**1. Performace:**

This script evaluates the performance of the custom\_score evaluation function against a baseline agent using alpha-beta search and iterative deepening (ID) called `AB\_Improved`. The three `AB\_Custom` agents use ID and alpha-beta search with the custom\_score functions defined in game\_agent.py.

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Playing Matches

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Match # Opponent AB\_Improved AB\_Custom AB\_Custom\_2 AB\_Custom\_3

Won | Lost Won | Lost Won | Lost Won | Lost

1 Random 0 | 10 0 | 10 0 | 10 0 | 10

2 MM\_Open 0 | 10 0 | 10 0 | 10 0 | 10

3 MM\_Center 0 | 10 0 | 10 0 | 10 0 | 10

4 MM\_Improved 0 | 10 0 | 10 0 | 10 0 | 10

5 AB\_Open 4 | 6 4 | 6 5 | 5 5 | 5

6 AB\_Center 3 | 7 4 | 6 5 | 5 5 | 5

7 AB\_Improved 4 | 6 4 | 6 5 | 5 5 | 5

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Win Rate: 15.7% 17.1% 21.4% 21.4%

Your ID search forfeited 35.0 games while there were still legal moves available to play.

**2. Conclusion:**

The evaluation function #2 and #3 have higher performance, since the these two heuristics considered not only the player’s performance, but also the opponent’s performance, which is a “net” score of the current state.