Tic-Tac-Toe

Games played on three-in-a-row boards can be traced back to ancient Egypt, where such game boards have been found on roofing tiles dating from around 1300 BC. Tic Tac Toe is a simple game which involves filling up a 3x3 grid with X's and O's. It is a two-player game, but the evolution of technology and modern computing has made it possible for a single person to play the game against the computer.

The project aims to demonstrate the use of the **Mini-Max algorithm** along with **Alpha-Beta pruning** for playing the game. We have used python's **PyGame library** to make a user-friendly interface. The player who gets three X's or three O's in a particular row, column or diagonal first wins the game. The algorithm automatically decides the best possible move to place the next 'X' whenever the user completes his turn.

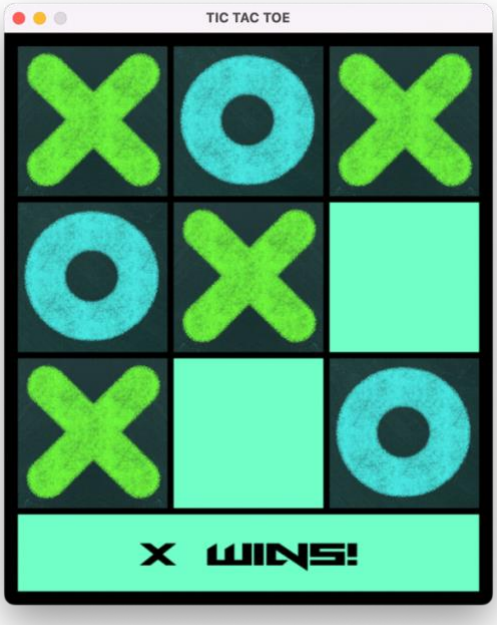
Pre information about the game:

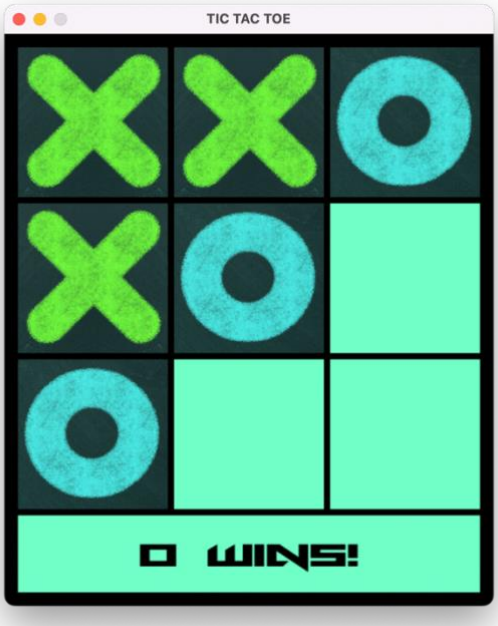
- The computer always takes the first turn.
- The player is assigned the letter 'O' by the game AI.
- The player should try their best to place three O's in a particular row, column or diagonal while preventing the computer from placing three consecutive X's.
- When all nine squares are full, the game is over. If neither the player nor the AI has three consecutive marks, the game ends in a tie.

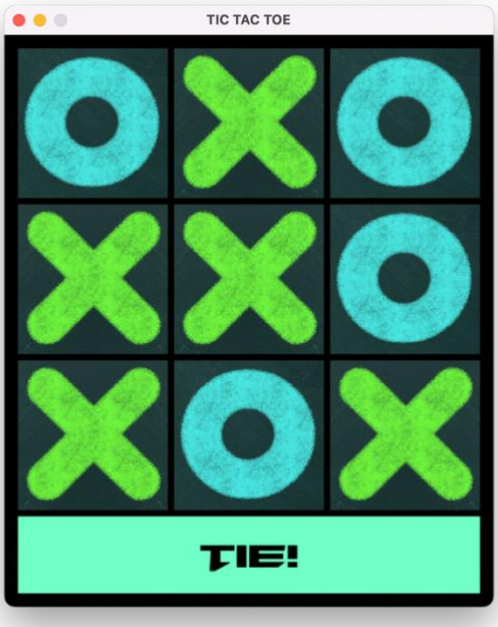
Links:

- Source Code
- Video Demonstration

Screenshots:







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