Tic-Tak-Toe:

Computer Vs computer:

Have used Reinforcement learning method.

* Has N x N matrix with N > 0.
* Initialize the matrix with zeroes.
* The values in the matrix will be represented by integers: 0, 1, 2.
* 0: empty cell represented by ' '
* 1: cell occupied by symbol 'O'
* 2: cell occupied by symbol 'X'
* A win is defined by any row, column or diagonal being filled with the same symbol, with the symbol as the winner.

Computer Vs Player:

Have used simple unsupervised learning algorithm. And follow the following steps:

1. First, see if there’s a move the computer can make that will win the game. If there is, take that move. Otherwise, go to step 2
2. See if there’s a move the player can make that will cause the computer to lose the game. If there is, move there to block the player. Otherwise, go to step 3.
3. Check if any of the corner spaces (spaces 1, 3, 7, or 9) are free. If so, move there. If no corner piece is free, then go to step 4.
4. Check if the center is free. If so, move there. If it isn’t, then go to step 5.
5. Move on any of the side pieces (spaces 2, 4, 6, or 8). There are no more steps, because if the execution reaches step 5 the side spaces are the only spaces left.