
 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	10	0	10	0
2	MM_Open	4	6	7	3	5	5	6	4
3	MM_Center	5	5	9	1	6	4	9	1
4	MM_Improved	6	4	8	2	5	5	3	7
5	AB_Open	6	4	5	5	5	5	5	5
6	AB_Center	6	4	5	5	7	3	3	7
7	AB_Improved	3	7	3	7	8	2	4	6
Win Rate:		55.7%		67.1%		65.7%		57.1%	

There were 9.0 timeouts during the tournament -- make sure your agent handles search timeout correctly, and consider increasing the timeout margin for your agent.

Your agents forfeited 98.0 games while there were still legal moves available to play.

I have started testing heuristic functions with AB_Custom_3. This function calculates the distance between self and opponent as the score. Essentially, we are trying to run away from the opponent, hoping that we could avoid getting blocked by the opponent. However, this function only produces a score of 57.1%, which means running away from opponent doesn't really help us win the game.

The second function I tested is custom_score. This function is built on top of the improved_score but adds a distance bias to the score. If two moves produce similar scores but one move gets us away from the opponent, it gets a boost and is more likely to get selected. Since the improved_score function is a very strong tactic, I tried to add a constant to see if we could get better results. We get 67.1% for the new implementation 55.7% for the original implementation. It seems that the bias does help improve the performance.

Finally, I tested custom_score_2 which is similar to custom_score, but with a center bias instead of a distance bias. In other words, it tries to stay to the center of the board instead of keeping distance between self and opponent. It's less likely to get cornered by the opponent if we try to stay in the center. This gets 65.7% versus 67.1% if we use distance bias instead. However, the difference is not significant and we can conclude that either distance bias or center bias would result in a better performance than the original implementation.