

Artificial Intelligence

Quiz 4

30 minutes - 18 points

(- up to 3 points off for bad presentation :))

Exercise 1 (Total: 8 points)

Suppose you have to solve a problem that is discrete (what does it mean for a problem to be discrete by the way? (2 points)), for which you have to traverse the state space (e.g., game design), and for which you don't have additional information (such as an evaluation function). So you have to use one of the uninformed problem-solving methods reviewed in class.

Suppose that, to solve your problem, you are limited in space and in time. You want your game to remain quite real time, but still you want to achieve a pretty good solution to your problem.

Which of the uninformed problem-solving method would you recommend using to address such a problem? (2 points) Justify your answer (e.g., why is this method better than the others reviewed in class, describe the kind of solution that is returned, etc.). (4 points)

Exercise 2 (2 points) *Describe genetic algorithms.*

Exercise 3 (4 points) *Does minimax (the first algorithm presented in class to solve game playing problems) return the best possible move? (1 points) Discuss the quality of the move suggested by minimax (give example(s) if necessary). (3 points)*

Exercise 4 (4 points) *What is the main drawback of the minimax algorithm? (2 points) How can it be addressed? (2 points)*