Jørgen Lund Johannessen – 12th January 2026

Notes on NormalScores

These are the first analysis I've done on NBA stats.

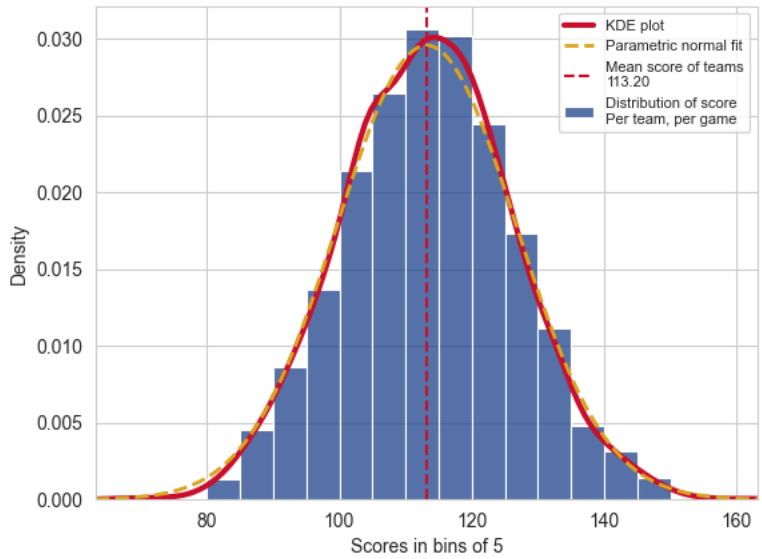
In these files, I test my hypothesis of NBA scores being normally distributed, and home teams generally scoring more than away teams.

These hypotheses may seem obvious, but they acted as a good starting point for statistical analysis of the NBA.

The data is from the Kaggle dataset described in the PullData folder, and I base my analysis on all games in the 2024/2025 season.

The visual results are as follows:

Distribution for all teams:



Visually, we see that the KDE plot is very closely aligned with the parametric normal distribution. Ideally, we would compute the likelihood of the observed data given the parameters of our assumed normal distribution, but that is a task for another time.

For now, it seems to be true that the score of NBA teams in any given game is normally distributed.

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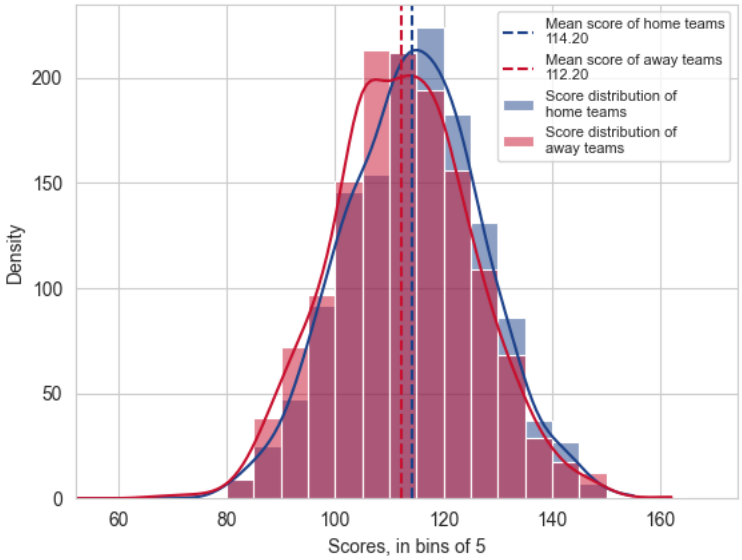
Distribution where home teams and away teams are separated:



As with the previous graph, it visually seems like the distributions of home team scores and away teams scores vary significantly. This would make sense, as having the home court is considered an advantage.

Again, it would be best to calculate the probability of the two different data sets being produced by the same distribution, but that is a task for another time.