So for this week’s discussion it was a bit difficult to find an article that reflected the probability in board games and card games other than blackjack. I’m not really a card player so blackjack didn’t really interest me. I took a bit of an alternative approach for my article.

FiveThirtyEight put out an article last year that illustrates the probability of an NBA team winning based on the following variables:

* What quarter is being played
* Time left in the quarter
* Does the team have a lead or a deficit? By how much?
* Does the team have the possession?

<http://fivethirtyeight.com/features/every-nba-teams-chance-of-winning-in-every-minute-across-every-game/>

The author cites a source where you can enter the information mentioned above, and a formula outputs the probability based on the statistics of NBA games from 2000-2012. <http://stats.inpredictable.com/nba/wpCalc.php>

The model takes into account play by play information for each game played in the NBA during that time span. Then uses locally weighted logistic regression some assumptions for pure possession states. More information here: <http://www.inpredictable.com/2015/02/updated-nba-win-probability-calculator.html>.

I was not able to reproduce the result given by the author. I would have to compile play by play data for 13 years and re-create the regression algorithm. However, since the author looked at the 2014-15 NBA season to show the probability of winning. I went and found stats for that years Chicago Bulls team. I recreated the play by play data for the first game they played that year against the Knicks.

<http://www.basketball-reference.com/boxscores/pbp/201410290NYK.html>

Granted this game is a bit of an outlier due to it being a blow out, the model as shown in the attached excel still illustrates the probability of the Bulls winning based on the time remaining and the score of the game.

As a next step, I will attempt to recreate this graph in Python and will post the code later in the week.