There are three custom methods

- The first method (custom_score) is to minimize opponent's move by the following formula:

  Own_move - 1.5*opponent_move

- The second method (custom_score_2) is to maximize the available moves after the next move. It calculate the sum of moves of all areas the player could make from current position. Consequently, It could reduce the moving of the opponent after next move

- The last method (custom_score_3) is similar to the second one as following formula:

  blanks*own_move - (max_blanks - blanks)* opponent_move

  This method is more defensive style since higher coefficient is applied to opponent's move at the end.

The tournament Table

Match #	Opponent	AB_Improved	AB_Custom	AB_Custom_2	AB_Custom_2
		Won | Lost	Won | Lost	Won | Lost	Won | Lost
1	Random	8 | 2	9 | 1	9 | 1	10 | 0
2	MM_Open	7 | 3	6 | 4	8 | 2	7 | 3
3	MM_Center	6 | 4	10 | 0	6 | 4	6 | 4
4	MM_Improved	4 | 6	7 | 3	6 | 4	4 | 6
5	AB_Open	4 | 6	7 | 3	6 | 4	4 | 6
6	AB_Center	6 | 4	6 | 4	8 | 2	5 | 5
7	AB_Improved	4 | 6	4 | 6	5 | 5	3 | 7
	Win Rate:	55.7%	71.4%	68.6%	55.7%

The table of win rate while running 4 time:

	AB_Improved	AB_Custom	AB_Custom_2	AB_Custom_2
Win Rate:	55.7%	71.4%	68.6%	55.7%
Win Rate:	61.4%	70.0%	68.6%	48.6%
Win Rate:	61.4%	64.3%	65.7%	57.1%
Win Rate:	67.1%	62.9%	70.0%	54.3%

The recommendation and discussion:

I recommendation using Custom_score_2 as following reasons

- At the first run, the win rate of AB_Custom is outperformed the the rest strategies. But when we run more than 4 time, we can see AB_Custom_2 is better than the rest if we calculate the average result.
- The win rate of AB_Custom_2 is not much different for each time. The result of winning will be predictable with high winning rate.

- The con of AB_Custom_2 is the computation cost. If the system have limitation of computing, we ‘d rather choose the AB_Custom.