**Application of Team Ratings to Sports Betting in the NBA**

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We plan to use preseason odds and regular season results to create an NBA team rating model that can be applied to sports betting. This will extend the SRS concept from the first few lectures, and may comprise a 538-esque ELO model. To create a robust model, we will use data from the past 4 seasons (2017-2021) to train and test our model.

**Data:**

Season Results

<https://www.basketball-reference.com/leagues/NBA_2022.html>

Preseason Win Totals

<https://www.basketball-reference.com/leagues/NBA_2021_preseason_odds.html>

Historical Betting Odds

<https://www.sportsbookreviewsonline.com/scoresoddsarchives/nba/nbaoddsarchives.htm?fbclid=IwAR3HlkEsMaXI3jRK-1fhNEj19DTD4h-wwKhh-UBYp3cZZG4jfsPsJth6Q7w>

Odds Shark for Data Errors in Sports Book Reviews Online

<https://www.oddsshark.com/nba>

**References:**

How Our NBA Predictions Work

<https://fivethirtyeight.com/methodology/how-our-nba-predictions-work/>

Extension of the Elo rating system to margin of victory

<https://www.sciencedirect.com/science/article/pii/S0169207020300157?via%3Dihub&fbclid=IwAR2w_vGWoP3ex4cVQFM58bsDVbuZ4XSZ_z1W-nacGzyxeNjJwpk7OnRUSLc>

The Betting Odds Rating System: Using soccer forecasts to forecast soccer

<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0198668#sec001>