

CS440: Introduction to Artificial Intelligence

Fall, 2008

Writing Assignment #1 (part 1)

Due Tuesday, Sept. 9th

Introduction

The goal of the writing assignments in this class is to exercise and improve your scientific writing skills. The emphasis is on your ability to express ideas *clearly*, *precisely*, and *succinctly*. For clarity, your essay should be easy to read, in the sense that it should flow logically and express your idea in the simplest manner possible. It should also not contain any distractions, such as grammatical or spelling mistakes. It should be formal and should avoid using the first person. Your essay should be precise in the sense that it describes your idea completely and without ambiguity. It should also be short: the longer a piece of scientific writing is, the less likely it will be read in its entirety. The challenge of scientific writing, of course, is that clarity, precision and brevity are often at odds with each other; your task is to write an essay that optimizes all three.

Instructions

You are to choose and describe a search problem. You may select any problem *except* missionaries and cannibals, an N-tile problem, or an N-queens problem. You must formalize the problem in terms of its states, initial state(s), successor function, goal test and path cost, as described on page 64 of your text. You must also analyze the search space in terms of its branching factor, minimum solution depth, maximum search depth, and whether it is a tree or graph.

Your essay can be no longer than 2 pages (in 11-point or higher font, with at least one inch margins). You must submit *two* printed copies at the start of class on Tuesday: one copy with your name on it, and one copy without. (The copy without your name will be given to one of your classmates to be critiqued.)

Grading

Grading will be based on clarity, precision and succinctness. Did you clearly formalize the problem in terms of states, the initial state, etc.? Was the formalization easy to find, clear, complete and precise? Was the analysis of the search space clear and easy to find? Was it correct? Did the essay contain unwanted distractions (spelling mistakes, etc.) or unnecessary filler?

Follow-on

Be aware that the anonymous version of your essay will be given to a classmate to critique, and that you will be asked to critique the work of a classmate.

Hints

1. Pick a simple problem. You only have two pages.
2. Give yourself time. Given the page limit, this is a challenging essay to write.

