Heuristics analysis for Isolation game AI agent

Build a Game-Playing Agent project for Udacity AIND

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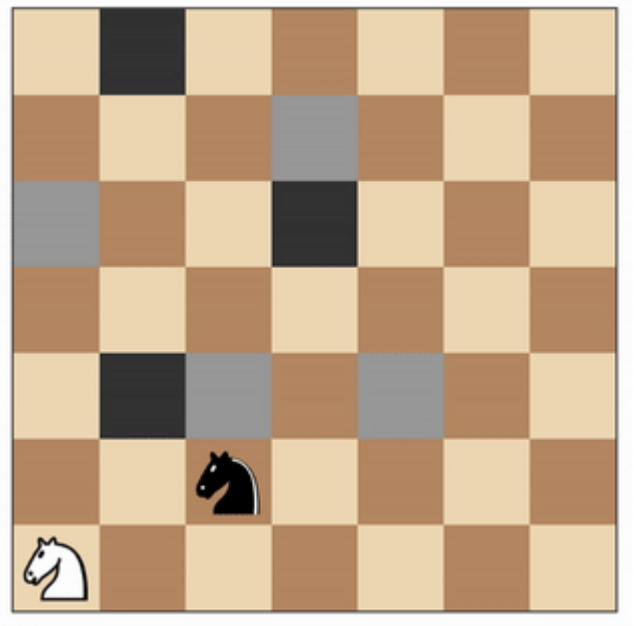
Project description

This document is a description of three custom heuristics developed for AI game-playing agent for Isolation game. The idea of the game is shown on a pic below. Two chess rooks are moving on a 7x7 board trying to lock each other. Game idea and rules are fully explained in the short *video*



Problem introduction

Project goal is to develop a heuristic that is better than AB_improved strategy developed by Udacity, more details available in the original *project repository*

Heuristics comparison

Matches Results

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

Match #	Opponent	AB_Improved	AB_Custom	AB_Custom_2	AB_Custom_3
7	AB_Improved	8 / 2	9 / 1	6 / 4	3 / 7
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	Win Rate:	65.7%	77.1%	80.0%	65.7%

Summary