Final Exam

- The final exam will be closed notes, books, laptops, and people.

- 90 minutes. 4/25 Wednesday 12:00-1:30pm. This room.

- Preparation:
  - Lecture Slides
  - Hand-out Exercises
  - Practice Final
  - Project 3: Reinforcement Learning
  - Project 4: Ghostbusters
Final Exam (20%)

- Make sure you **understand** the fundamentals in addition to being able to procedurally execute algorithms.

- The exam will not test your knowledge of Python, however questions may assume **familiarity with the projects** and test ability of writing pseudocode.

- See **hand-out exercises** and **practice final** for examples

2% extra credit for submitting your solutions in lecture on Friday 4/20 by 11:10am
Possible Final Exam Topics

- **Markov Decision Processes:**
  - Markov decision process definition
  - Reward functions, values and q-values
  - Bellman equations
  - Value iteration
  - Policy iteration

- **Reinforcement Learning**
  - Q-learning
  - Approximate Q-Learning

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Pacman seeks reward.
Should he eat or should he run?
When in doubt, Q-learn.
Possible Final Exam Topics

- **Markov Models and HMMs:**
  - Markov Model and HMM definition
  - Observation and Time Elapse
  - Exact Inference
  - Approximate Inference
  - Particle Filtering
  - Most Likely Explanation

- **Bayes Nets:**
  - Probabilistic Representations
  - D-Seperation
  - Inference
  - Variable Elimination
Possible Final Exam Topics

Will not cover the follows:
- Policy Gradient Methods
- Deep Reinforcement Learning
- Neural Networks
- Perceptron
- Naive Bayes
- Speech Recognition
- Computer Vision
- Robotics
- Natural Language Processing
Office Hour this/next week

- Office Hour - Friday, 4/20 4-5pm (DL 495)
- Office Hour - Monday, 4/23 1-2pm (DL 495)
- TA hour (project 4) - Thursday 4/19 10:30-11:30am (DL 580)