

Report for final project of AI

Motivation behind search strategy:

I implemented a best-first search strategy that relies on the calculation of an heuristic for each move and then choose the move with the best heuristic score.

The heuristic function takes in account the number of zeros found in the chosen move and if there are zeros increase the desirability of the move, since it will get the algorithm closer to the objective of having a final state, it also take in account some preferable patterns in the row, column or diagonals, like a series of 1 or 2 or 3 since in this case it's faster to get to a row, column or diagonal full of zeros.

Challenges in implementation:

Overall it was fun to code for this project, it was a bit difficult because I've never coded in Python and the C++ mainframe had some problems so I used the Python one, it was fun to think of the search strategy and the heuristic, unfortunately I didn't had a lot of time to spend on this project so I'm not sure it's the best search algorithm I could find but against a random opponent it wins!

Improvements achieved by your methods:

After this project I achieved a better comprehension of search algorithms, practice always help to understand!

Any lesson learned from the project:

Yes, there were some challenges of implementation that I really enjoyed to solve and taught me a lot.

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