

# NBA G.O.A.T. Calculator

by James M. Ezeilo

## Introduction

Welcome to the NBA G.O.A.T. Calculator website! I created this project because as a basketball fan, it's always so fun and interesting to debate with others over which NBA players have the strongest case for being the "Greatest of All Time". This guide will walk you through the steps to create a custom list of NBA players throughout history based on your ratings of various statistics and metrics. Follow these simple steps to get started!

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## Quick Guide: NBA G.O.A.T. Calculator

### 1. Getting Started

- **Access the Website:** To begin, open your web browser and go to [Website URL].

### 2. Filling Out the Form

- **Rate NBA Statistics:** On the homepage, you will find a form that asks you to rate various NBA statistics on a scale of 1 to 10. These statistics will vary but some examples are:
  - Points Per Game
  - Number of Championships
  - Longevity

- etc.
- **Understanding Categories:** All metrics are organized into 4 main categories. For a deeper understanding of how these scores are calculated, read the detailed guide here. The 4 categories are:
  - R-Score (Regular Season Stats)
  - P-Score (Postseason Stats)
  - K-Score (Awards & Accomplishments)
  - M-Score (Miscellaneous Metrics)
- **Submit Your Ratings:** After rating all the statistics, click the "GO! 🏆" button for a customized list of the Top 50 players ranked by G-Score (GOAT Score), a combination of the 4 categories mentioned above.
  - The Top 3 players from your player list will be highlighted in **bronze** for Rank 3, **silver** for Rank 2, and **gold** for Rank 1/GOAT.

You can choose to save your list by clicking the "Save List" button at the top of the results page.

### 3. Generating Your Player List

That's it! The site will process your ratings and use them to generate a custom list of 50 NBA players ranked based on your preferences.

## Congratulations!

You've successfully created your customized list of NBA players based on your GOAT criteria!

If you encounter any issues or have additional questions, please don't hesitate to contact me at [jmge.work@gmail.com](mailto:jmge.work@gmail.com).

## Tips & Tricks

When filling out your ScoreCard, there are some cool things I've noticed when creating different player lists. Here are some tips and tricks to keep in mind:

- If you value a more position-based style of play, you can fill out the R-Score & P-Score sections to value potential strengths of a given position. For example, if I value modern point guards, I'll give higher scores for metrics like PPG, APG,

and 3FG% while giving lower scores to metrics like RPG or BPG. And vice versa for forwards and centers.

- Applying an M-Score penalty will significantly reward players for productivity (high accomplishment in a short time frame). Basically this will mostly favor NBA players with shorter careers but high averages, which tends to skew towards current players. So if you choose to apply an M-Score penalty, be sure to pay attention to which players on your player list have a particularly high or low M-Score to better understand why they're ranked so high or low.
- When viewing the player list, you'll likely notice that players with higher R-Scores and P-Scores have very high averages. More specifically, players with high R-Scores have a lot of production during the regular season while players with high P-Scores have a lot of production during the postseason. Players with a high K-Score are extremely decorated with multiple awards and accomplishments. Lastly, players with a high M-Score have been extremely active throughout their careers. For some users, this can be seen as a strength towards a given player's GOAT case while others may see it as a weakness. If you want to punish players with longer careers while rewarding players with better stats and shorter careers, make sure to apply an M-Score penalty.

## FAQs

→ Q: How do I change my ratings?

- ◆ A: You can revisit the homepage and re-rate the statistics to update your player list.

→ Q: Can I save my player list for future reference?

- ◆ A: Yes, there is an option to save your list for future access...

→ Q: Is there a limit to the number of players on my list?

- ◆ A: There is currently a limit of 50 players, but the website will likely be updated in the future to allow users to customize the number of players that make up their player list.

# Metrics Explained

As mentioned above, there are 4 categories that make up how the NBA GOAT Calculator aggregates data to create player lists:

- R-Score (Regular Season Score): Total score given based on a player's career regular season performance.
- P-Score (Playoffs Score): Total score given based on a player's career postseason performance.
- K-Score (Kudos Score): Total score given based on a given player's awards and accolades. This includes:
  - Championships (Rings)
  - All-Star Appearances
  - Regular Season MVPs (R-MVP)
  - Finals MVPs (F-MVP)
  - All NBA First Teams
  - All NBA Second Teams
  - All NBA Third Teams
  - Champ BOOST - Allows users to apply a 4x bonus to championship-related accolades (Rings & F-MVPs).
- M-Score (Miscellaneous Score): Total score given based on a given player's longevity (years played in the NBA) and durability (games played in the NBA).
- G-Score (Greatest of All-Time / GOAT Score): Total score given based on a player's statistics in the regular season and playoffs, as well as their accomplishments, accolades, longevity, and durability throughout their NBA career.

Each player is assigned a score for each of the following categories. Going into detail about how each score is calculated:

R-Score (Regular Season Score) =  
(Regular Season PPG \* ScoreCard) +  
(Regular Season APG \* 1.75 \* ScoreCard) +

(Regular Season RPG \* 1.75 \* ScoreCard) +  
 (Regular Season SPG \* 2.5 \* ScoreCard) +  
 (Regular Season BPG \* 1.75 \* ScoreCard) +  
 (Regular Season 3FG% \* 10 \* ScoreCard) +  
 (Regular Season FG% \* 10 \* ScoreCard) +  
 (Regular Season eFG% \* 10 \* ScoreCard) +  
 (Regular Season TS% \* 10 \* ScoreCard)

P-Score (Playoffs Score) =

((Postseason PPG \* ScoreCard) +  
 (Postseason APG \* 1.75 \* ScoreCard) +  
 (Postseason RPG \* 1.75 \* ScoreCard) +  
 (Postseason SPG \* 2.5 \* ScoreCard) +  
 (Postseason BPG \* 1.75 \* ScoreCard) +  
 (Postseason 3FG% \* 10 \* ScoreCard) +  
 (Postseason FG% \* 10 \* ScoreCard) +  
 (Postseason eFG% \* 10 \* ScoreCard) +  
 (Postseason TS% \* 10 \* ScoreCard)) \*  
 Playoffs BOOST

Playoffs BOOST: Allows users to apply a slight boost to player averages during the playoffs. Boost amount ranges from:

- ★ NONE - No Boost
- ★ MIN - 10% Boost
- ★ MID - 25% Boost
- ★ MAX - 50% Boost

K-Score (Kudos Score) =

(Rings \* Scorecard \* Champ BOOST) +  
 (All-Star Appearances \* Scorecard) +  
 (R-MVPs \* Scorecard) +  
 (F-MVPs \* Scorecard \* Champ BOOST) +  
 (All NBA 1st \* Scorecard) +  
 (All NBA 2nd \* Scorecard) +  
 (All NBA 3rd \* Scorecard)

M-Score =

((Years Played \* 4) \* Scorecard) +  
 (((Games Played / 20) \* Scorecard) / 5)

G-Score =

R-Score + P-Score + K-Score + M-Score

**NOTE:** If an M-Score Penalty is applied, the calculation of the G-Score changes to:

- $G\text{-Score} = R\text{-Score} + P\text{-Score} + K\text{-Score} - (M\text{-Score} * \text{ScoreCard})$

## Abbreviation Dictionary

PPG: Points per game

APG: Assists per game

RPG: Rebounds per game

SPG: Steals per game

BPG: Blocks per game

3FG%: 3-Point Field Goal Percentage

FG%: Field Goal Percentage

eFG%: Effective Field Goal Percentage

TS%: True Shooting Percentage

## More Notes

- The data used for calculation was pulled directly from the NBA's official database using the official [NBA API](#). Basketball eference was used to supplement or validate errors and inconsistencies within the NBA's data such as null values or True Shooting percentages that would exceed 1. The data is made up of 4815 total players with career statistics and metrics ranging from the 1949-1950 season to the 2022-2023 season.
- The 4 categories used to aggregate the data as well as the formulas that combine the different metrics for each category were created by me.
- I wanted to implement more metrics such as PER, Box Plus/Minus, and other advanced stats to make the calculator more comprehensive and customizable. I also wanted to implement a way for users to place emphasis on certain eras by decade. However, PER data is incredibly difficult to source since it isn't an official NBA statistic and Box Plus/Minus didn't cleanly work with any of the formulas I created (I'm still looking for ways to hopefully implement these in the future).