Assignment 0

CS 776: Evolutionary Computing
Fall 2018
Max Score: 100

Objectives

1. Learn and demonstrate knowledge of Problem Solving as Search

The missionaries and cannibals problem is usually stated as follows. Three missionaries and three cannibals are on one side of a river, along with a boat that can hold one or two people. Find a way to get everyone to the other side without ever leaving a group of missionaries in one place outnumbered by the cannibals in that place.

- Formulate the problem precisely making only those distinctions necessary to ensure a valid solution. Draw a diagram of the complete state space.
- Implement and solve the problem optimally using an appropriate search algorithm. Is it a good idea to check for repeated states?
- Why do you think people have a hard time solving this puzzle given that the state space is so simple.
- Extend your algorithm to solve cases where the boat can hold upto three people.

1 Turning in your assignment

Turn in one document (preferable pdf) with the following information through canvas before the due date.

1. Your FULL name and email address
2. Source code listing, in case I need to run your program
3. Transcript of your program running. This should be informative enough for me to be able to easily see how many missionaries and cannibals are on each side of the river as well to see the position of the boat. If I do not understand your output, you will not get a grade. You may annotate your transcript to make it easier for me to understand.

4. I may ask for a demo

Ask me if you have questions.