

Isolation Game Heuristic Analysis

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For this project, we experimented with Three different heuristics. Here's a summary of their results:

***** Playing Matches *****										
Match #	Opponent	AB_Improved		AB_Custom		AB_Custom_2		AB_Custom_3		
		Won	Lost	Won	Lost	Won	Lost	Won	Lost	
1	Random	10	0	9	1	9	1	10	0	
2	MM_Open	8	2	9	1	9	1	10	0	
3	MM_Center	10	0	9	1	10	0	10	0	
4	MM_Improved	6	4	8	2	9	1	8	2	
5	AB_Open	6	4	5	5	7	3	6	4	
6	AB_Center	8	2	6	4	7	3	5	5	
7	AB_Improved	4	6	5	5	8	2	5	5	

Win Rate:		74.3%		72.9%		84.3%		77.1%		

I recommend using `Custom2 heuristic`:

- Custom heuristic is not good because can't get high score at any opponet.
- Custom2 heuristic can have high score at any opponent.
- Custom3 is good at MM opponent, but is not good at AB opponent.

Heuristic 1 (Custom)

Strategy

This heuristic take a strategy that increase own player's space to move, and decrease opponent space to move.

Score

Score is not good

Heuristic 2 (Custom2)

Strategy

This heuristic take a strategy that increase own player's space to move, and take a distance with opponent.

Score

Score is very good.

Heuristic 3 (Custom3)

Strategy

This heuristic take a strategy that makes own player's location to near center, and opponent's location to near wall.

Score

This heuristic take a good score at MM opponent, but a bad score at AB opponent.

In my opinion AB opponent can calculate solution at near center position and opponent can take good strategy.