Syllabus for COMP364, Artificial Intelligence

Fall 2014
Dickinson College
Instructor: John MacCormick

Goals

- Understand, implement and experiment with several of the fundamental techniques used by computers to exhibit some aspects of intelligence
- Understand the basic philosophical and ethical issues relating to artificial intelligence
- Strengthen skills for implementing and analyzing algorithms
- Strengthen skills for reading, analyzing and presenting the contents of scientific literature
- Strengthen skills for conducting and presenting original scientific research

Teaching methods

- required reading in advance of most lectures
- lectures and class discussions covering textbook contents and other material
- in-class mini-labs using computers to experiment with concepts covered in lectures
- programming projects
- presentation on a published scientific paper
- self-directed research on a major final project
- exams to reinforce understanding of concepts

When and where

- Classes: Monday and Thursday 3:00–4:15pm, Tome 231
- Office hours: see the instructor's webpage

Book

Artificial Intelligence: A Modern Approach (Third edition)
by Stuart Russell and Peter Norvig, 2009
Publisher: Prentice Hall
ISBN: 0136042597

Assessment and grading

- Final grade will comprise:

Exams (2 x 15% each)	30%
Programming assignments (4 x 10% each)	40%
Presentation of a published paper	10%
Final project	20%

- **Exams:** There will be two midterm exams, given in class on 10/16 and 12/4. Exams are open note: any printed or written material may be consulted during an exam. Electronic devices may be used only to consult the following: (i) e-books; (ii) resources on the class website. Electronic devices may not be used for any other purpose, unless stated otherwise in the exam. In particular, you may not write or compile any source code on an electronic device, and you may not perform web searches. A majority of exam questions will be similar to the sample exam questions provided on the course webpages. These sample exam questions should be regarded as compulsory but ungraded homework, to be done immediately after the class in which they are provided.

- **Programming assignments:** There will be 4 programming assignments, due at the start of class on the dates given in the accompanying schedule. Programming assignments must be submitted electronically to Moodle as a single ZIP file of the relevant source code and any write-up. Programming assignments may be done in pairs or individually.
- **Paper presentation:** Students will read, conduct background research on, and present the contents of a paper of their choice, selected from those published at the AAAI 2014 conference. Presentations will take place on 11/6 and 11/10. Paper presentations must be done in pairs.
- **Final project:** Students will undertake a project on a topic of their own choosing. The project will involve original research or experimentation, substantial programming, a formal write-up, and a presentation in the final exam slot (9am, 12/19). Final projects must be done in ~~pairs~~ teams of 2 or 3 people [changed 11/13/2014].

Amount of work

You should expect to spend 7-9 hours per week (outside of class time) on this course.

Plagiarism, copying, and collaborating

The College's standard policy on plagiarism applies and you should be familiar with it, but here are some key points that apply particularly to this course:

- All work must be your own.
- Never copy work from someone else or allow your own work to be copied.
- You may not copy or consult assignment solutions from any source, including online repositories or solutions provided for previous instances of the course.
- If you use exact words taken from any source, you must use quotation marks and cite the source.
- Students are encouraged to help each other understand concepts, including concepts that apply to graded assignments. However, all work must still be your own. So if you discuss a problem with someone, you must destroy any written or electronic material that results from the discussion, and re-create it later on your own.
- Be especially careful not to copy computer code from another student, or from the Internet. Sharing or copying computer code is easy and often tempting, but it is not permitted and will suffer the same penalties as any other form of cheating. It is permitted to copy small snippets of code from online sources or from the course website, but the extent and origin of any copied snippet must be described clearly using comments in the source code.

Accommodations

The instructor will follow college policy on accommodations for students who need them.

Late Work Policy

Each student is permitted a total of four no-penalty days of lateness over the entire semester; every subsequent day of lateness incurs up to a 25% penalty for the late assignment. Late days can be used only in whole day units. Keep track of your own usage of late days. To use one or more late days on a given assignment, state clearly at the start of your submission how many days you are using, and the total used so far in the semester. Late days cannot be used for presentations. For group assignments, late days are applied to all members of the group.