

Style of Play in the NBA

The Data Revolution has happened. How are teams adjusting their game plans?

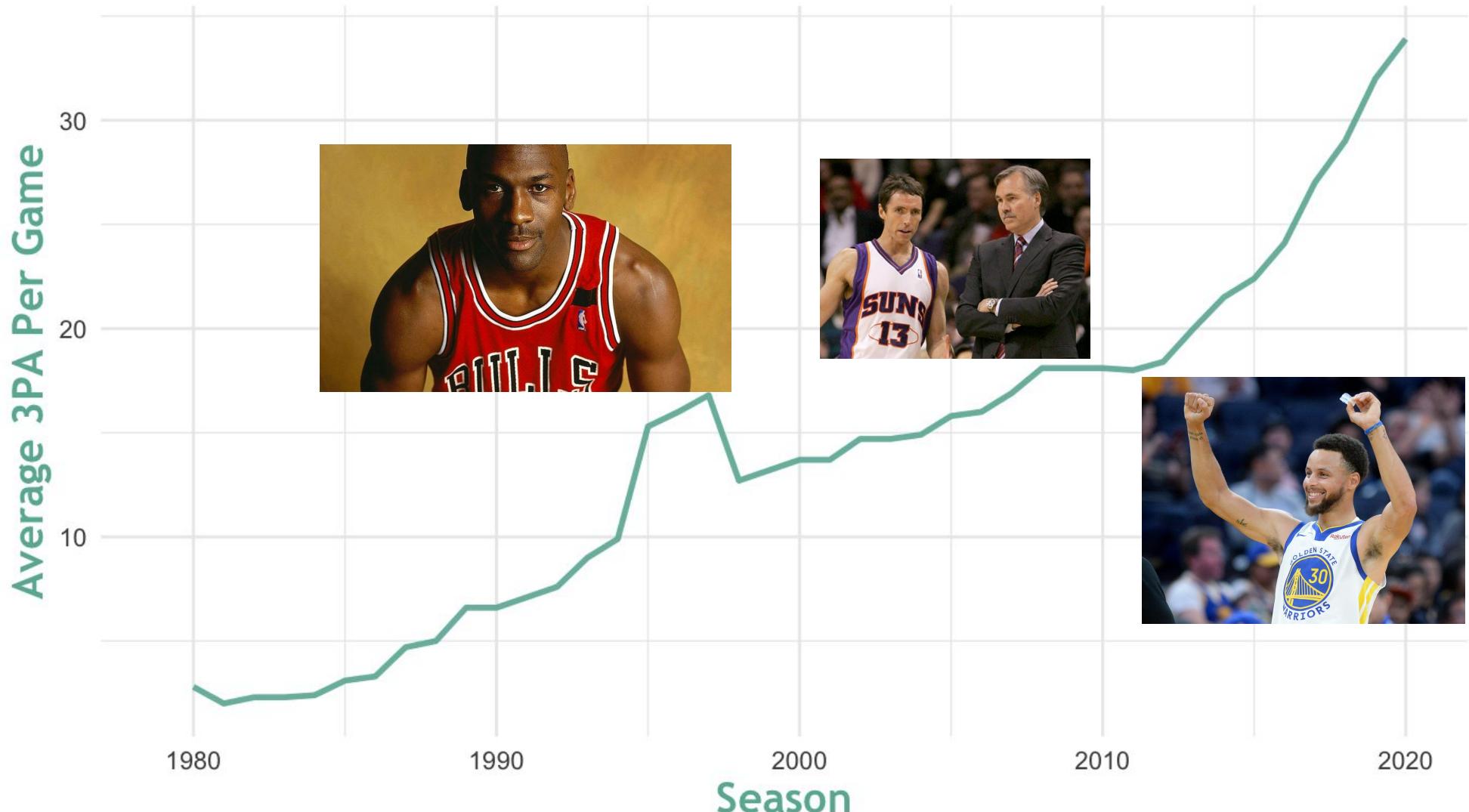


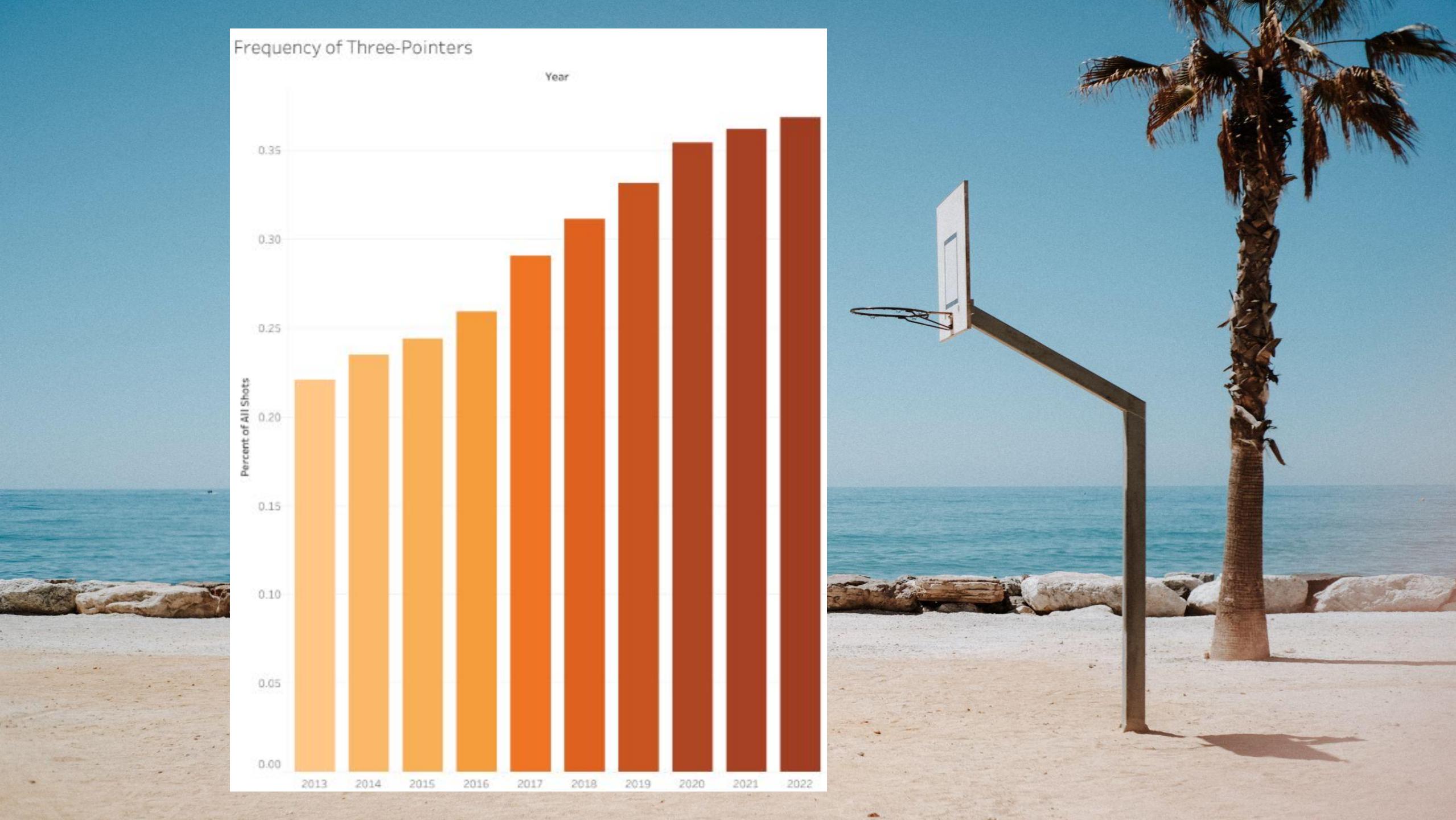
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NBA Three-Point Shots Attempted





Frequency of Three-Pointers

Year

0.35

0.30

0.25

0.20

0.15

0.10

0.05

0.00

2013

2014

2015

2016

2017

2018

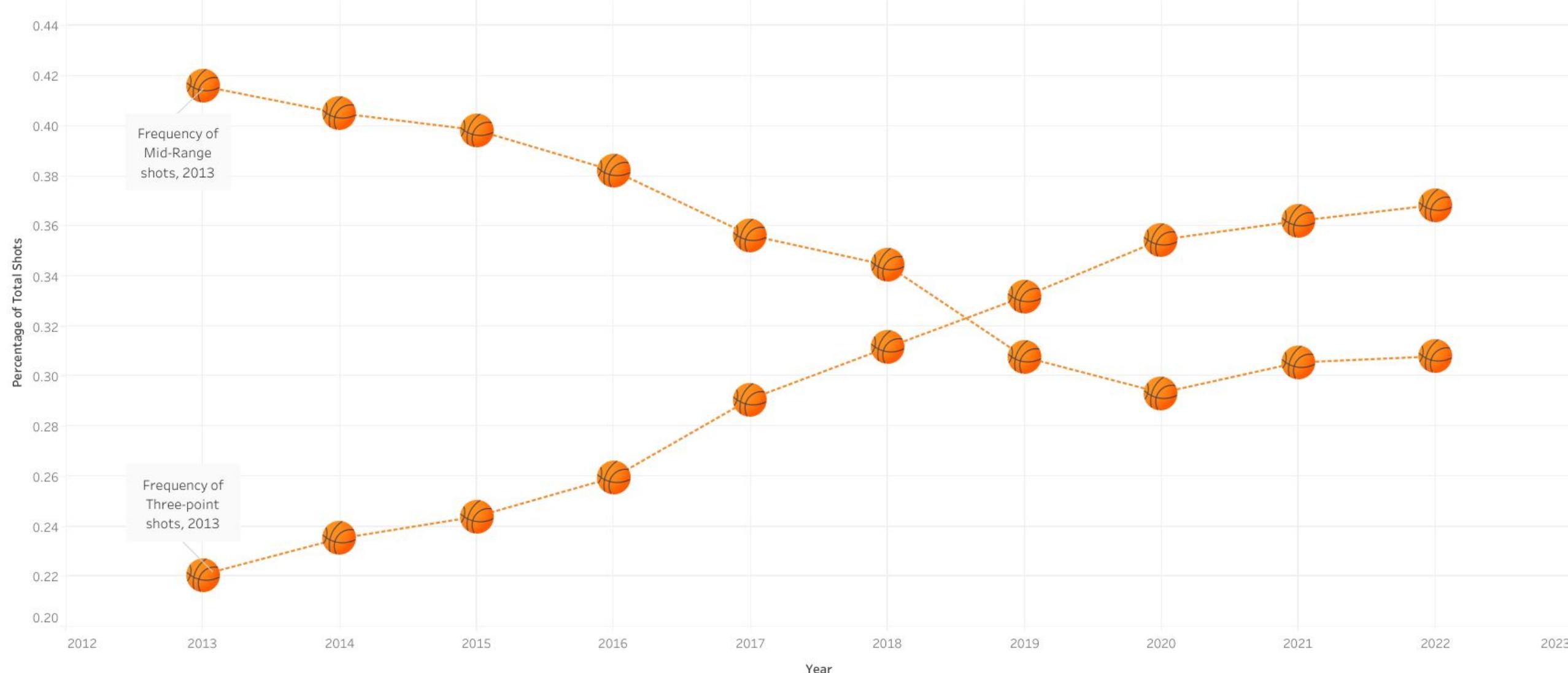
2019

2020

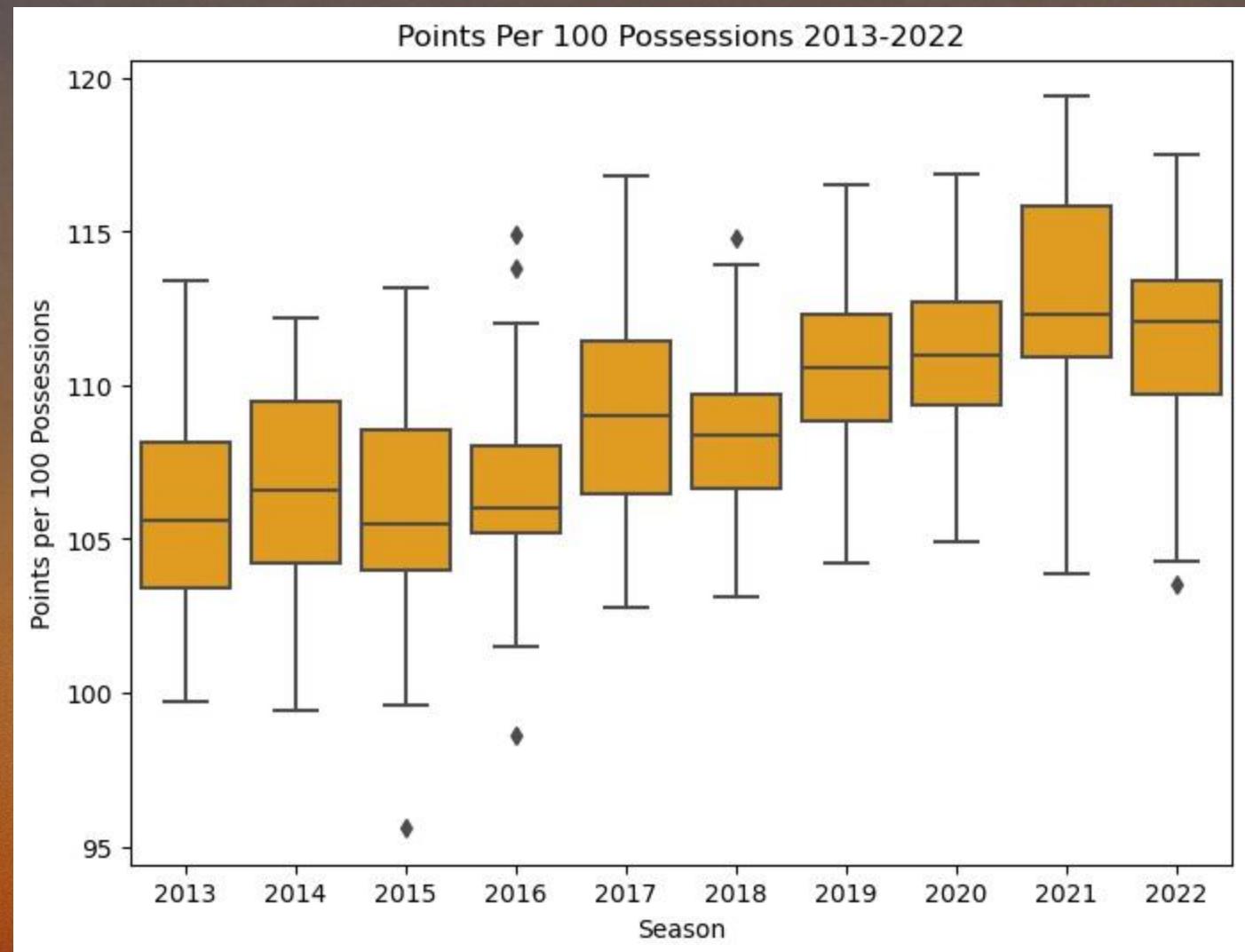
2021

2022

Frequency- Three-Pointers vs Midrange Shots



Efficiency, Efficiency, Efficiency



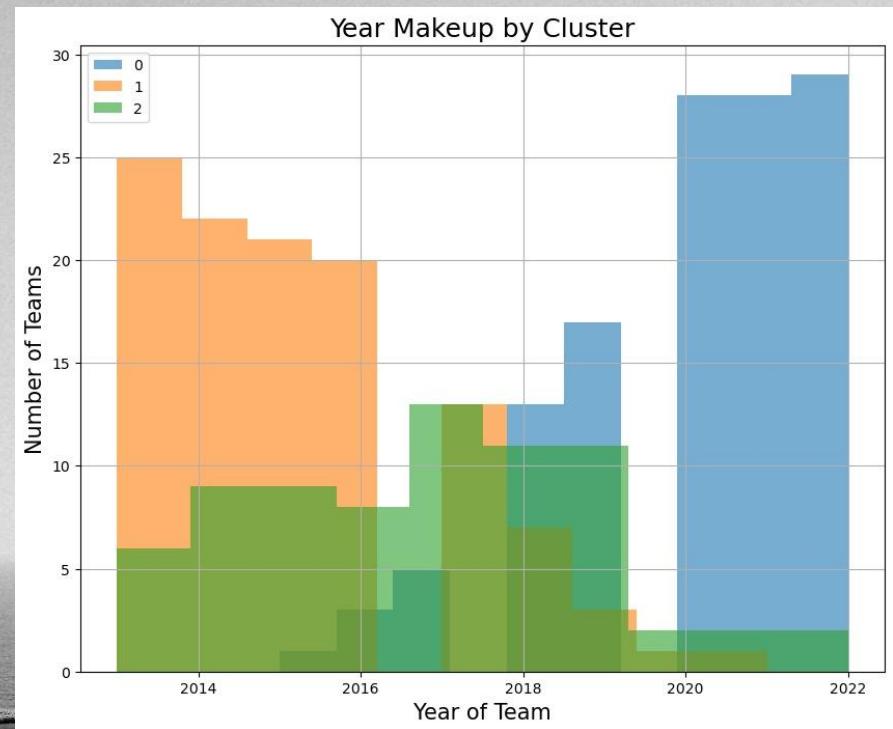
Clustering Model Features

- Percent of Plays in the Halfcourt
- Offensive Rebound Percent
- Frequency of Transition
- Frequency of Shots at the Rim
- Frequency of Short Mid-Range

- Frequency of Long Mid-Range
- Frequency of All Mid-Range*
- Frequency of Corner Threes
- Frequency of Non-Corner Threes
- Frequency of All Threes*



	Cluster 0	Cluster 1	Cluster 2
Year	2020	2015	2017
Frequency of Threes	36.0%	23.9%	28.0%
Frequency of Mid-range	29.8%	41.6%	34.0%
Offensive Rebound Rate	25.7%	27.6%	28.1%



Frequency of Threes vs Midrange, by Cluster



A photograph of a basketball hoop from a low angle, looking up. The hoop is orange and the net is white. The background is a clear blue sky with a few wispy clouds.

Year Outliers

Cluster 0:

- 2015 Atlanta Hawks
- 2016 Cleveland Cavaliers
- 2016 Philadelphia 76ers

Cluster 1:

- 2020 and 2021 San Antonio Spurs

Cluster 2:

- 2022 Toronto Raptors
- 2022 Memphis Grizzlies

Adding in Performance

	Cluster 0	Cluster 1	Cluster 2
Made Playoffs	57.0%	51.0%	51.0%
Made Finals	8.7%	2.7%	10.0%
Won Champions hip	3.2%	1.8%	5.7%

Conclusions

- A huge majority of teams have shifted their style of play in similar ways.
- There are signs the analytics gold rush may be leveling off.
- You can still win at the highest level playing different styles. Data analytics have not changed that.



Next Steps

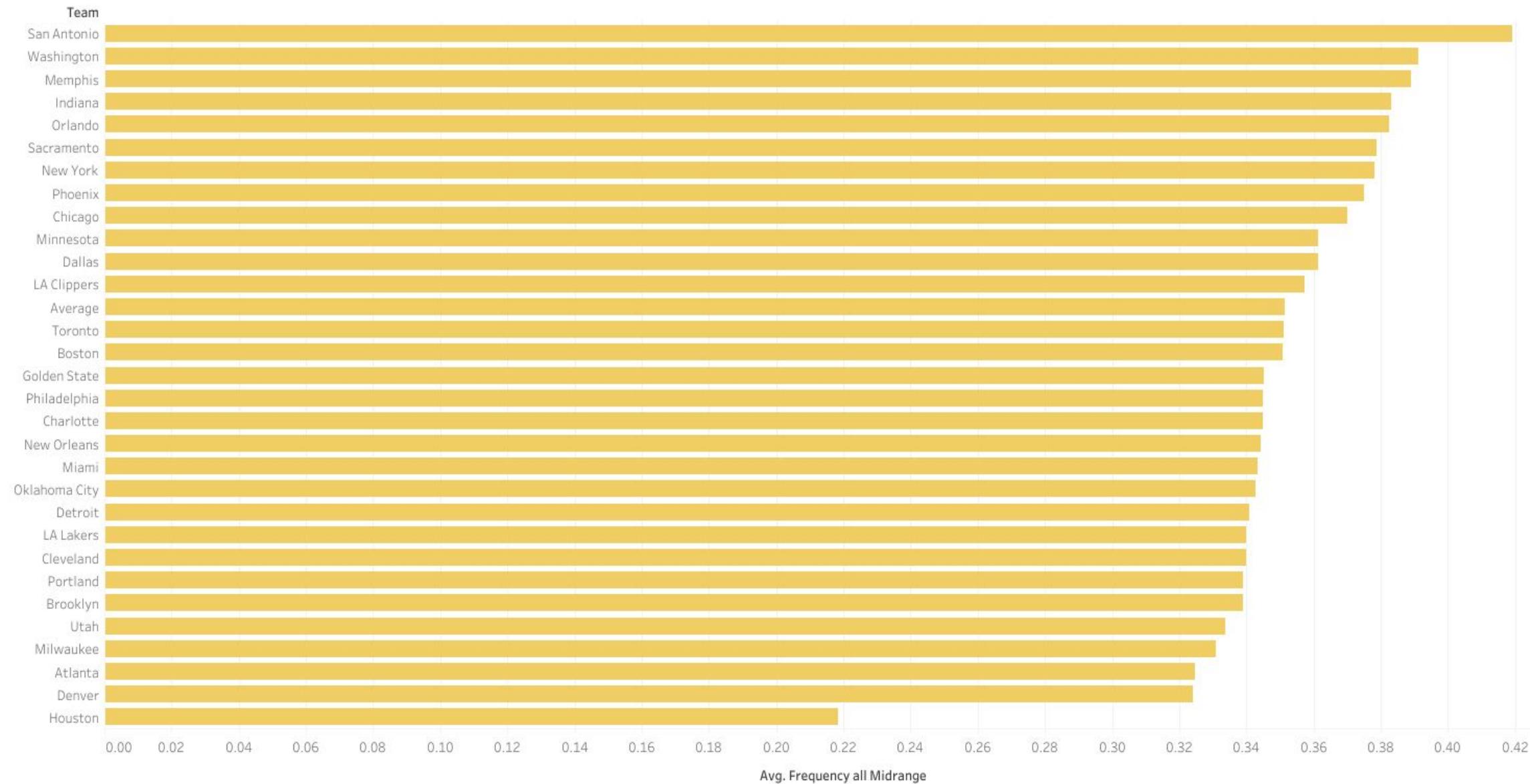
- Time series model to predict peak average three point frequency
- Investigate roster composition. Where have you gone Dennis Rodman?
- Similar clustering analysis for defensive statistics



**THANK
YOU**



Average Frequency of Midrange Shots



Average Frequency of Midrange Shots

