Heuristics Analysis

Artificial Intelligent Nanodegree Program

Project 2: Building a Game Playing Agent

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The heuristics methods I used for this project consist:

1) custom_score
- Gets the difference in scores between the computer player and the opponent.

2) custom_score2
- Detects the progress of the game and if more than 33% of the board is occupied, the number of possible opponent moves gets a weight factor. So as the game comes to an end, the computer player will know how many moves the opponent has compared to itself. Thereafter, the distance between the opponent and computer player is calculated. If the moves are close, m_distance will be a small value and vice versa. As both players move to same side of the board, it matters on how much difference is there for each player's mobility.

3) custom_score3
- An aggressive method where the computer player chases the opponent.

Best Evaluation Function

Custom_score3 works as a better function than the rest because:

1. it has the highest winning rate
2. it is very simple to implement, fast and straightforward
3. simple algorithm allows deeper search into the game tree which provides a better estimate

Results: