c. The game plays the way I expect. By playing games against my code of Minimax function, the most common result is the draw. I couldn’t beat the AI, but I would only lose the game when I made the worst decision.

Move 1: Evaluated 81377 states, Expanded 29633 states

Move 2: Evaluated 1374 states, Expanded 492 states

Move 3: Evaluated 72 states, Expanded 30 states

Move 4: Evaluated 7 states, Expanded 3 states

The evaluated/expanded state counts decreased over the course of the game. With each positions of the board filled, less blank positions on the board needed to be evaluated/expanded by the algorithm Minimax.

let move\_expand\_order=[4,0,6,8,2,3,1,5,7];

//let move\_expand\_order=[4,0,3,6,8,1,2,5,7];

Move 1: Evaluated 113053 states, Expanded 47713 states

Evaluated 129149 states, Expanded 53627 states)

Move 2: Evaluated 1374 states, Expanded 492 states

Move 3: Evaluated 72 states, Expanded 30 states

Move 4: Evaluated 7 states, Expanded 3 states

Turn 0:

Waiting on CPU player...

Complete. (Evaluated 113053 states, Expanded 47713 states)

CPU selects position 4 (Expected utility score 0)

Turn 1:

X

Waiting on human player...

Player selects position 0

Turn 2:

O

X

Waiting on CPU player...

Complete. (Evaluated 3750 states, Expanded 1524 states)

CPU selects position 3 (Expected utility score 0)

Turn 3:

O

X X

Waiting on human player...

Player selects position 5

Turn 4:

O

X X O

Waiting on CPU player...

Complete. (Evaluated 297 states, Expanded 125 states)

CPU selects position 8 (Expected utility score 0)

Turn 5:

O

X X O

X

Waiting on human player...

Player selects position 2

Turn 6:

O O

X X O

X

Waiting on CPU player...

Complete. (Evaluated 20 states, Expanded 8 states)

CPU selects position 1 (Expected utility score 0)

Turn 7:

O X O

X X O

X

Waiting on human player...

Player selects position 7

Turn 8:

O X O

X X O

O X

Waiting on CPU player...

Complete. (Evaluated 3 states, Expanded 1 states)

CPU selects position 6 (Expected utility score 0)

Turn 9:

O X O

X X O

X O X

Game complete.

Draw.