Heuristic Analysis

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custom_score_3

This heuristic trying to maximise ratio between available player moves count and opponents moves count. So this heuristic will seek situation where player has a lot of available moves and opponent has not at all or has minimum of them.

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custom_score_2

This heuristic function is similar as custom_score_3 but trying to minimise ratio between available opponent moves and player moves. So this heuristic will seek situation where player has a lot of available moves and opponent has not at all or has minimum of them.

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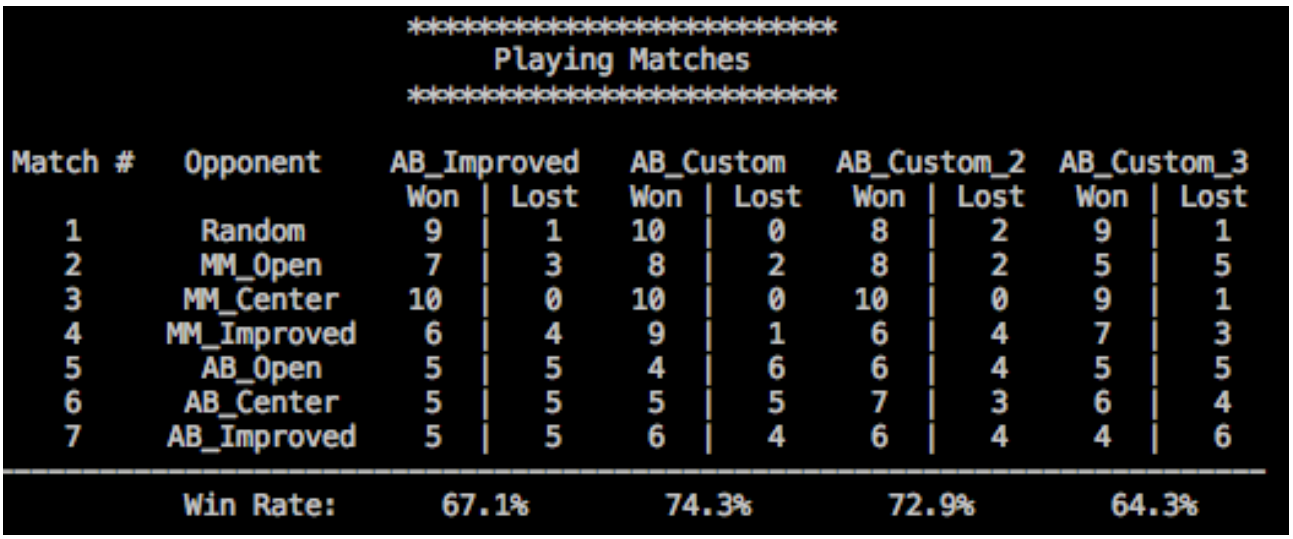
custom_score

This is my best evaluation function. It uses weights and increases importance of player moves count. Also available moves count is taken as square so it increases difference between values more that just difference between values.

Execution results

Here you may notice that custom_score shows best results among other evaluation functions.I suppose this function is best and should be used because:

1. We have to use amount of legal moves remaining. Because our goal is maximise this value for the player. custom_score using it.
2. We have to take into account remaining moves for the opponent. custom_score doing it.
3. We have to take into account speed of evaluation function. In terms of speed custom_score is not worse than improved_score method if compared with O notation. This is just simple math formula that uses two numbers.



Playing Matches

Match #	Opponent	AB_Improved		AB_Custom		AB_Custom_2		AB_Custom_3	
		Won	Lost	Won	Lost	Won	Lost	Won	Lost
1	Random	9	1	10	0	8	2	9	1
2	MM_Open	7	3	8	2	8	2	5	5
3	MM_Center	10	0	10	0	10	0	9	1
4	MM_Improved	6	4	9	1	6	4	7	3
5	AB_Open	5	5	4	6	6	4	5	5
6	AB_Center	5	5	5	5	7	3	6	4
7	AB_Improved	5	5	6	4	6	4	4	6
	Win Rate:	67.1%		74.3%		72.9%		64.3%	