

Write Up

The fundamental code that I began with was out initial starting connect 4 game from assignment three. However, I replaced the MoveRandom function with the play_out_game function. What this function does is run the Monte Carlo algorithm and returns the amount of times the was won in each of the columns. The way that I implemented my Monte Carlo algorithm was by putting a piece in each column with the current board. Once I placed a piece in a column, I would play out 30 games with board. The way that I would place the rest of the pieces was by using the heuristic that was given to us, namely winning when there is 3 in a row and blocking when there is not. Every time that a column was finished, I would at the total times that blue won and would add that total to a list. Once each column was finished, I would return the list of totals. I would then pick the column that had the most wins in it to place the next tile. If there was a tie, I would randomly pick a column of the best ones.