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## Connect Four Write Up

My implementation weighs specific board positions more favorably than others. Four in a row has an absurdly large utility value, a double trap also has a very large utility value, three in a row with a gap on either end or in any place in the middle has a sizable value, and just normal 3/2 in a row has a nominal value. I implement a minimax algorithm to look 3 moves ahead and evaluate the board assuming that the adversary plays an optimal move. The minimax did not properly evaluate when a win was imminent, so I hard coded in an instant win and an instant block. There is no need to look three moves ahead if you can win immediately. It won 200/200 games against a random bot and won once and drew once against my roommate. I think a large part of the creativity is the fact that it checks for double traps. As a kid double traps was always the bane of my connect four career so I tried to ensure that the bot would recognize it as the power move it is and try to set one whenever possible and prevent one whenever possible, both possible due to the minimax algorithm.