CS 471/571(Fall 2023): Introduction to Artificial Intelligence

Exam Review

Thanh H. Nguyen

Reminder

- Student experience survey

  - Deadline: 06:00 AM on Monday, Dec 4th, 2023

  - If >= 80% of students complete the survey, everyone will get an extra 2% credit for your final grade

Time and Location

- Time:
  - 10:15– 12:15 (120 minutes),
  - Monday, December 4th, 2023.

- Location: 110 WIL

- Open book:
  - Textbook
  - Lecture slides
  - 2-side 1-page cheat-sheet

- Calculator

Topics

- Graph Search

- Adversarial search

- Markov Decision Process

- Reinforcement learning

- Bayes Nets

Graph Search

- Uninformed search
  - UCS

- Informed search
  - Greedy
  - A*
  - Admissibility and consistence

Adversarial Search

- Minimax search

- Alpha-beta pruning

Markov Decision Process

- Policy / value iteration

- Optimal policy / value of states

Reinforcement Learning

- Q-learning

- Approximate Q-learning

Bayes Nets

- Semantic

- Independence
  - D-separation

- Inference
  - Variable elimination

- Sampling
  - Likelihood Weighting
  - Gibbs sampling

Example:

- Exam Fall 2020:
  - Link: https://classes.cs.uoregon.edu/23F/cs471/lectures/FinalFall2020.pdf