

Write up

Team Name: SyntaxError

Team Members: Andre Vourakis

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Overview

This version of SyntaxErrorAI uses the minimax search algorithm along with a depth cut-off, an evaluation function, and alpha-beta pruning. It is capable of playing against a human or another AI in any size board and for any value of K.

Minimax

This minimax search algorithm can generate different gamestates of the game and return the move with the “best” outcome.

Depth cut-off

The depth cut-off is a variable that keeps track of the depth of the minimax search. It can be adjusted to set any desired depth limit.

evaluation function

The current evaluation function assigns scores based on how close the current player is to connecting K pieces together.

Alpha-beta pruning

It avoids searching game states that won't result in a good outcome.

IDS with Sorting

It uses Iterative Deepening Search and sorts the moves to generate the most pruning.