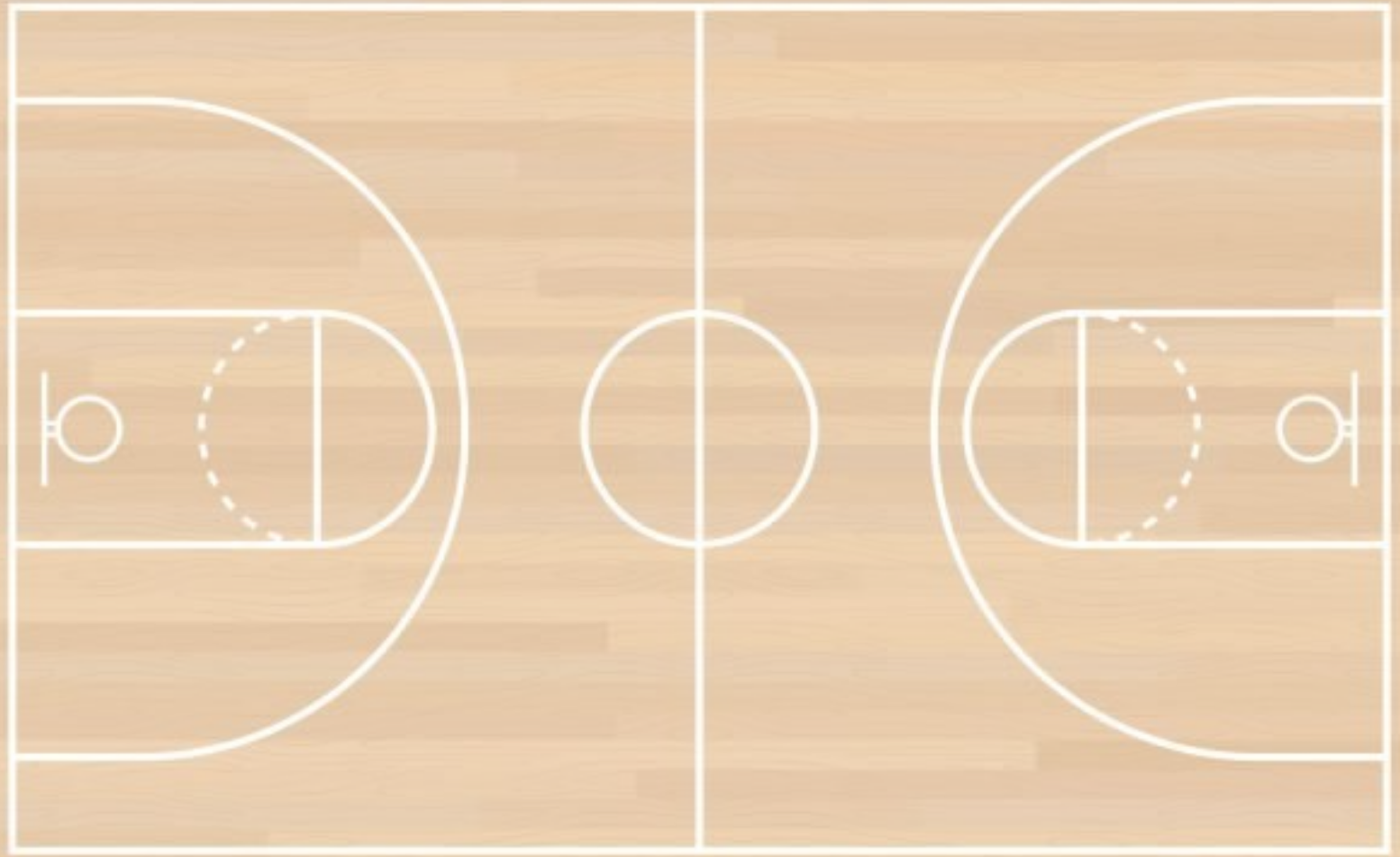


# Last-Minute Magic: Analyzing NBA Shot Success

by
Maddalena
Torricelli

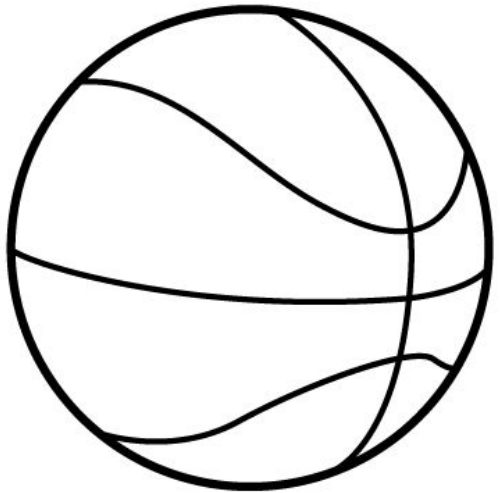
# DATA

Info on all the NBA matches from the 2010 to the 2018 season included

. position of the shot

. made/missed

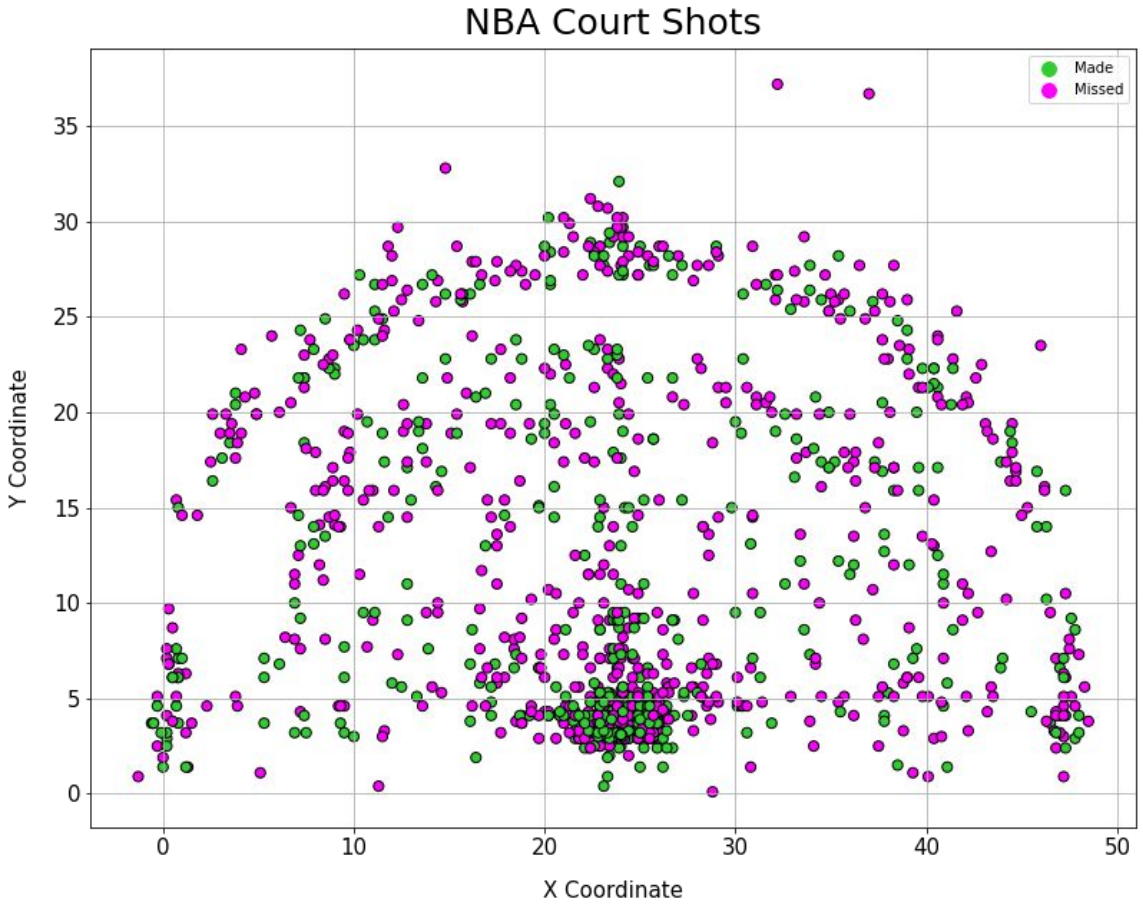
. time remaining in the quarter



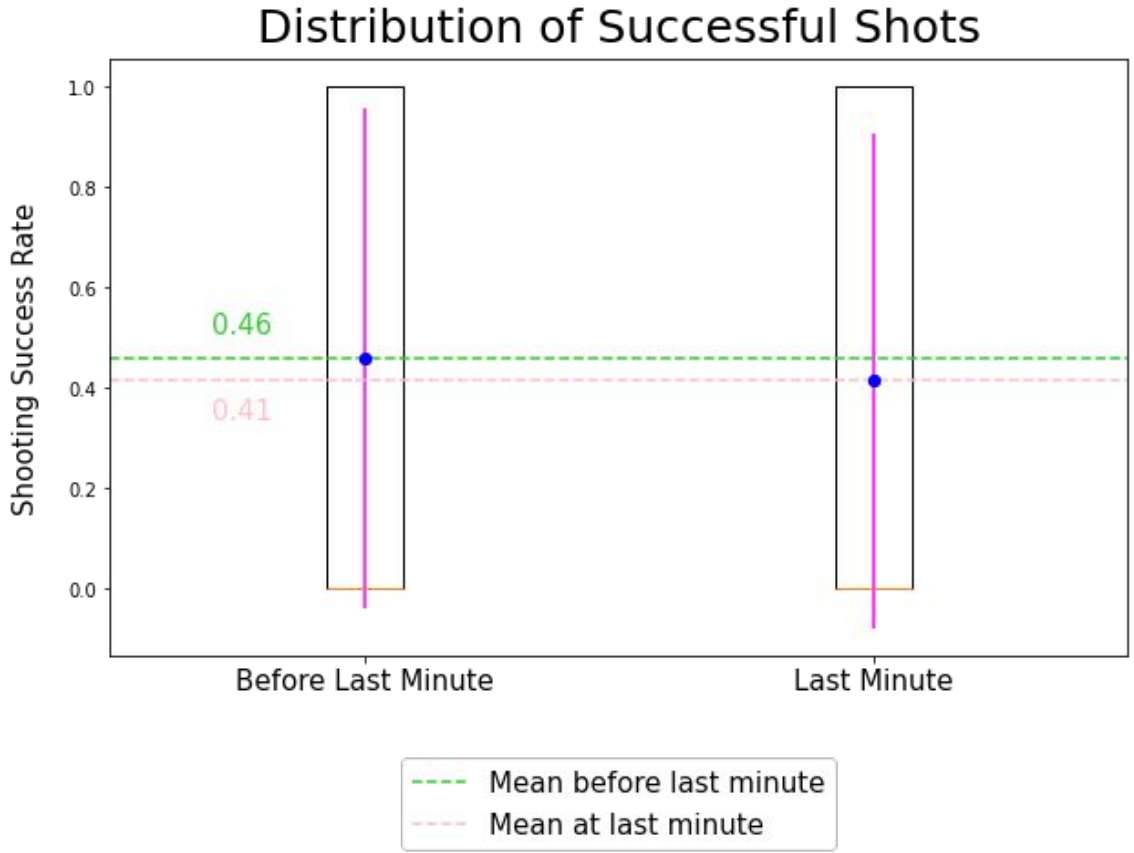
Source: Kaggle

Goal: analyze the impact of the final minute of each quarter on shot success.

# NORMAL DAY IN NBA SCHEDULE: NOV 9TH, 2015



# TIME-PRESSURE SHOOTING SUCCESS: GENERAL OVERVIEW




## Statistical Results and Interpretations

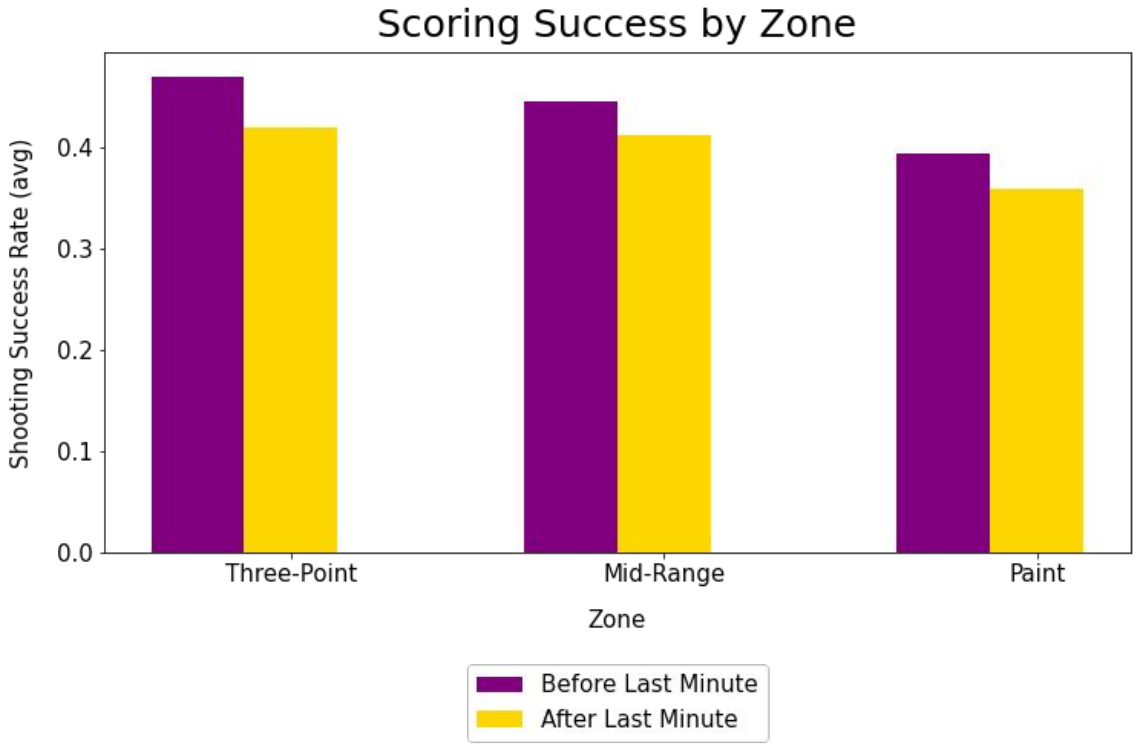
T-statistic: *38.46 with pvalue 0*

Interpretation: T-test shows there is a significant difference between the two distributions.

KL Divergence: *0.042*

Interpretation: it quantifies how one distribution diverges from another. A value of 0.042 indicates that there is a small divergence between the two distributions, suggesting that while there is a statistical difference, the distributions are relatively similar.

# TIME-PRESSURE SHOOTING SUCCESS: IS THIS ZONE DEPENDENT?




## Statistical Results and Interpretations

| ZONE | SHOOTINGE SUCCESS BEFORE/AT LAST MINUTE | | T-STATS pvalue 0 | KL DIV |
|---|---|---|---|---|
| 3-POINT | 0.47 | 0.42 | 36.98 | 0.01 |
| MID-RANGE | 0.44 | 0.41 | 12.85 | 0.00 |
| PAINT | 0.39 | 0.36 | 6.65 | 0.00 |

Statistical tests confirm that shooting success rates are significantly higher before the last minute compared to after in all zones, In the 3-Point zone, this is particularly marked.

# TAKE-HOME MESSAGE

Not neglectable different between shooting success rate before and at the very last minute of each quarter of game

Statistical test confirm this finding for all the zones: 3-points, mid-range and paint

Step forward: can we identify players with similar behaviour when it comes to the endgame?