

Artificial Intelligence: Assignment 1

Due date: January 13 (Monday)

Problem 1 (4 points)

Read Chapters 1 and 2 of the textbook and write a one-page summary of the important points that are *not* listed in Sections 1.5 and 2.5.

Problem 2 (6 points)

Three-Dimensional Tic-Tac-Toe is a two-player game, which is an advanced version of standard Tic-Tac-Toe. It involves a three-dimensional board of size $3 \times 3 \times 3$, which is initially empty. When the first player makes a move, she places a cross in one of the empty cells; similarly, when the second player makes a move, he places a circle in an empty cell.

The game ends after each player make thirteen moves. The final score of the first player is the total number of rows, columns, and diagonals filled with three crosses; similarly, the score of the second player is the number of rows, columns, and diagonals filled with circles. The player with the higher score is the winner.

Implement a program for playing this game. It should prompt the user to specify the player (“1” or “2”) and then act as this player. For example, if the user enters “1,” the program makes the first move. For the full credit, it should win against the instructor and teaching assistant.