

Heuristic Analysis:

Custom score function gives a weighted ratio score between #my_moves and #opp_moves. I tested 3 different ratios for #my_moves and #opp_moves with evaluation function ($\#my_moves - \#opp_moves$) and the results are as below:

Ratio: My Moves / Opp Moves

1. 1: 1.5
2. 1: 2
3. 1.5: 1

Custom Score:

- 1) ID Improved: 65.71% Student: 67.14%
- 2) ID Improved: 70.71% Student: 62.86%
- 3) ID Improved: 61.71% Student: 62.86%

Conclusion:

The 3 test results from different ratio shows that 1: 1.5 is the best ratio for #My moves / #Opp Moves. The reason being, it increases the heuristic for my moves when my player has many open moves. Opponent shall be penalized when opponents moves are large.