Intelligent Autonomous Agents
ICS 606 / EE 606
Fall 2011

Administrative Information
Instructor: Prof. Nancy Reed
Information and Computer Sciences Dept.
University of Hawai‘i, Mānoa
nreed@hawaii.edu

Course Overview
• Course Homepage:
  http://www2.hawaii.edu/~nreed/ics606/index.html
• Prerequisites
• Textbook
• Course Requirements

Prerequisite Knowledge
• Interest in designing and/or building intelligent programs
• Interest in learning about and/or creating systems with autonomous behavior
• Programming experience in a high-level language equivalent to ICS 313 (Lisp) or EE 467 is helpful, but not required

Textbooks

Additional Reading Material
  • Is it an Agent or a Program? (Franklin & Graesser) (link online)
  • Intelligent Agents (Ch. 2 of Russell & Norvig, 1st Edition) (online)
  • Research articles – most in the UH library and/or online
  • Conference proceedings: AAMAS, ACM, AAAI, IJCAI, ECAI, IEEE
  • Journals: Artificial Intelligence Journal (Elsevier), Autonomous Agents and Multi-Agent Systems (Springer), Web Intelligence and Agent Systems (IOS), IEEE Intelligent Systems
  • International Journal of Agent-Oriented Software Engineering (Inderscience), International Journal of Agent Technologies and Systems (IGI)

Course Organization
• M/W in Hamilton 003G
• Lecture and discussion format
• Discussions centered on weekly reading material
• Research paper presentations
• Research project
  • Final report due on Wednesday of finals week
  • Final presentations during the last few weeks of class
Course Requirements

- Project – literature survey or agent program/test, 50%
- Exam – one written midterm, 30%
- Class participation and paper presentations, 20%
- Extra credit options including programming agent systems

Project Information

- Select an application area of interest
- Choose a literature survey or a programming project
- Work with software (softbots) or hardware (robots)
- Define research question(s) to address
- Write a project proposal – due 3rd week
- Produce a list of references relevant to your topic – due 5th week
- Pick at least 2 papers on your list to present
- Project progress report – due 11th week
- Final written report due finala week
- Micro, Mini, and Final project presentation to entire class
- You may work in groups
- You may use any programming language you wish
- [http://www2.hawaii.edu/~nreed/ics606/projects.html](http://www2.hawaii.edu/~nreed/ics606/projects.html)

Exam Information

- There will be one midterm exam on Wed. of Week 10
- Covers material from
  - Textbook
  - Lectures
  - Readings and papers presented in class

Class Discussions on Research

- Discussion of material is crucial to understanding research – both how to conduct research and how to evaluate research
- Student presentation (papers relevant to projects) guidelines
  - Presenter:
    - Give a copy of the paper to the instructor 1 week before the presentation
    - Just before the presentation (or earlier): distribute a list of questions to the class
    - Professional presentation of main points of paper (35 minutes)
    - Discuss strengths and weaknesses of the paper/approach
    - Aid in discussing the paper and the questions you raised
  - Audience: formulate comments/questions about all papers/reading material
  - If absence from class is necessary, written reports may be required

Course Homepage

- [http://www2.hawaii.edu/~nreed/ics606/index.html](http://www2.hawaii.edu/~nreed/ics606/index.html)
- Messages
- Schedule
- Grading criteria
- Exam
- Project information
- Resource links