

CS 161: Fundamentals of AI

Guy Van den Broeck

Spring 2018

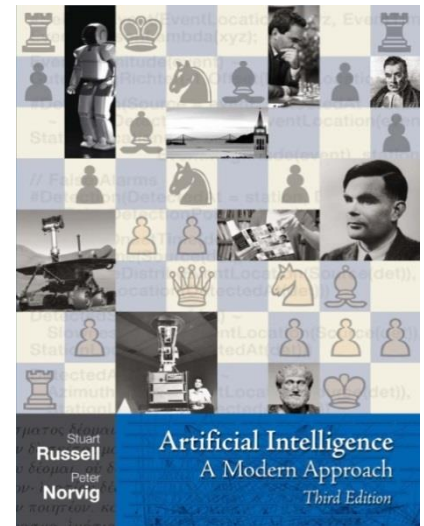
Course Information



- Instructor:
Prof. Guy Van den Broeck
<guyvdb@cs.ucla.edu>
- TAs:
 - Feng Shi <shi.feng@cs.ucla.edu>
 - Evelyn Chen <chenyiying@ucla.edu>
 - Chi Zhang <zccc@cs.ucla.edu>
- TA office hours TBA on course website
- Instructor Office Hours: Mon 10.30-11.30am

Course Information

- Textbook
Artificial Intelligence: A Modern Approach
by Stuart Russell and Peter Norvig
- Grading will be based on
 - Homework (20%)
 - Midterm (35%)
 - Final (45%).



Homeworks

- Regular programming homeworks (in LISP)
- Some pencil and paper homeworks
- Don't be late!
- Honor Code!!
 - You are encouraged to work on your own in this class. If you get stuck, you may discuss the problem with up to two other students, **PROVIDED THAT YOU SUBMIT THEIR NAMES ALONG WITH YOUR ASSIGNMENT. ALL SOLUTIONS MUST BE WRITTEN UP INDEPENDENTLY, HOWEVER.** This means that you should never see another student's solution before submitting your own. You may always discuss any problem with me or the TAs. **YOU MAY NOT USE OLD SOLUTION SETS UNDER ANY CIRCUMSTANCES.** Making your solutions available to other students, **EVEN INADVERTENTLY** (e.g., by keeping backups on github), is aiding academic fraud, and will be treated as a violation of this honor code.
 - You are expected to subscribe to the highest standards of academic honesty. This means that every idea that is not your own must be explicitly credited to its author. Failure to do this constitutes plagiarism. Plagiarism includes using ideas, code, data, text, or analyses from any other students or individuals, or any sources other than the course notes, without crediting these sources by name. Any verbatim text that comes from another source must appear in quotes with the reference or citation immediately following. Academic dishonesty will not be tolerated in this class. Any student suspected of academic dishonesty will be reported to the Dean of Students. A typical penalty for a first plagiarism offense is suspension for one quarter. A second offense usually results in dismissal from the University of California.

Tentative Overview

Week	Date	Topic	Chapter
Week 1	Apr 3	Course introduction: What is AI?	Chapter 1,2
	Apr 5	LISP programming	
Week 2	Apr 10	Problem solving as search	Chapter 3
	Apr 12	Uninformed search strategies	Chapter 3
Week 3	Apr 17	Informed search strategies	Chapter 3
	Apr 19	Heuristics	Chapter 3
Week 4	Apr 24	Constraint satisfaction	Chapter 6
	Apr 26	Constraint satisfaction	Chapter 6
Week 5	May 1	Game playing	Chapter 5
	May 3	Propositional logic: Representation	Chapter 7
Week 6	May 8	Midterm exam	
	May 10	Propositional logic: Inference	Chapter 7
Week 7	May 15	First-order logic: Representation	Chapter 8
	May 17	First-order logic: Inference	Chapter 9
Week 8	May 22	Reasoning under uncertainty	Chapter 13
	May 24	Bayesian Networks	Chapter 14
Week 9	May 29	Bayesian Networks	Chapter 14
	May 31	Machine Learning: Decision Trees	Chapter 18
Week 10	Jun 5	Machine Learning: Deep Learning	Chapter 18
	Jun 7	Reinforcement Learning	Chapter 21
Week 11	?	Final exam	

Exams

- Midterm exam
 - Free-form exercises
 - Multiple choice questions
 - True/false questions on theory
 - Choose the right answer to exercises
- Final exam
 - Entirely multiple choice (because logistics)
 - Covers all the material (but more after midterm)
- See study guides posted before exams
- Closed book exams, only simple calculators

Questions?