

Nba Award Predictor

Start the Program:

Initial Screen:

The base table shows all current players in the NBA with all traditional statistics

PLAYER	TEAM	AGE	GP	W	L	W_PCT	MIN	FGM	FGA	FG_PCT	FG3M	FG3A	FG3_PCT	FTM
Immanuel Quic...	NYK	21.0	60	34	26	0.567	19.5	3.7	9.2	0.398	1.9	4.8	0.394	2.4
Jalen McDaniels	CHA	23.0	40	17	23	0.425	17.6	2.6	5.6	0.464	0.7	2.0	0.346	0.9
Juan Toscano...	GSW	28.0	47	22	25	0.468	19.7	2.1	3.7	0.587	0.6	1.5	0.417	0.4
Moses Brown	OKC	21.0	37	7	30	0.189	20.6	3.3	6.0	0.552	0.0	0.0	0.0	1.8
Nicolo Melli	DAL	30.0	39	22	17	0.564	12.3	0.9	2.9	0.316	0.4	1.7	0.254	0.3
Derrick Jones Jr.	POR	24.0	55	29	26	0.527	23.1	2.5	5.3	0.478	0.8	2.4	0.323	1.0
Matisse Thybulle	PHI	24.0	62	43	19	0.694	20.1	1.6	3.8	0.419	0.7	2.2	0.304	0.1
Donta Hall	ORL	23.0	8	3	5	0.375	11.5	1.1	1.8	0.643	0.0	0.0	0.0	0.9
Keldon Johnson	SAS	21.0	61	30	31	0.492	29.0	5.0	10.3	0.482	0.9	2.6	0.34	2.0
Tyler Cook	DET	23.0	26	10	16	0.385	11.6	1.8	2.8	0.639	0.0	0.0	0.0	0.5
Sam Merrill	MIL	24.0	27	17	10	0.63	7.4	1.1	2.3	0.484	0.7	1.5	0.488	0.1
Khem Birch	TOR	28.0	61	23	38	0.377	21.8	2.5	5.1	0.495	0.2	0.6	0.263	1.3
Deni Avdija	WAS	20.0	54	25	29	0.463	23.3	2.4	5.8	0.417	1.0	3.1	0.315	0.5
Anthony Davis	LAL	28.0	30	19	11	0.633	32.1	8.4	16.7	0.503	0.7	2.8	0.265	3.9
Kyle Lowmy...	TOR	35.0	46	15	31	0.326	24.8	5.7	13.0	0.436	2.8	7.2	0.396	3.0

MVP	DPOY
ROTY	MVP-BFS
RESET	

Buttons:

MVP	DPOY
ROTY	MVP-BFS
RESET	

The buttons to the right of the table allow the user to select which actions to take.

[MVP](#): Will open up the MVP predictor screen

[DPOY](#): Will open up the DPOY predictor screen

[ROTY](#): Will open up the ROTY predictor screen

[MVP-BFS](#): Will open up the MVP-BFS screen

[RESET](#): Reset the tables and take the user back to the initial screen

MVP

The MVP predictor screen will appear like this with initial weights on the sliders set. These sliders can be changed and the weight changes will be reflected on the sliders and the MVP score function. These values will compute new MVP Scores which are placed into the MVP score column for each player. This column is auto sorted so that the player with the highest score is at the top.

PLAYER	MVP Score	TEAM	AGE	GP	W	L	W_PCT	MIN	FGM
Nikola Jokic	66.608	DEN	26.0	65	43	22	0.662	35.1	10
Giannis Ant.	66.378	MIL	26.0	55	35	20	0.636	33.2	10
Joel Embiid	64.039	PHI	27.0	46	35	11	0.761	31.7	9
Luka Doncic	63.339	DAL	22.0	59	35	24	0.593	35.1	10
Stephen C.	62.618	GSW	33.0	58	32	26	0.552	34.1	10
Julius Ran...	59.899	NYK	26.0	64	36	28	0.563	37.4	8
Bradley Beal	59.657	WAS	27.0	56	29	27	0.518	35.5	-
Damian Lill...	57.683	POR	30.0	60	33	27	0.55	35.8	8
Jayson Tat...	57.341	BOS	23.0	58	32	26	0.552	35.9	9

Points Coefficient: 1.40 Assists Coefficient: 0.90

Points Exponent: 1.00 Assists Exponent: 1.10

Rebounds Coefficient: 0.90 Blocks Coefficient: 0.80

Rebounds Exponent: 0.70 Blocks Coefficient: 1.30

Steals Coefficient: 1.00 Wins Coefficient: 0.90

Steals Exponent: 1.20 Wins Exponent: 0.70

MVP

DPOY

ROTY

MVP-BFS

RESET

MVP SCORE = 1.40*POINTS^1.00 + 0.90*ASSISTS^1.10 + 0.90*REBOUNDS^0.70 + 0.80*BLOCKS^1.30 + 1.00*STEALS^1.20 + 0.90*WINS^0.70

MVP SLIDERS

To select the weights for the MVP score function, use the sliders that are to the right of the table if you wish to adjust how player statistics should be reflected in an MVP candidate.

Points Coefficient: 1.40

Points Exponent: 1.00

Rebounds Coefficient: 0.90

Rebounds Exponent: 0.70

Steals Coefficient: 1.00

Steals Exponent: 1.20

Assists Coefficient: 0.90

Assists Exponent: 1.10

Blocks Coefficient: 0.80

Blocks Coefficient: 1.30

Wins Coefficient: 0.90

Wins Exponent: 0.70

MVP SCORE FUNCTION

The MVP SCORE function takes the weights from the sliders and changes the label of present in the frame, so that the user can see how all the weights apply.

MVP SCORE = 1.40*POINTS^1.00 + 0.90*ASSISTS^1.10 + 0.90*REBOUNDS^0.70 + 0.80*BLOCKS^1.30 + 1.00*STEALS^1.20 + 0.90*WINS^0.70

DPOY

The DPOY predictor screen will appear like this with initial weights on the sliders set. These sliders can be changed and the weight changes will be reflected on the sliders and the DPOY score function. These values will compute new DPOY Scores which are placed into the DPOY score column for each player. This column is auto sorted so that the player with the highest score is at the top.

PLAYER	DPOY S...	TEAM	AGE	GP	W	L	W_PCT	MIN	DEF_RATL	DREB	DREB_PCT
Chris Paul	17.329	PHO	35.0	64	46	18	0.719	31.6	107.8	4.2	0.132
Ben Simm...	17.24	PHI	24.0	53	39	14	0.736	32.6	105.7	5.8	0.171
Jimmy Butler	17.239	MIA	31.0	48	29	19	0.604	33.8	106.5	5.2	0.154
Danny Green	17.198	PHI	33.0	63	42	21	0.667	28.2	107.7	2.9	0.098
Rudy Gobert	17.019	UTA	28.0	64	47	17	0.734	30.9	101.4	10.1	0.285
Nikola Jokic	17.012	DEN	26.0	65	43	22	0.662	35.1	112.6	8.1	0.236
Jrue Holiday	16.687	MIL	30.0	53	36	17	0.679	32.2	108.1	3.3	0.095
Draymond ...	16.611	GSW	31.0	58	30	28	0.517	31.2	109.5	6.2	0.185
Robert Cov...	16.553	POR	30.0	63	36	27	0.571	32.1	114.1	5.8	0.185

Defensive Rating Coefficient: 0.60

Defensive Rating Exponent 0.30

Blocks Coefficient: 1.80

Blocks Coefficient: 0.30

Steals Coefficient: 2.30

Steals Exponent: 1.30

Defensive Win Shares Coefficient: 2.90

Defensive Win Shares Exponent: 2.90

Wins Coefficient: 1.20

Wins Exponent: 0.50

MVP

DPOY

ROTY

MVP-BFS

RESET

DPOY SCORE = 0.60*DEF_RTG^0.30 + 2.30*STEALS^1.30 + 1.80*BLOCKS^0.30 + 2.90*DEF_WS^2.90 + 1.20*WINS^0.50

DPOY SLIDERS

To select the weights for the DPOY score function, use the sliders that are to the right of the table if you wish to adjust how player statistics should be reflected in an DPOY candidate.

Defensive Rating Coefficient: 0.60

Defensive Rating Exponent 0.30

Blocks Coefficient: 1.80

Blocks Coefficient: 0.30

Steals Coefficient: 2.30

Steals Exponent: 1.30

Defensive Win Shares Coefficient: 2.90

Defensive Win Shares Exponent: 2.90

Wins Coefficient: 1.20

Wins Exponent: 0.50

DPOY SCORE FUNCTION

The DPOY SCORE function takes the weights from the sliders and changes the label of present in the frame, so that the user can see how all the weights apply.

$$\text{DPOY SCORE} = 0.60 \cdot \text{DEF_RTG}^{0.30} + 2.30 \cdot \text{STEALS}^{1.30} + 1.80 \cdot \text{BLOCKS}^{0.30} + 2.90 \cdot \text{DEF_WS}^{2.90} + 1.20 \cdot \text{WINS}^{0.50}$$

ROTY

The ROTY predictor screen will appear like this with initial weights on the sliders set. These sliders can be changed and the weight changes will be reflected on the sliders and the ROTY score function. These values will compute new ROTY Scores which are placed into the ROTY score column for each player. This column is auto sorted so that the player with the highest score is at the top.

PLAYER	ROTY S.	TEAM	AGE	GP	W	L	W_PCT	MIN	FGM
Anthony Ed...	40.676	MIN	19.0	65	20	45	0.308	31.7	6.7
LaMelo Ball	38.58	CHA	19.0	44	22	22	0.5	28.7	5.8
Tyrese Hall...	32.701	SAC	21.0	58	25	33	0.431	30.1	5
Jae'Sean T...	30.399	HOU	25.0	65	16	49	0.246	29.4	4.5
Cole Anthony	28.447	ORL	20.0	40	13	27	0.325	27.1	4.5
Killian Hayes	15.63	DET	19.0	21	6	15	0.286	24.1	2.3

Points Coefficient: 1.40

Points Exponent: 1.00

Rebounds Coefficient: 0.90

Rebounds Exponent: 0.70

Steals Coefficient: 1.00

Steals Exponent: 1.20

Assists Coefficient: 0.90

Assists Exponent: 1.10

Blocks Coefficient: 0.80

Blocks Coefficient: 1.30

Wins Coefficient: 0.90

Wins Exponent: 0.70

MVP

DPOY

ROTY

MVP-BFS

RESET

ROTY SCORE = 1.40*POINTS^1.00 + 0.90*ASSISTS^1.10 + 0.90*REBOUNDS^0.70 + 0.80*BLOCKS^1.30 + 1.00*STEALS^1.20 + 0.90*WINS^0.70

ROTY SLIDERS

To select the weights for the ROTY score function, use the sliders that are to the right of the table if you wish to adjust how player statistics should be reflected in an ROTY candidate.

Points Coefficient: 1.40

Points Exponent: 1.00

Rebounds Coefficient: 0.90

Rebounds Exponent: 0.70

Steals Coefficient: 1.00

Steals Exponent: 1.20

Assists Coefficient: 0.90

Assists Exponent: 1.10

Blocks Coefficient: 0.80

Blocks Coefficient: 1.30

Wins Coefficient: 0.90

Wins Exponent: 0.70

ROTY SCORE FUNCTION

The ROTY SCORE function takes the weights from the sliders and changes the label of present in the frame, so that the user can see how all the weights apply.

ROTY SCORE = $1.40 * \text{POINTS}^{1.00} + 0.90 * \text{ASSISTS}^{1.10} + 0.90 * \text{REBOUNDS}^{0.70} + 0.80 * \text{BLOCKS}^{1.30} + 1.00 * \text{STEALS}^{1.20} + 0.90 * \text{WINS}^{0.70}$

MVP-BFS

Select a former MVP winner from each of the 2 lists and press find path to generate the shortest path of teammates that will go from one MVP to the other. Without the playerGraph.ser file, the MVP-BFS will not be able to run until the graph is fully scrapped from <https://basketball.realmgm.com/>. Therefore, we have included the playerGraph.ser file so that the user will not have to wait for the graph to be built to be able to use the MVP-BFS functionality. However, all other aspects of the program will be full functionally because of the MVP-BFS graph being built on another thread.

SELECT PLAYER 1

Derrick Rose
Bill Russell
Tim Duncan
Stephen Curry
Bob McAdoo
Russell Westbrook
Wes Unseld
Julius Erving
Bill Walton
Larry Bird
Shaquille O'Neal
Dave Cowens
Giannis Antetokounmpo
Dirk Nowitzki
Kevin Garnett
Hakeem Olajuwon
Wilt Chamberlain
Karl Malone
Allen Iverson
LeBron James
Magic Johnson
Kevin Durant
Bob Cousy
James Harden
Kareem Abdul-Jabbar
Kobe Bryant
David Robinson
Bob Pettit
Charles Barkley
Steve Nash
Michael Jordan
Moses Malone
Willis Reed
Oscar Robertson

SELECT PLAYER 2

Derrick Rose
Bill Russell
Tim Duncan
Stephen Curry
Bob McAdoo
Russell Westbrook
Wes Unseld
Julius Erving
Bill Walton
Larry Bird
Shaquille O'Neal
Dave Cowens
Giannis Antetokounmpo
Dirk Nowitzki
Kevin Garnett
Hakeem Olajuwon
Wilt Chamberlain
Karl Malone
Allen Iverson
LeBron James
Magic Johnson
Kevin Durant
Bob Cousy
James Harden
Kareem Abdul-Jabbar
Kobe Bryant
David Robinson
Bob Pettit
Charles Barkley
Steve Nash
Michael Jordan
Moses Malone
Willis Reed
Oscar Robertson

Find Path

MVP	DPOY
ROTY	MVP-BFS
RESET	

MAKE A PATH