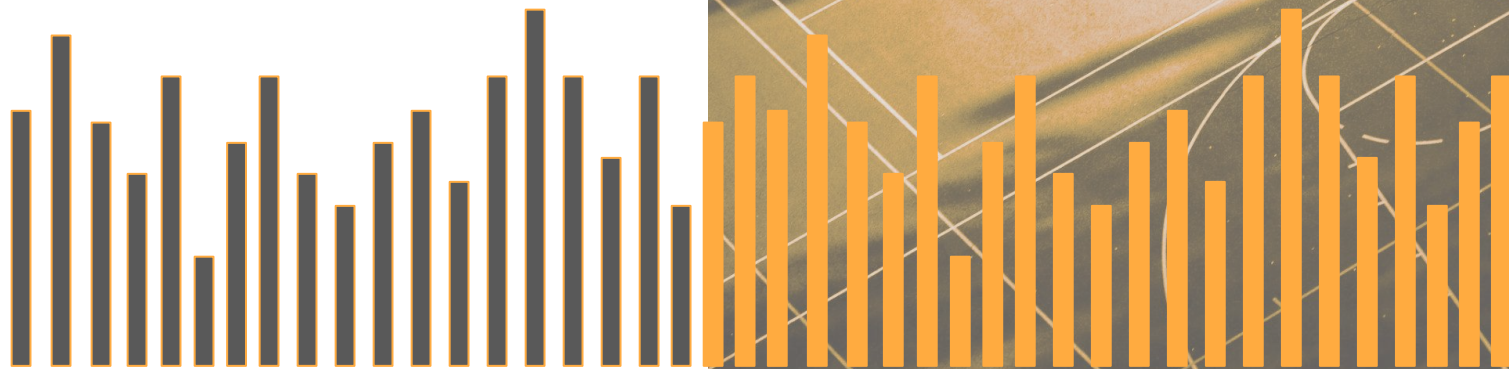


# NET POSITIVE

BIG BASKETBALL DATA

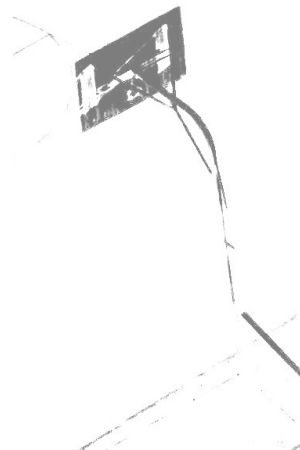


# What?

measures performances

transforms data into value

compares players



# Why?

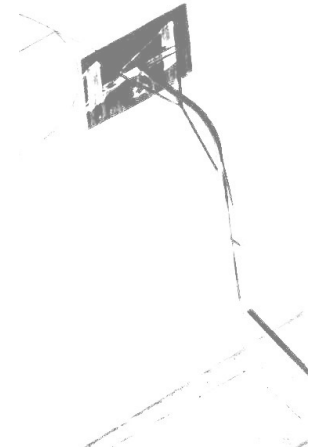
Data analytics common practice in the NBA

Existing solution insufficient and outdated

Context-enriched data

Beat the 75% accuracy

Data analytical / Data scientific approach

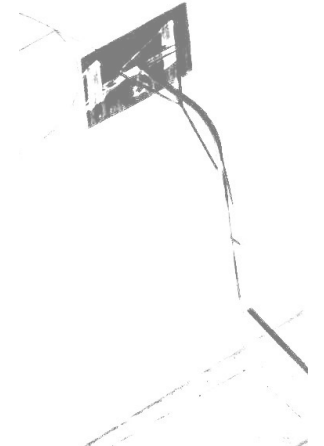


# For whom?

Basketball enthusiasts / Fans

Sport journalists

Sport Marketing



# How?

Data records of last eight seasons (2nd Basketball Bundesliga)

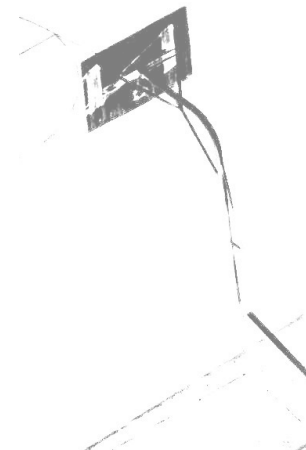
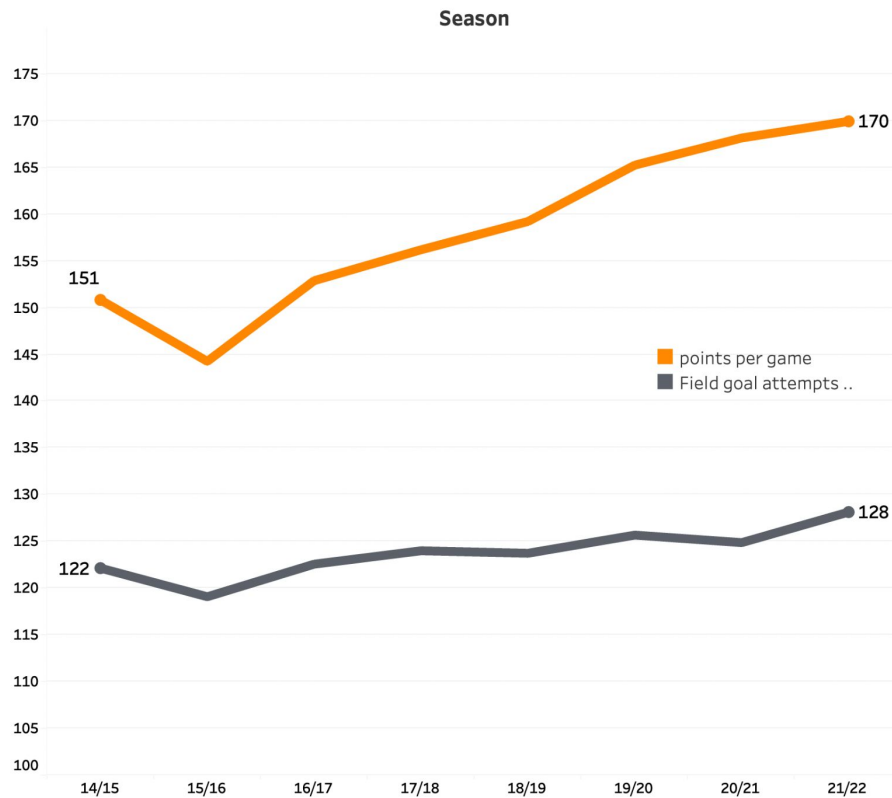
2214 Games      1132 different players      1.251.617 single data points

## Game summary:

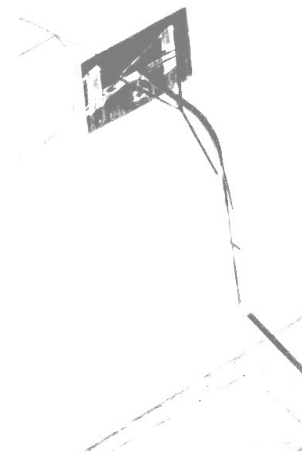
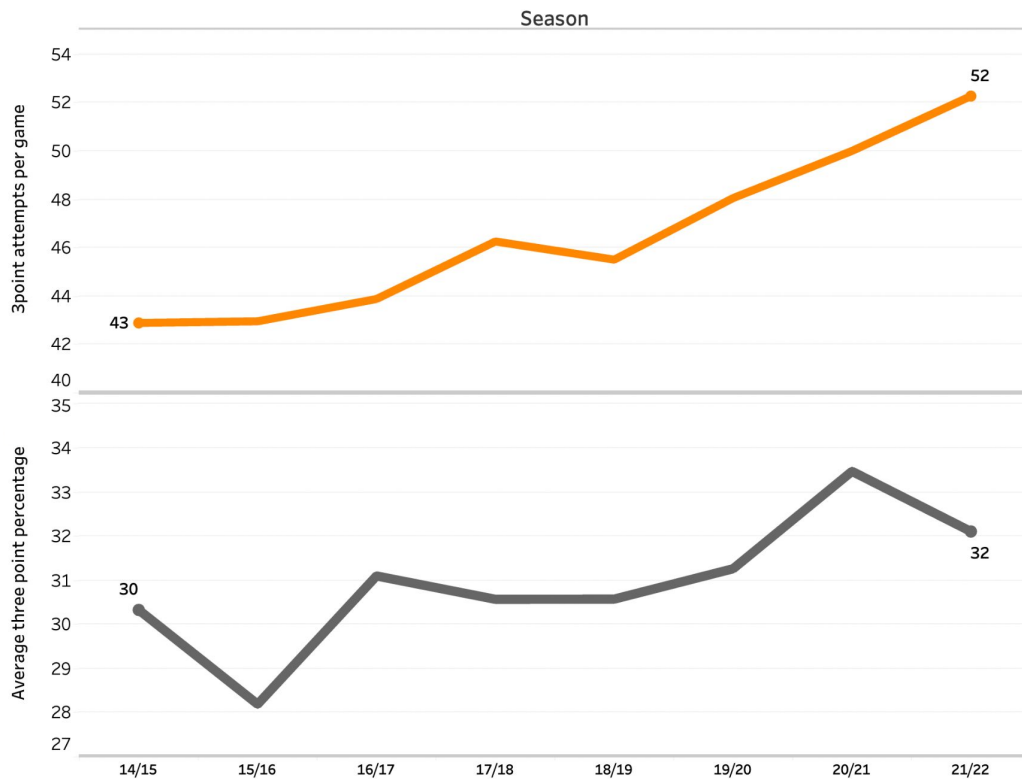
Starting 5, P: Points, F: Fouls, Min: Spielzeit, FT: Free Throw, AS: Assists, RB: Rebounds, BL: Blocks, ST: Steals, TO: Turnover, EF: Effektivität, \*-A-R: Punkteart - Attempts - Rate, Topscorer

SPIELER	▲	MIN	2P-A-R	3P-A-R	FG-A-R	FT-A-R	P	AS	R: O-D-T	F	BL	ST	TO	EF
#0 Robert Albert Montgomery Jr.		04:41	0 - 0 - 0%	0 - 0 - 0%	0 - 0 - 0%	0 - 0 - 0%	0	0	1 - 0 - 1	2	0	0	0	1
#2 Tyler Nelson		20:28	4 - 7 - 57%	4 - 10 - 40%	8 - 17 - 47%	2 - 2 - 100%	22	1	0 - 3 - 3	2	1	1	0	19
#3 Jose Gabriel de Oliveira Neto		11:05	0 - 2 - 0%	0 - 1 - 0%	0 - 3 - 0%	0 - 0 - 0%	0	1	0 - 2 - 2	2	0	0	1	-1
#4 Svante Schmundt		00:00	0 - 0 - 0%	0 - 0 - 0%	0 - 0 - 0%	0 - 0 - 0%	0	0	0 - 0 - 0	0	0	0	0	0
#5 Christopher John Carter		22:22	2 - 5 - 40%	1 - 4 - 25%	3 - 9 - 33%	3 - 4 - 75%	10	4	0 - 3 - 3	3	0	0	2	8
#14 Jordan Jamal Roland		19:32	2 - 3 - 67%	1 - 3 - 33%	3 - 6 - 50%	0 - 0 - 0%	7	0	0 - 1 - 1	1	0	0	1	4
#18 Till Gloger		28:55	9 - 10 - 90%	0 - 0 - 0%	9 - 10 - 90%	3 - 4 - 75%	21	2	3 - 2 - 5	3	0	0	1	25
#19 Sid-Marlon Theis		29:42	1 - 2 - 50%	0 - 2 - 0%	1 - 4 - 25%	0 - 0 - 0%	2	2	1 - 7 - 8	2	0	1	1	9
#21 Michael Jost		10:18	0 - 0 - 0%	0 - 1 - 0%	0 - 1 - 0%	0 - 0 - 0%	0	0	0 - 2 - 2	1	0	0	1	0
#22 Nijal Eman Pearson		35:19	5 - 9 - 56%	0 - 2 - 0%	5 - 11 - 45%	3 - 4 - 75%	13	3	0 - 1 - 1	1	1	3	1	13
#35 Bradley Alexander Loesing		17:38	0 - 3 - 0%	0 - 0 - 0%	0 - 3 - 0%	2 - 2 - 100%	2	4	0 - 2 - 2	1	0	0	0	5
Teamaktionen									7	0			2	5
Gesamt		200:00	23 - 41 - 56%	6 - 23 - 26%	29 - 64 - 45%	13 - 16 - 81%	77	17	35	18	2	5	10	88

# Points per game



# 3 Point Shot Development



# Considerations

## Different positions

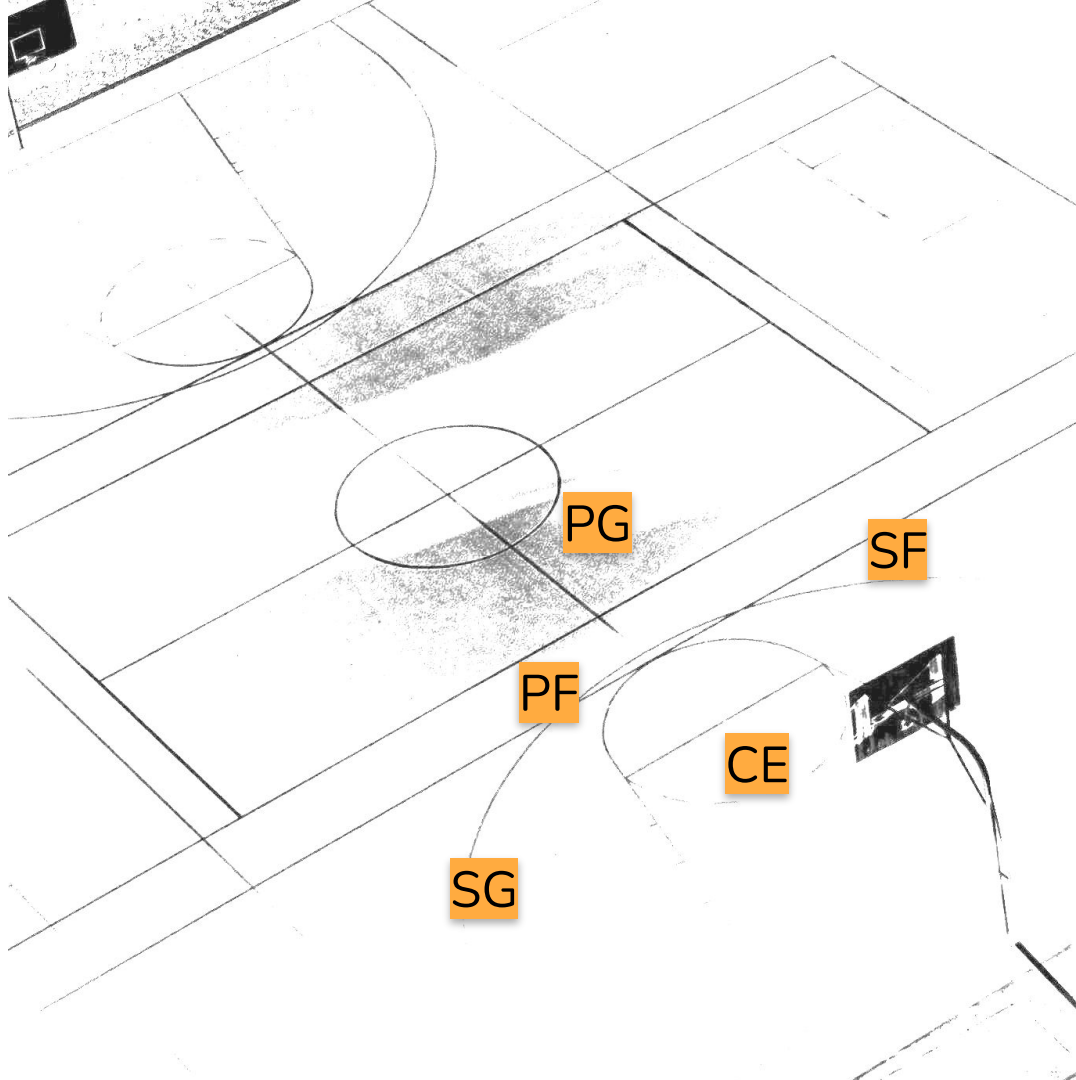
**CE** Center

**PG** Point Guard

**SG** Shooting Guard

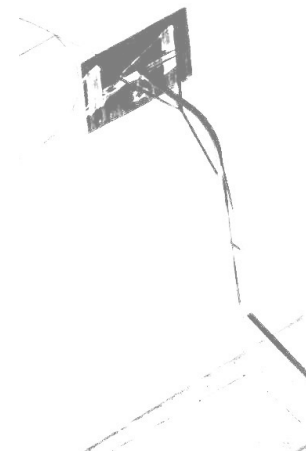
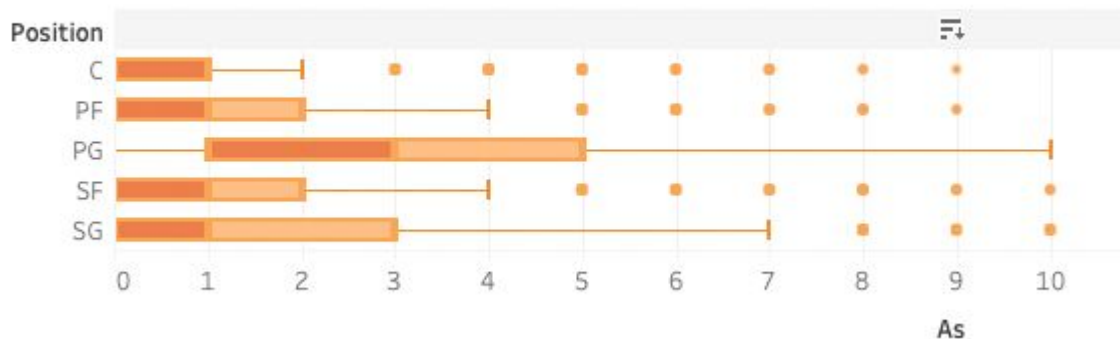
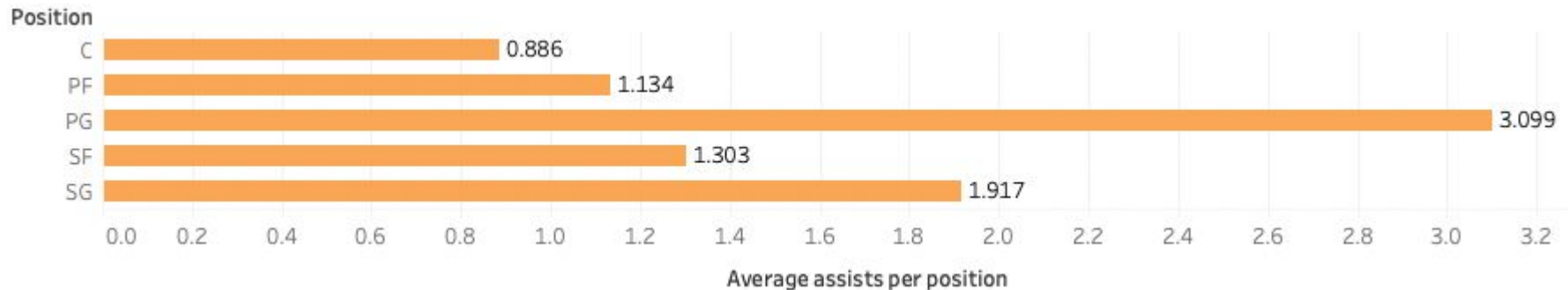
**PF** Power Forward

**SF** Small Forward





# Position Analysis - Example : Assists



# The Score

7 factors:

Points (+)

EFG (Effective Field Goal Ratio) (+)

Assists (+)

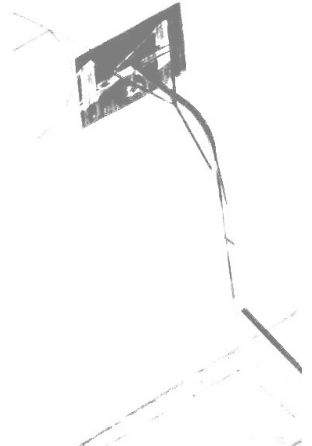
Rebounds (+)

Steals & Blocks (+)

Turnovers (-)

Playing time (+)

=



# The Formula

$$Score_{Player} = \left( \sum_{i=1}^n W_i \cdot \frac{X_i - X_{PosMin}}{X_{PosMax} - X_{PosMin}} \right) \cdot \frac{T_{Play}}{T_{Game}}$$

## Game Stats Till Gloger:

21 points

0.75 EFG

2 assists

5 rebounds

0 steal & block

1 turnover

28:55 min played



0.91(points)

0.59 (EFG)

1.0 (assists)

0.36 (rebounds)

0.0 (steals & blocks)

0.75 (turnovers)

0.72 (time)

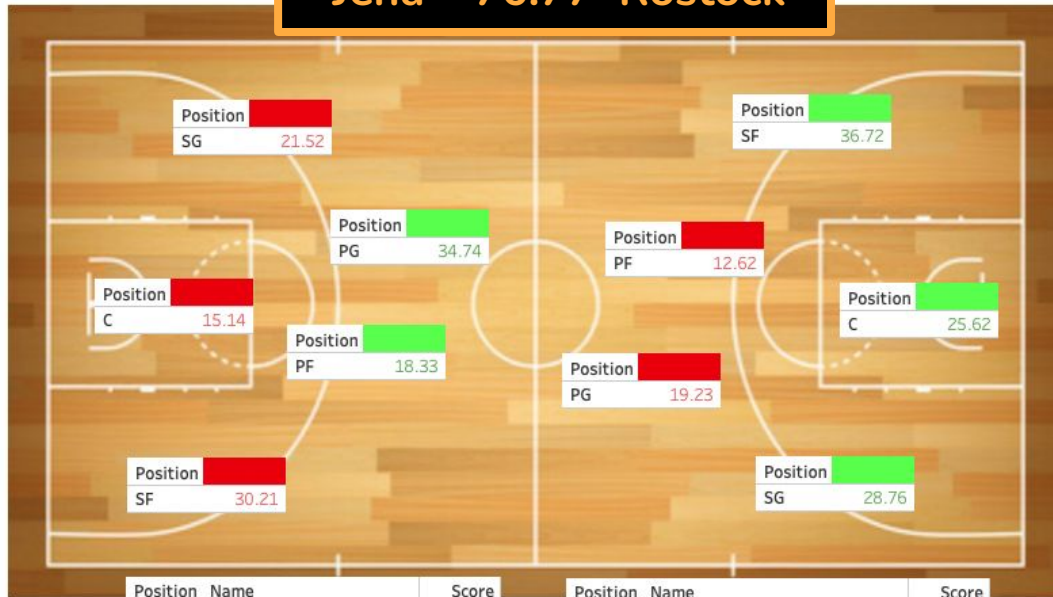


45.02



# Dashboard

Jena 76:77 Rostock



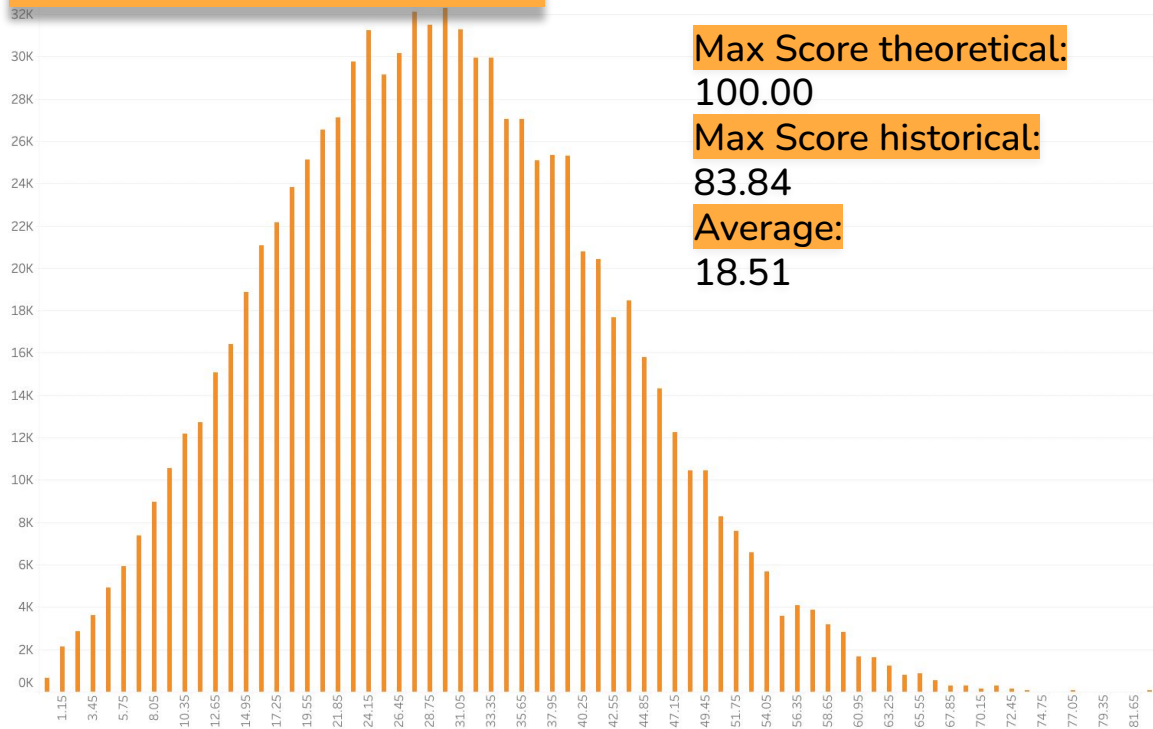
Position	Name	Score
C	Alexander James Herrera	29.67
	Rafael Alberton Rodrigues	0.60
PF	Clinton Daniel Chapman	9.01
	Julius Wolf	29.27
	Stephan Haukohl	16.71
PG	Rayshawn Laron Simmons	36.09
	Vuk Radojicic	33.39
SF	Brandon Omar Thomas	30.21
SG	Jonathan Malu Kazadi Mu..	24.67
	Nico Brauner	18.37
Grand Total		22.80



Position	Name	Score
C	Jose Gabriel de Oliveira Neto	6.23
	Till Gloger	45.02
PF	Michael Jost	5.12
	Robert Albert Montgomery Jr.	2.75
	Sid-Marlon Theis	30.00
PG	Bradley Alexander Loesing	14.45
	Christopher John Carter	22.10
	Jordan Jamal Roland	21.14
SF	Nijal Eman Pearson	36.72
SG	Tyler Nelson	28.76
Grand Total		21.23

# Talking points

## Score distribution



## Limitations of our score

- Favors players with strong endurance
- Favors positions with longer playing times
- Score bias when games go into overtime
- Separate formula for Team-Scores needed

## Outlook

Refining Score by adding more data  
(more seasons, different leagues)

Development of a team based score

Development of a score prediction  
algorithm

## One last thing:



*Game, Set and Match. NetPositive*



SCAN ME

For more information and future updates  
visit our GitHub:

[https://github.com/Net-Positive/Net\\_Positive](https://github.com/Net-Positive/Net_Positive)