Artificial Intelligence for Games and Puzzles
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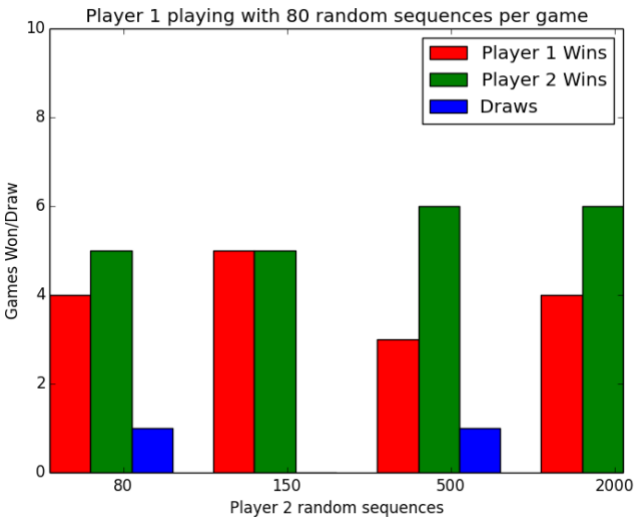
Human vs Computer:

I have tested the game in human vs computer mode and played it with different setting and found out that as the number of games per move increased, the accuracy of the algorithm also increased, but at the cost of some time. The was a mixed kind of a result where at some point with higher number of moves the AI was winning and the human won with small number of moves.

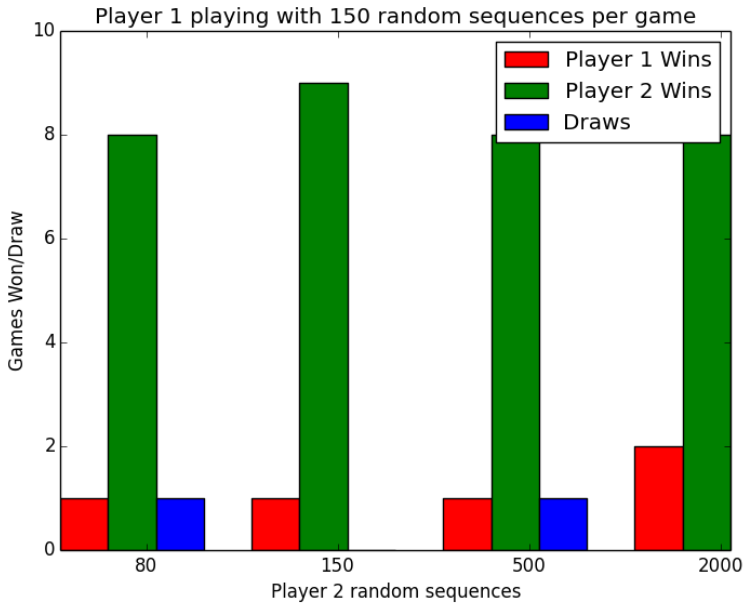
Computer vs Computer:

Player 1 80 Random sequences per game:



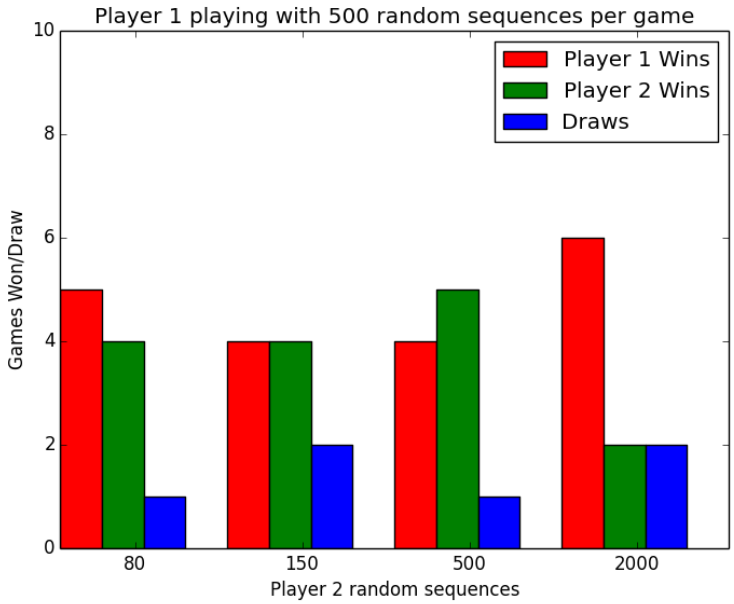
The above chart shows us the wins and draws in different combinations of random sequences. We can see that the player 2 is having more wins than player one and have draws in 2 of the combinations. The maximum number of games played in each combination are 10.

Player 1 150 Random sequences per game:



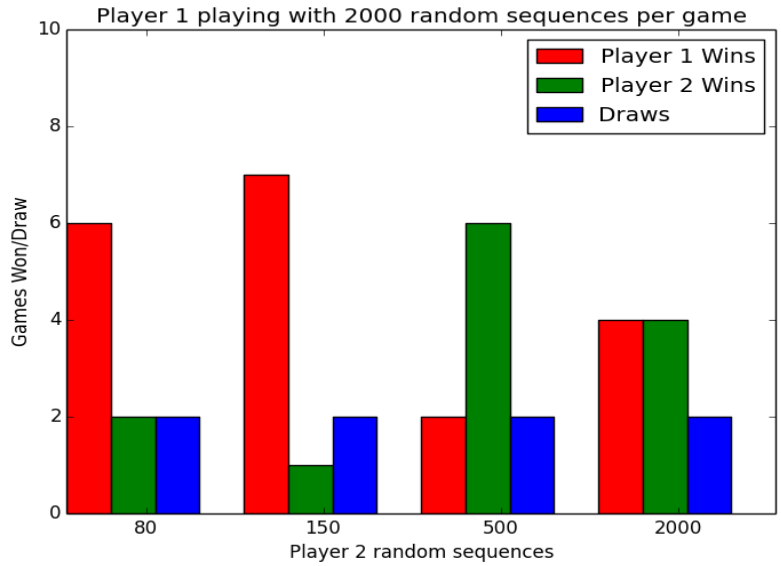
The above graph shows us the statistics when player one has 150 random sequences per game. We can see that player 2 is dominating the game. In all the combinations the player 1 is winning by a huge margin.

Player 1 500 sequences per game:



When player 1 has 500 random sequences, we can see that player 1 has won a good number of games. Even though player 2 has 2000 random sequences which is way more than player 1, but still player one scores a good.

Player 1 2000 sequence per game:



In this combination we can see that player 1 has won many games when it has 2000 random sequences.

In this project we could see there were some error like a player has more random sequences but still it looses a lot, this could be happening because the Monte Carlo technique uses randomness to predict the moves.