
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	10	0	10	0		
2	MM_Open	8	2	4	6	8	2	6	4		
3	MM_Center	5	5	5	5	6	4	8	2		
4	MM_Improved	6	4	7	3	5	5	5	5		
5	AB_Open	5	5	1	9	5	5	6	4		
6	AB_Center	6	4	4	6	6	4	6	4		
7	AB_Improved	5	5	4	6	5	5	6	4		

Win Rate:		64.3%		48.6%		64.3%		67.1%			

AB_Custom function is a “naive” heuristic which outputs a number of player’s legal moves. It performs especially badly with AI opponents implementing alphabeta search (less than 50% win rate). Overall score is unsatisfactory: 48.6% win rate.

AB_Custom_2 function is a heuristic that also takes into account a number of opponent’s legal moves. In essence, the player’s score is decreased by amount of opponent’s possible moves during given board state. It performs better than AB_Custom function however a probability of overall tie (5 - 5 in 3 out of 7 tournaments) is decreasing win rate down to 64.3%.

AB_Custom_3 function is an “aggressive” heuristic. Basically it doubles the value of penalty for every move available to opponent. It ties overall once (with MM_Improved) and wins tournament with any other AI resulting in victory 67.1% of times. **AB_Custom_3** is evaluation function of my choosing due to its high win rate.