March Madness is one of the most unpredictable tournaments in sports, and each year fans are left wondering whether their favorite team overachieved or underperformed. The 2024-2025 Wisconsin Badgers had a strong regular season, earning a No. 3 seed in the NCAA tournament, but were eliminated early by BYU. This led many fans and analysts to wonder just how far Wisconsin was expected to advance.

To answer this, we built a statistical model using results from every Division I men's basketball game during the 2024-2025 season. Using a Bradley-Terry model, we estimated how strong each team was relative to every other team. Essentially, the Bradley-Terry model takes all head-to-head games and learns how likely one team is to beat another, based on past results. The higher a team's "ability" score, the more often they are expected to win against evenly matched opponents.

Once we had these team strengths, we simulated the entire 2025 NCAA Tournament 10,000 times to estimate how often each team would advance to each round. To improve accuracy, we also incorporated additional factors such as offensive rating, defensive rating, net rating, strength of schedule, and home versus away performance, giving a fuller picture of each team's performance during the season.

The results showed that Wisconsin reached the Sweet Sixteen in about 41% of simulations but made the championship in only 3.3% of runs. Compared to other seasons, this year's tournament truly displayed the dominance of the No. 1 seeds. All four reached the Final Four, reflecting just how wide the gap was between top-tier teams and mid-seeded teams. The No.1 seeds (Florida, Auburn, Duke, and Houston) consistently emerged as top contenders in our model, with them combining to win nearly 48% of all simulated championships.

These results show that Wisconsin's early exit, while disappointing, was well within realistic expectations. Our model gives coaches, fans, and analysts a data-driven way to understand expectations versus outcomes, and to see which teams were truly positioned for deep tournament runs.

Looking forward, future improvements could include incorporating KenPom's advanced efficiency metrics, which include tempo-adjusted performance, but are unfortunately behind a paywall. Also adding free throw statistics, which become especially important in close postseason games could have improved our model. Together these refinements could make our simulation an even stronger tool for explaining and predicting the chaos, or occasional dominance, of March Madness.