

Monte-Carlo Methods in Artificial Intelligence
Oregon State University, Corvallis
Location: 1007, Kelley Engineering Center

Monday, March 18, 2013

- 8:45-9:00: Introduction, Overview, *Prasad Tadepalli*
9:00-10:45: Approximate Inference in Bayesian Networks: random variables, conditional and joint distributions, inference by forward sampling, *Weng-Keen Wong*
11:00-12:00: Invasive Species Modeling, *Tom Dietterich*
12:00-1:30: Lunch
1:30-2:30: Decision Making in Markov Decision Processes: Evaluating policies, *Alan Fern*
2:45-5:00: Lab exercise: Writing policies for playing Galcon, *Jed Irvine, Mandana Hamidi, Henry Trimbach*

Tuesday, March 19, 2013

- 9:00-10:45: Conditioning on Evidence: rejection sampling, likelihood weighting, importance sampling, *Weng-Keen Wong and Prasad Tadepalli*
11:00-12:00: Monte-Carlo Localization for Robots, *Bill Smart*
12:00-1:30: Lunch
1:30-2:30: Policy Improvement: Computing rollout policies, recursive rollouts, *Alan Fern*
2:40-5:00: Lab exercise: policy rollout on Galcon, *Jed Irvine, Walker Orr, Shan Xue*

Wednesday, March 20, 2013

- 9:00-10:00: Markov Chain Monte Carlo methods, Gibbs Sampling, *Prasad Tadepalli*
10:00-10:45: Syndromic Surveillance, *Weng-Keen Wong*
11:00-12:00: Air Traffic Control, *Kagan Tumer*
12:00-1:30: Lunch
1:30-2:30: Monte Carlo Tree Search and UCT, *Alan Fern*
2:40-5:00: Lab exercise: Experiments with UCT, Introduction to team projects, *Jed Irvine, Mandana Hamidi, Jana Doppa*
5:30-7:30: Dinner at McMenamins

Thursday, March 21, 2013

- 9:00-10:00: Dynamic Bayesian Networks and Particle Filtering, *Prasad Tadepalli*
10:00-11:00: Ecosystem Management Problems, *Tom Dietterich*
11:15-12:00: Tournament Rules, *Jed Irvine*
12:00-1:30: Lunch
1:30-5:00: Team Project, *Jed Irvine, Henry Trimbach, Jervis Pinto*

Friday, March 22, 2013

- 9:00: Projects due
9:00-10:00: Partially Observable Markov Decision Processes, *Tom Dietterich*
10:00-11:00: Monte Carlo Planning in Games, *Alan Fern*
11:15-12:00: Student Presentations
12:00-1:30: Lunch
1:30-2:30: Student Presentations
2:30-3:30: Tournament Results, *Jed Irvine, Jana Doppa, Jervis Pinto*