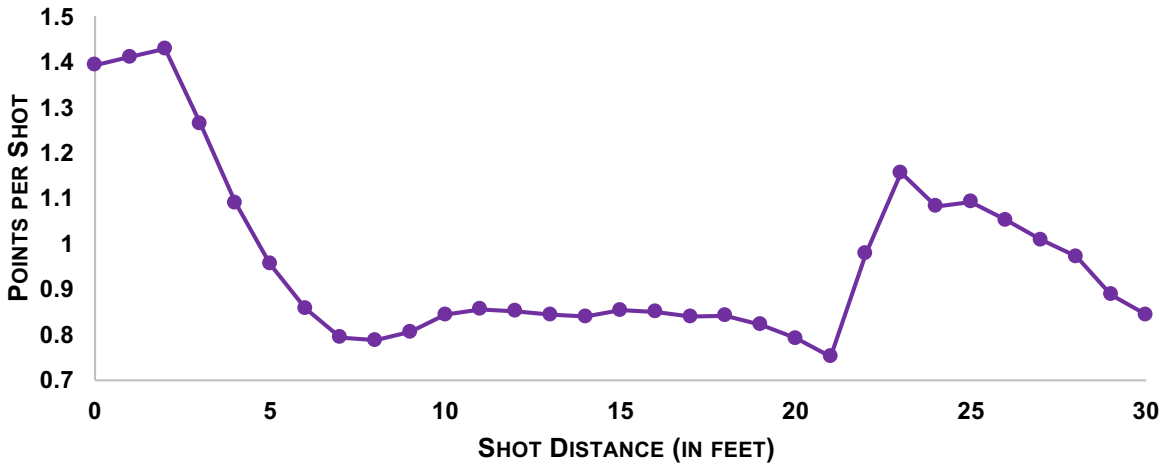
# NBA Shot Distance vs Efficiency
## (Pts per Shot)

September 2022

**Objective: Determine efficiency based on shot distance (Second Spectrum data) throughout the league over the past 5 years. Where is the efficiency drop-off?**

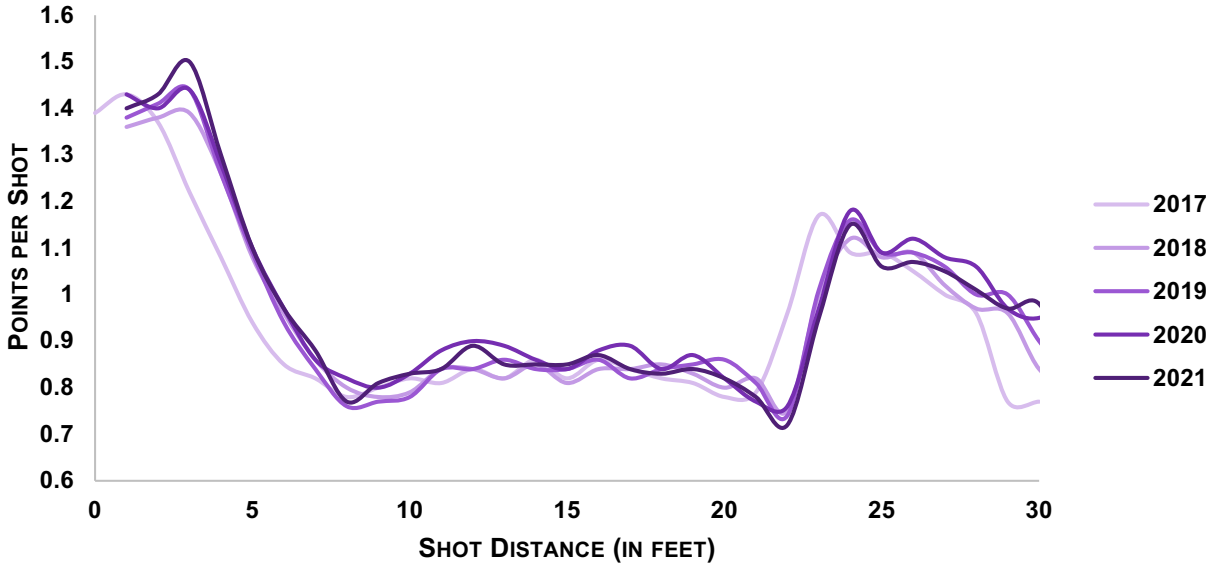
### Average Points per Shot by Distance




The graph above shows Pts per Shot (PPS) across the last 5 seasons.

- You can see that shots producing the highest points per shot are either < 5 feet from the goal or 3 point shots, with obvious decline in efficiency in the midrange
  - 4 feet is a good "cutoff point" for rim shots – shots farther than 4ft average ~1 PPS
- Interestingly, shot efficiency dips at the 7-8 foot mark, leading to the conclusion that you'd rather take a set midrange shot than a floater in traffic

### Points per Shot by Distance by Year




As shown in the graph above, the trend of PPS based on the distance of the shot has remained relatively consistent over the last 5 years.

- PPS peaks 3-4 feet from the goal and again between 23-24 feet.
- There were no major changes based on the pandemic year, though the 2017-18 season had peaks closer to the rim than the other 4 seasons (potentially due to data provider inconsistencies)