

MCTS and Flat MC for Ultimate Tic-Tac-Toe

Environment

Hardware

- CPU - Intel® Core™ i5-7200U CPU @ 2.50GHz × 4
- RAM - 8 GB

Programming language: C#

Results

Flat Monte Carlo

- Efficiency: ~13500 simulations/s
- Highest CG rank: gold league, 266th place

Basic MCTS with reusing tree, $\gamma=1$, $c=\sqrt{2}$

- Efficiency: ~11000 simulations/s
- MCTS - gold league, 135th place

$c = 1$ gave best results for MCTS - 108th place in gold league

MAST

- Efficiency: ~2000 simulations/s (probably not most efficient implementation)
- Worse than basic MCTS.