

Artificial Intelligence Lab, B.Tech 4th Semester

Instructions

1. You are required to submit your assignment responses by 11 AM today through the Google Form that has been emailed to you.
2. There will be evaluation for this assignment.
3. Plagiarism checking will be performed on all the submissions for this assignment. If plagiarism is detected, your assignment will not be evaluated.

Evaluation Assignment 2

1. Solve the 8-puzzle problem using a blind search and heuristic search algorithm and, compare their performance using the following statistics: (15+15=30)
 - (a) the total number of nodes expanded
 - (b) the total number of nodes generated
 - (c) the maximum length of the queue structure
 - (d) the length of the solution path (number of moves)

The uninformed search algorithm that you will implement will be Iterative Deepening Search. The informed search algorithm that you will implement will be A* using the misplaced tile heuristic.

Consider the following initial state and final state for the problem

Initial state

8 2
3 4 7
5 1 6

Final state

1 2 3
4 5 6
7 8