Assignment 0

CS 776: Evolutionary Computing
Fall 2016
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

Assume that this format will be used for all your assignments throughout the semester unless otherwise specified.

1. At the beginning of class, turn in hardcopy to me with
   (a) Your FULL name and email address
   (b) Source code listing
   (c) Transcript of your program running

Ask me (sushil@cse.unr.edu) if you have questions.