

# Tic-Tac-Toe

Version 1.0 (7/19/23)

**Time Estimate:** 4-6 hours

**Learning Outcomes:** Complete this programming assignment will allow you to:

1. Build a simple agent that plays Tic-Tac-Toe optimally.
2. Gain experience with the minimax algorithm in a context where the game tree can be completely explored.

**Instructions:**

1. Start with my [Tic-Tac-Toe agent](#).
2. Rewrite the minimax and selectMove functions.
3. If your code works properly when you run the program the console should say “50 tests passed.”

**Details:** I have a simple Tic-Tac-Toe game that will automatically play your agent against itself in 50 preset Tic-Tac-Toe “puzzles”. These include winning moves, blocking moves, as well as fork moves. It is possible to write a skilled Tic-Tac-Toe AI without using the minimax algorithm by planning for each of these eventualities. However, it is more effective to build a minimax tree search that can handle all such cases and others should they exist. You are free to use either strategy to solve this problem. You merely need to pass all 50 tests.