

Artificial Intelligence - Reversibot

Martin Johansson `dat13mjo` and Robin Timan `dat13rti`

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1 Find the file

The runnable file is found in the map `/AI/project1`. The source files exists in a zip file in the same map named `project1.zip`

2 Run the program

To run the program write `"python3 board.py"` in the terminal, the rules for playing the game is displayed in the terminal.

3 Technical

We implemented a minimax algorithm that uses alpha-beta pruning, this makes it more efficient than the minimax algorithm. The evaluation function builds on the mobility of the players instead of the number of tiles turned. This is because we believe that this will be a more powerful metric. As well to this all possible corner moves is also used in the evaluation method. This means that the evaluation function will be the "possible moves of the bot + 3* possible corner moves - possible moves of the player - 3 * possible corner moves of the player". The method seems to have some problems because it is kinda easy to beat, but sadly we didn't have time to look into this.

4 Interesting code

Minimax -i `minimax.py` found in `dat13mjo/AI/project1/minimax.py` and is the complete file

Evaluation function -i `board.py` found in `dat13mjo/AI/project1/board.py` on line 224