

CAP 4630 Introduction to AI. Fall 2009

Instructor: Dr. Fernando Gomez (gomez@cs.ucf.edu)

Office Harris Building 318. Off. Hours: M, T, Th 3 to 3:50 pm, F 3 to 5 pm

Week 1

Introduction to Artificial Intelligence (AI)
Historical Perspective
AI Programming Languages

Week 2

Lisp
Basic Operations

Week 3

Lisp
Recursion

Week 4

Lisp
Iterative vs. Recursive Solutions
Property Lists

Week 5

Lisp
Functionals
Macros

Week 6

Search Techniques

Week 7

Search Techniques (continuation)

Week 8

General Problem-Solving Methods

Week 9

Knowledge-Based Systems

Week 10

Knowledge Representation
Semantic Networks

Week 11

Knowledge Representation

Frames

Ontologies

Week 12

Logic

Week 13

Logic (concluding)

NLP (natural language processing)

Week 14

NLP

POS Taggers + Syntax

Week 15

NLP (natural language processing)

Grammars, Semantics

Week 16

NLP (concluding)

Learning

This course will require programming in Lisp and exposure to Prolog. First, we will assign simple functions and then we will have two or three projects. These projects could be about any of the following: the implementation of a search algorithm, an expert system, a knowledge representation language and/or a simple English grammar.

Grading: Test 1 25%; Test 2: 25%; Final 30%; Programs + homeworks: 20%. If there is a QUIZ, it would be worth 10% of the grade, in which case the first 2 tests will be 20% each. All projects *must be done individually, unless indicated otherwise*. Students are responsible for all announcements made in class. If a student misses a class, she/he must ask a friend to take notes. Attendance to class is essential for succeeding in the course.

Date of Tests:

Test 1: October 6th

Test 2: Two/Three weeks before Thanksgiving.

Final: to be announced by the University.

Text Books: *Artificial Intelligence* by George F Luger and (optional) *Common Lisp Craft* by R. Willensky. These books will be used as a reference to the lectures given in class.

Plus and Minus Grades (A- 90-92, B+ 87-89, B 83-86, B- 80-82, C+ 77-79, C 73-76, C- 70-72, D+ 67-69, D 63-66, D- 60-62, F 59-0).