CS480 (Fall 2010): Introduction to Artificial Intelligence

General Course Information

- Instructor: Shuiwang Ji
- Office: E&CS 3204
- E-mail: sji@cs.odu.edu
- Lecture: Monday and Wednesday, 5:45PM-7:00PM
- Office Hours: Monday and Wednesday, 4:30PM-5:30PM, or by appointment
- Lecture Location: E&CS 2120
- Prerequisite: Basics of probability and linear algebra, data structures and algorithms
- Textbooks:

Catalog Description

Intelligent agent design, search and constraint satisfaction problems, logic and probabilistic reasoning, planning, and machine learning

Objective

An in-depth understanding of the classic artificial intelligence topics and its recent developments

Grading

- Homework (30%): There will be 4-5 homework, which accounts for 30% of the overall grade.
• Project (30%): There will be 2-3 individual projects, which accounts for 30% of the overall grade. Infrastructure code in LISP will be provided.

• Exam (40%): There will be 3 exams:
  • Exam 1 (in class): 10%
  • Exam 2 (in class): 10%
  • Final Exam: 20%

• Undergraduate students and graduate students will be graded separately. The final grade will depend on the distribution of grades in your own group (undergraduate versus graduate) and other factors such as the difficulty of the examinations or assignments.

Make-up Tests and Late Assignments

You are expected to submit all assignments on the due date. **Hard-copy is due before class on the due date, and code in electronic copy (if required) is due at the end of the due date.** You cannot be assigned a grade unless you submit the homework/project.

For late assignments, 10% is deducted for each day (including weekend) late for the first week after an assignment is due. Each assignment is due at the end of the day of the date indicated. An assignment submitted beyond a week will not be accepted. If you cannot attend an examination at its scheduled time, you should contact the instructor prior to the examination.

Academic Honesty

All homework and projects are strictly individual and must be your own work. The instructor reserves the right to question a student orally or in writing and to use his evaluation of the student’s understanding of the assignment and of the submitted solution as evidence of cheating. Violations will be reported to the Honor Council for consideration for punitive action. By CS Dept. policy, students found to be in violation of this rule will, at the very least, receive a failing grade in the course and may be subject to stiffer penalties.

Honor Code

All students are expected to abide by the ODU Honor Code. This means that all exams and assignments are to be the exclusive work of the student. An honor pledge will be required on all work which is to be graded.

Project Grading

Each project will require some amount of programming and analysis in the form of a written report. They will be graded using the following percentages:
1. Program structure: 10%
2. Project report: 30%
3. Correctness: 60%

For all project components, the student can receive assistance from individuals other than the instructor only to ascertain the cause of errors. Thus you can get help if you need it to figure out why something does not work. You just cannot get help from anyone, other than the instructor, to figure out how to make something work. All solutions turned in for credit are to be your individual work and should demonstrate your problem solving skills.

Class Schedule (Subject to Change)

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<th>Topic</th>
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<td>Introduction to AI, intelligent agent design</td>
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<td>Informed search</td>
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<td>Constraint satisfaction problems (CSPs) and local search</td>
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<td>Representations for reasoning with uncertainty</td>
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<td>Sampling methods for Bayesian network inference, first-order logic</td>
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<td>Planning, Markov Decision Processes (MDPs)</td>
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