Every sport attempts to rank teams in some fashion. In many, it’s a simple win-loss comparison mixed with some head-to-head deciders when there’s a draw. In soccer and rugby, rankings – or tables – are set based on a points system. For rugby, teams receive 4 points for a win, 2 points for a draw, 1 point for losing by 7 points or less, and 1 point for scoring 4 tries (the equivalent of an NFL touchdown) in a single game. But, how valuable are any of these ranking systems?

Ultimately, the value of the ranking is their ability to determine what will be the best game of the year: the championship. The NFL attempts to rank teams so that the best team in each conference makes it the Superbowl. Similarly, rugby leagues use the ranking systems to select the top four teams in the league. Those teams are then matched up against one another such that the top two teams should theoretically end up in the final. Thus, the best system for ranking teams is the one that is most accurate in predicting the outcome of future games. That is, the one where the highest rank team has the best odds of beating the teams beneath it, and so on down the table.

A simple win-loss ratio does not take into account many factors that could indicate a team’s odds of winning a future match. Rugby attempts to take certain factors into account: teams that score a lot of points (four tries or more) and teams that lose by only a small margin (7 points or less). By rewarding teams that earn these “bonus points,” and factoring those points into the ranking system, rugby is ultimately attempting to improve the accuracy of their tables. The question is, can we use simple indicators based on previous matches to predict the outcome of future games?

For this project, I am focusing on the sport of rugby, and specifically on the Aviva Premiership, which is England’s top league. It is made up of 12 teams, each of which plays each other team twice during the regular season. This accounts for 22 rounds of play. I will be starting with