Number of Players Zero

(AI tic-tac-toe via ChatGPT)

Stephen Witty
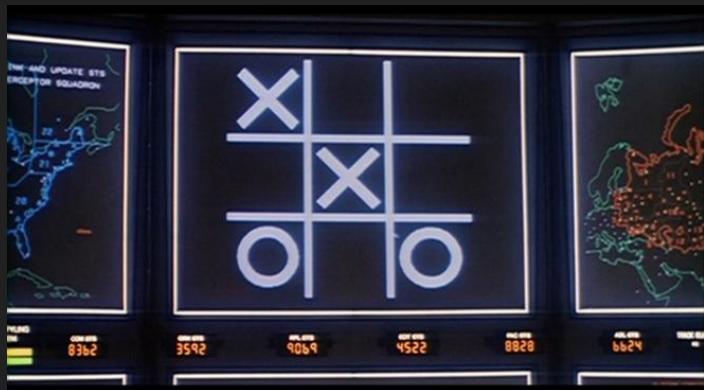
switty@level500.com
GitHub: level500.com
870-688-5220

Movie WarGames - 1983   Project inspiration

ICBM launch control - two man rule using keys

The WarGames version and the real life version

In the movie, people were removed in favor of computer control

Project Goal - Number of Players Zero

Just for fun

Exercise OpenAI API

Create program that drives ChatGPT to play tic-tac-toe against itself

Measure results - wins, ties etc

In the future, match different AI models against each other

Methodology

Python based using OpenAI API

Construct dynamic GPT prompt for each board move

Update in memory board map based on moves provided by ChatGPT

Alternate X and O players through identical logic

Specify number of games to play via source constants

```
      |     |
  O   |     |   X
      |     |
  _____
      |     |
      |  X  |
      |     |
  _____
      |     |
      |     |
      |     |
```

Move history: X5, O1, X3

Current winner:

X wins: 3   O wins: 2   Ties: 0

******* GPT prompt **************************
A game of tic tac toe is in progress and you are asked to help decide the next move. The board spaces are numbered from 1 to 9. The first row are spaces 1, 2 and 3. The second row are spaces 4, 5 and 6. The third row are spaces 7, 8 and 9. The board is currently populated like this: Space 1 is O, Space 2 is None, Space 3 is None, Space 4 is None, Space 5 is X, Space 6 is None, Space 7 is None, Space 8 is None, Space 9 is None. It is the player with the token X turn to play. What space should player with token X place their token to give the player the best chance to win the game on this move or a future move? Provide the answer as a number in between {}. For example if the answer is space 7, your output should include {7}. If the board is completely empty pick the most advantageous starting space. You cannot pick a space that is not currently None.

******* GPT reply **************************
{3}