CS 4100/5100: Foundations of AI
Introduction

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College of Computer and information Science
Northeastern University

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Topics to be covered in this course

- Search
  - uninformed search
  - heuristic search
  - constraint satisfaction
  - adversarial search
- Bayes networks
  - Probability refresher
  - Bayes networks
  - Hidden Markov Models
- Decision making under uncertainty
  - Markov Decision Processes
  - Reinforcement Learning
- Machine learning
  - Logistic regression
  - Support vector machine
  - Backpropagation
  - k-means clustering, Expectation Maximization
  - Dimensionality reduction

Class format

- ▶ Each class has assigned reading material (see syllabus). Please read it before coming to class.
- ▶ Class time is divided up into multiple concept segments
  - ▶ at the beginning of each segment, I lecture on a particular topic
  - ▶ then, you answer a few short quiz questions (handed out before class)
  - ▶ then, we discuss.
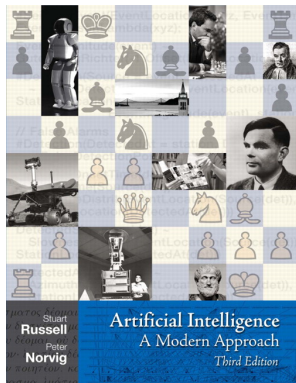 - ▶ each segment lasts approx 30-45min

Course evaluation

- (10%) Quizzes held during class
    - Covers material covered in class.
    - One quiz in every class.
    - I will drop the lowest two quiz grades.
- (45%) Programming assignments
    - 5 programming assignments.
    - I will drop the lowest programming assignment.
- (15%) Homework assignments
    - 3 homework assignments.
- (10%) Midterm exam
- (20%) Final exam

Contact Info

- Professor: Rob Platt, rplatt@ccs.neu.edu
- Office hrs: Fridays, 10:30am – 12:00, 208B West Village H, or by appointment

- TA: Di Sun
- Office hrs: TBD, sundi@ccs.neu.edu, 215 West Village H

- TA: Siyong Ma
- Office hrs: TBD, ma.s@husky.neu.edu, 208 West Village H

Textbook

Artificial Intelligence: A Modern Approach
Third Edition

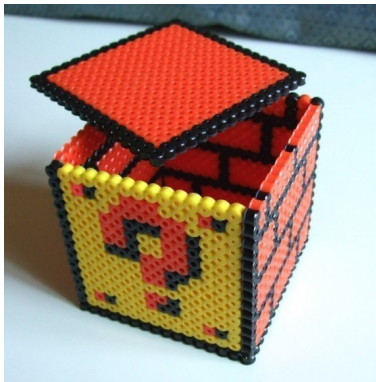Stuart Russell, Peter Norvig

The difference between talking and cheating

You ARE allowed to: talk to other students about concepts in the reading.

You ARE NOT allowed to: discuss or share the solutions to homework assignments with anyone besides me or the TA.

If you violate these rules, I will probably find out about it (using Moss). If I do, then you will be penalized and I may refer you to the college for disciplinary action.

Piazza

- https://piazza.com/northeastern/fall2014/cs41005100

Questions?