Assignment A2: Problem Solving: Search

CS 4300
Fall 2015

Assigned: 25 August 2015

Due: 10 September 2015

For this problem, handin a lab report pdf (include name, date, assignment and class number in pdf) which studies statistics comparing breadth-first, depth-first and A^* search on the Wumpus World problem. The measure of complexity is the total number of nodes generated during a search. For A^* search use the heuristic of Euclidean distance between the current state and the goal state. Run 2000 trials using random boards with Wumpus and 20% probability of a pit in each (non-start) cell. Test the hypothesis that A^* search is 10% better than BFS and DFS at the 95 % confidence level.

You should handin the report pdf as well as the source code used in the study. The code should conform to the style requested in the class materials (no matter what the language).

In addition, please turn in a hardcopy of the report in class before the start of class on September 10, 2015.

Write a lab report in the format (please do not deviate from this format!) described in the course materials.

Discuss the statistical framework to establish a confidence interval on the means, and the hypothesis test.