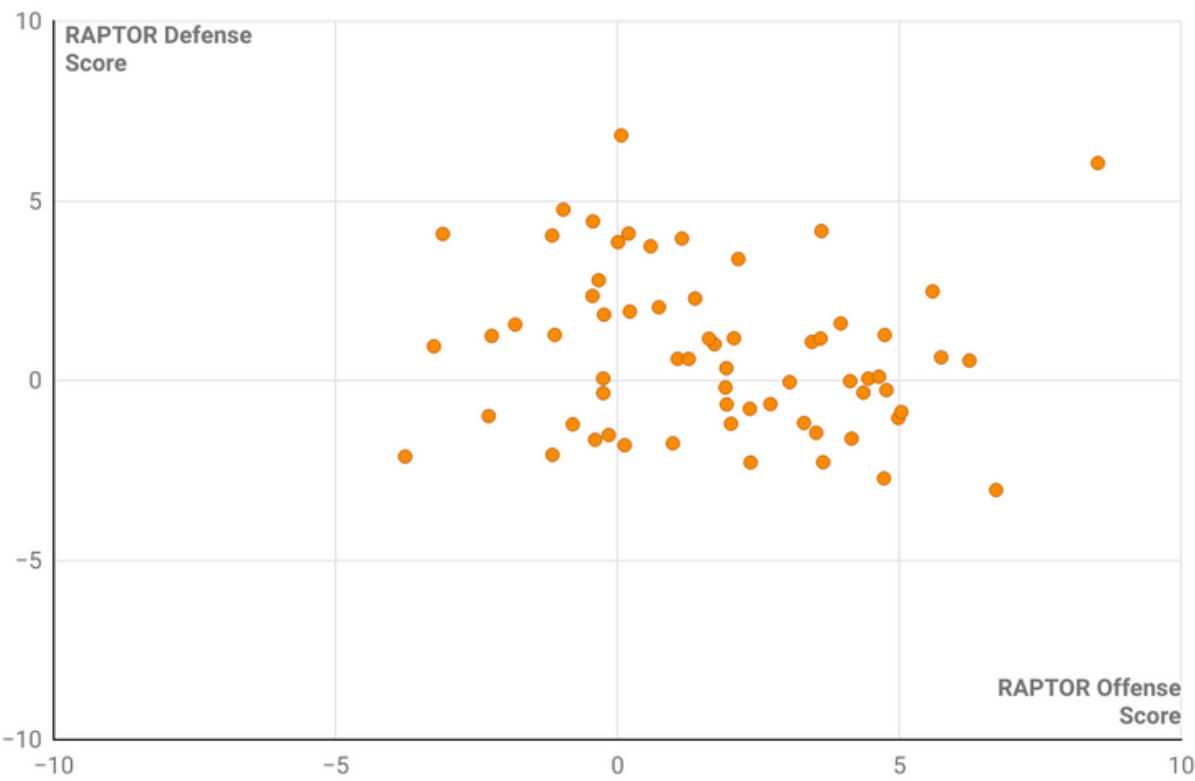


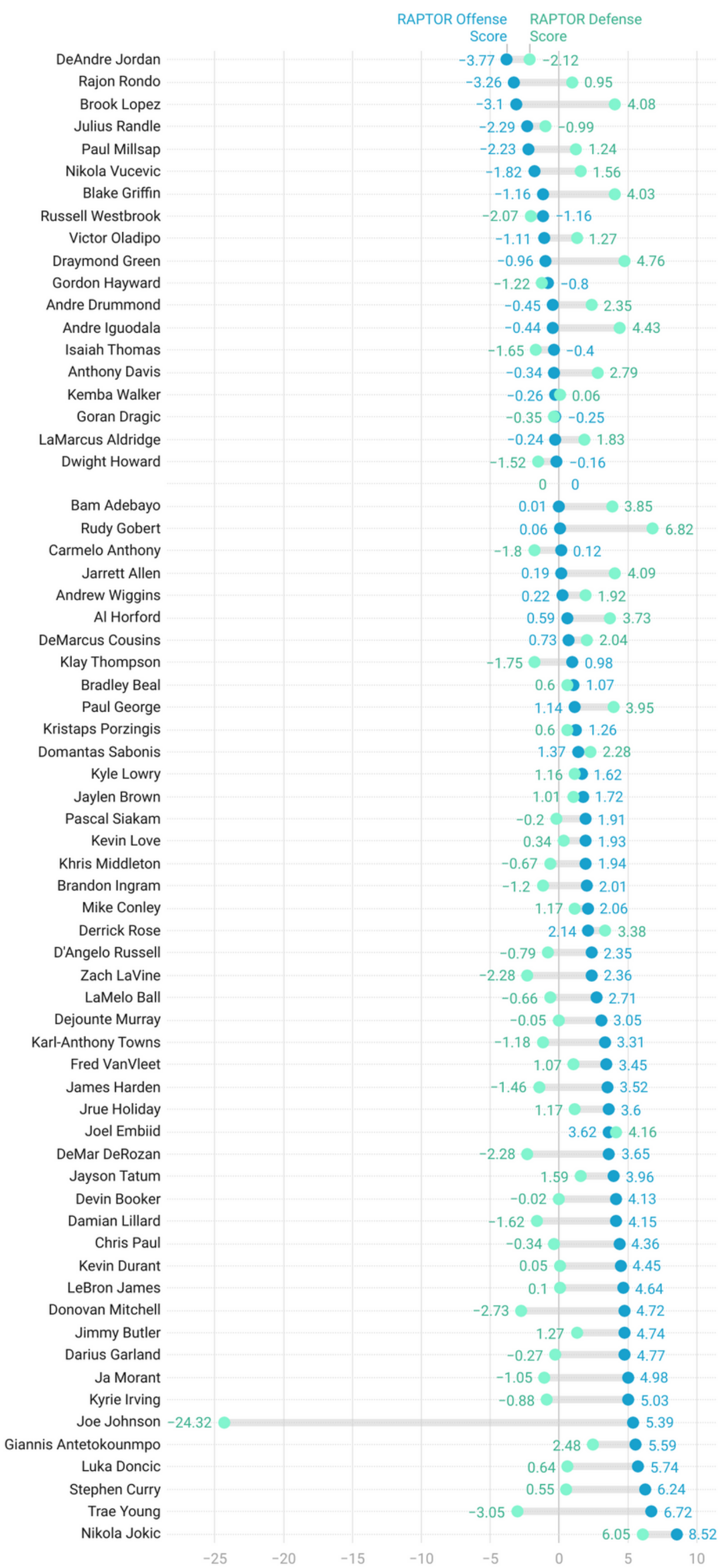
Chart: Quinn O'Connor • Source: FiveThirtyEight • Created with Datawrapper

Knowing I would have over 68 data points, I knew color coding each dot on the scatterplot wouldn't do the trick. Thus, I decided to encode a picture of each player with the correlated data point so that when a user scrolls over a specific data point, a name and photo pop up.

For my second visualization, I decided to go with a range plot to visualize the difference between each player's offensive and defensive RAPTOR Score. Compared to the scatterplot, which was meant to show the standing of each all-star against one another, the range plot better visualizes the individual statistics and differences between offensive and defensive RAPTOR scores. Additionally, the range plot showcases which all-stars are more suited for defense versus offense based on where their plot lands on the range.

Offensive v.s. Defensive RAPTOR Scores of NBA All-Stars

A comparison of NBA All-Stars offensive and defensive RAPTOR ratings



When conducting my research, I went through many of FiveThirtyEight's data stories and found that the one I was most fascinated by was the [2022-2023 NBA Player Projection](#). The article states that "the projection system identifies similar players throughout NBA history and uses them to develop a probabilistic forecast of what a current NBA player's future might look like." The system allows for users to click through any NBA player they choose and look through a series of graphs on their game statistics and compare them to similar players. Through projects like RAPTOR, I realize how much data collection goes into processes like this and how vital prediction analysis is to the industry of sports as a whole.

It is also important to highlight just how vital this data is to players. When speaking with third-year Emerson College basketball player Ava Salti, she said the following. "Making sure that data and game analysis such as this is available to players is vital to any sport. It lets players know where they stand and where to improve. I know I'm all about statistics; I like to know my shooting percentage, my vertical jump height, and my running speed. All of that. "

In the sports industry, data collection and analysis benefit those who collect it and the athletes, coaches, and fans who comprehend it.