Artificial Intelligence

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CSE 440

Introduction

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About the Course

- This course is aimed to be the first course in Artificial Intelligence.
- Expectations:
  - Solid programming skills in C or C++ or Java or Python.
    - If you have trouble converting pseudocode to working code, you are not ready for this class.
  - Solid algorithmic background.
    - Understanding how to analyze time/space complexity of algorithms.
    - Knowledge of basic data structures - lists, trees, graphs, sorting.
- Grades will depend on:
  - Writing complex code that works.
  - Solving algorithmic/mathematical problems.

Are You Ready for This Course? (1)

- Programming Assignment 1 is already posted.
- It is due in 10 days (Sunday, Oct 03, 2017).
- You should already know how to:
  - Solve it using standard algorithms (e.g., Dijkstra's algorithm).
  - Implement your solution, and build a working program as described in the assignment.
- If you cannot do programming assignment 1, you are not ready for this class, and you should not expect to pass.

Are You Ready for This Course? (2)

- Do you understand big-Oh notation (and Theta notation, Omega notation, etc)?
- Do you understand basic data structures and algorithms such as:
  - linked lists, priority queues.
  - trees and graphs.
  - different sorting methods.
  - breadth first search, depth first search.
  - minimum-cost spanning trees.
  - Dijkstra's algorithm.
- If not, you are not ready for this course.

Grading (1)

- Weight of the assignments is 40% and the weight of exams is 60%.
- Each students must pass individually to get a pass grade in this course.
- A letter grade will be computed based on all scores in assignments and exams.
- So, if you ace the exams but do no assignments , you will fail.
- If you ace the assignments but fail the exams, you will fail.
- I fully expect some people will be shocked at the end of the semester, when they fail the class due to this policy.
- Still, there is nothing I can do about that.
  - The grading policy posted on course website.
  - You are responsible for reading and understanding the course outline from course website.

Grading (2)

- No assignment scores will be dropped.
- No exam scores will be dropped.
- Grading is based on performance.
- Grading criteria do not include:
  - Effort.
  - Class participation.
  - What grade you need to qualify for financial aid, for avoiding probation, for graduation, etc.

Assignments

- You must submit your assignments on due dates via email.
- Each students must show the assignment solution in office hours.
- Late penalty: 25% per day.
  - No exceptions, except for medical/personal emergencies documented in writing before any deadline.
  - Network/computer crashes will not be accepted as an excuse.

Exams

- Some question will ask you to apply any algorithm or technique on some given example.
- Some questions will ask you to come up with pseudocode or with an algorithm for solving a specific AI problem.
- Some questions will ask you to analyze the time/space complexity of different AI algorithms.
- No electronic devices are allowed:
  - No cell phones, laptops, e-books.
  - Only non programmable calculators will be allowed.

Attendance

- Attending exams is mandatory.
  - Again, exceptions are made only for medical/personal emergencies documented in writing with the permission of faculty (before exam).
  - Traffic jam, transportation problems, malfunctioning alarms, not accepted as an excuse.
- You do not have to attend lectures.
- However, if you do not attend lectures, you are still responsible for understanding the material.
  - Do not expect a private lecture during office hours or by e-mail.

Class Participation

- Class participation is not part of the grading criteria.
- However: asking questions, and trying to answer questions, can help you in understanding the material.
  - If you have questions and you do not ask in class, where are you going to get the answers?
- If you do not understand something, always feel free to raise your hand and ask a question.

Getting Help

- I will not mind taking a look at your code if you have a bug and need help.
- However, if I do not spot something wrong right away, all I will do is offer some quick suggestions on how to further test your code, and improve code structure.
- Feel free to use office hours, posted on the website.
- Feel free to send e-mails with your questions.
- **Do not expect responses to frantic queries in the last minutes before an assignment is due**.

Course Website

- The course schedule (including assignments and exams) and lecture slides will be available.
- Assignments will be available on the “Assignments“ section of the schedule.
- You are responsible for reading and understanding what the course outline says.

Videos

- https://www.youtube.com/watch?v=etZPXWZpF7s
- https://www.youtube.com/watch?v=mJeNghZXtMo