Introduction to Artificial Intelligence (COMP/EECE 4720/6720)
Spring 2019

Instructor: Bonny Banerjee, Ph.D.

Contact Information:
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Office Hours: By appointment

When: TR 9:40 -11:05 am
Where: Engineering Science Bldg. Room 218

Course Description (from catalog)**:**
Fundamentals of programming in LISP; central ideas of artificial intelligence, including heuristic search, problem solving, slot-and-filler structures, and knowledge representation.

Note: Prior knowledge in LISP is not required. Class project will involve some programming that can be done in any language (C/C++/C#, Java, MATLAB, Python, etc.). Any student not comfortable with programming should talk to the instructor in the first class.

Required Text:
"Artificial Intelligence: A Modern Approach" by Stuart Russell and Peter Norvig

Syllabus:
Introduction to a computational approach to artificial intelligence, intelligent agents, problem solving by searching, beyond classical search, logical agents, first-order logic, inference in first-order logic, classical planning, planning and acting in the real world, quantifying uncertainty, probabilistic reasoning, probabilistic reasoning over time, making simple and complex decisions.

Topics:
Chapter 1: What is “intelligence”?
Chapter 2: Intelligent agents
Chapters 3-6: Problem solving
Chapters 7-12: Knowledge, reasoning and planning
Chapter 13: Quantifying uncertainty
Chapter 14: Probabilistic reasoning
Chapter 15: Probabilistic reasoning over time
Chapter 16: Making simple decisions
Chapter 17: Making complex decisions

Important dates:
1/15: First class
3/5, 3/7: No class -- spring break
3/12: Midterm exam
4/23: Last class (project presentations in class and project reports due)
4/30: Final exam (10:30 am-12:30 pm)

Evaluation and Final Grades:
Grading: Homeworks 20%, Midterm 20%, Final 20%, Project 20%, Class participation 20%.
The 4720 and 6720 sections will be graded separately. In each exam and homework, the students enrolled for 6720 will have to answer more questions.