

Isolation Heuristic Analysis

pening (ID) called `AB_Improved`. The three `AB_Custom` agents use
and alpha-beta search with the custom_score functions defined in
e_agent.py.

Playing Matches

Match #	Opponent	AB_Improved		AB_Custom		AB_Custom_2		AB_Custom_3	
		Won	Lost	Won	Lost	Won	Lost	Won	Lost
1	Random	6	4	10	0	8	2	9	1
2	MM_Open	9	1	8	2	6	4	4	6
3	MM_Center	8	2	9	1	8	2	8	2
4	MM_Improved	8	2	9	1	5	5	5	5
5	AB_Open	6	4	6	4	5	5	3	7
6	AB_Center	6	4	6	4	5	5	6	4
7	AB_Improved	6	4	5	5	5	5	4	6
Win Rate:		70.0%		75.7%		60.0%		55.7%	

Aman Ahluwalia

May Cohort

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Heuristic 1

The first heuristic is concerned with the number of remaining moves. It takes into account the number of remaining moves of the opponent as well as own and uses a simple formulae, which internally just computes the relative importance with respect to other, to calculate the score. The performance which i usually got was very good, around 75% in total.

Heuristic 2

The second heuristic attempts to capture the relative difference between the number of possible moves for ourselves and the opponent players, with the intent of restricting the opponent's mobility and increasing one's own mobility. The performance was between 60-65% in total (against all the competitors) on average.

Heuristic 2

The third heuristic just tries to calculate the manhattan distance of the piece from the centre block of the board. Its performance is pretty average being around 58% (on average).

There are pretty more heuristics we can apply like corners captured and stability, and we can even combine multiple heuristics to get the best performance.