AlMaRiMa

Tablut Challenge 2020

Algorithm

- ■ Minimax
  - – Optimal for games
  - – Easy to implement
  - – Recursive
  - – Iterative deepening
- ■ Move processing
  - – Board states as minimax nodes
  - – Legal moves created cycling all directions for all pawns until an obstacle is encountered
- ■ Pruning for $\alpha > \beta$
  - – If $\alpha = \beta = 1/0$ it may be possible to find a quicker win $\longrightarrow$ no pruning
  - – In case of multiple winning scenarios the quickest one is preferred

Heuristic

- Heuristic choice
  - Games with different heuristics run locally using a testing class and a logger
  - Weights chosen manually through testing
  - Using different heuristics for black and white suggested by testing results
- Linear combination of 4 components
  - Number of pieces
  - King Manhattan distance to nearest escape tile
  - King danger score (different for black and white)
  - King escape line score