

Group 19 Project Proposal: NBA Win Rate and Betting Odds Predictions

Problem Statement:

Our project is to analyze historical NBA players and teams' data to predict future team win rates and decide which NBA team to bet for any given match to obtain optimal payout. We make these predictions based on each team's player statistics to predict how likely each team will win then compare it with the betting odds to determine how much and which team to bet on. This has a major real world implication because sports betting is a lucrative industry that has real monetary gains and losses, so the ability to predict the winning team can result in monetary gains.

Dataset:

NBA dataset: <https://www.basketball-reference.com/leagues/>

Betting odds: <https://www.oddsportal.com/basketball/usa/nba/results/>

The data that we collect from the NBA have information containing detailed player stats for each team as well as all the matches for any given NBA season. These statistics help us predict how likely each team will win. The betting odds website has the historical betting odds for each match, which we will use to compare with our prediction of how likely each team wins and then decide which team to bet based on winning odds.

Project Plan:

Steps	Estimated Time	Team Member
Scrape and clean data	1 week	Players: Jeffrey, Yidi. Bets: Weixin, Jiachen
Calculate team stats	1 week	Players: Jeffrey, Yidi. Teams: Weixin, Jiachen
Predict team wins	1 week	All
Recommend bets	1 week	All
Visualize data	1 week	Graphs: Jeffrey, Jiachen. Presentation: Yidi, Weixin