
CS 188 Summer 2021 Regular Discussion 1B Solutions

Course Overview

Here are some questions for you

1. What is AI?
2. What can AI do?
3. What do you want to learn from this course?

There are three types of discussion sections

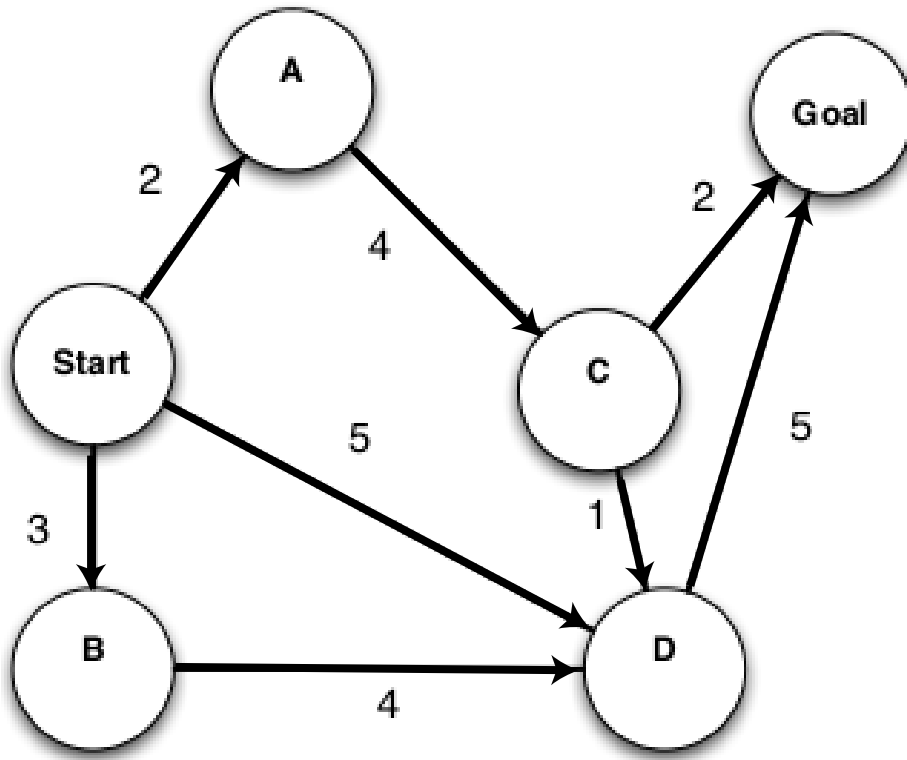
1. Regular Discussion
2. Exam Prep
3. LOST

There are 5 grading components

1. Programming Assignments (25%)
2. Electronic Homework Assignments (10%)
3. Written Homework Assignments (10%)
4. Midterm (20%)
5. Check-in quizzes + Final exam (35%)

Check-in Quizzes boost: Your percentage grade on the final = $\max(\text{percentage grade on the final}, 1/4 * \text{percentage grade on check-in quizzes} + 3/4 * \text{percentage grade on the final})$ For example, if you completed 80% of all check-in quizzes and got 60% on the final, your grade on the final will be $1/4 * 80\% + 3/4 * 60\% = 65\%$.

1 Search Algorithms in Action (Uninformed Search Review)



For each of the following graph search strategies, work out the order in which states are expanded, as well as the path returned by graph search. In all cases, assume ties resolve in such a way that states with earlier alphabetical order are expanded first. Remember that in graph search, a state is expanded only once.

a) Depth-first search.
States Expanded: Start, A, C, D, Goal
Path Returned: Start-A-C-D-Goal

b) Breadth-first search.
States Expanded: Start, A, B, D, C, Goal
Path Returned: Start-D-Goal

c) Uniform cost search.
States Expanded: Start, A, B, D, C, Goal
Path Returned: Start-A-C-Goal

Note that for States Expanded, including or not including the Goal node is valid. This is a small detail based on implementation.