

Course wrap up

CS 486/686

University of Waterloo

Lecture 24: April 3, 2014

Outline

- Course wrap up
- Final exam info (see course website)
- Other AI courses
- AI research
- AI jobs

Topics Covered

- Search algorithms
- Probabilistic Inference
- Decision Making under Uncertainty
- Machine Learning
- A bit of Natural Language Processing
- A bit of Robotics

Topics That We Didn't Cover

- Computer Vision
- Natural Language Processing
- Robotics
- Multi-agent Systems

Other AI courses

- CS485/685: Machine Learning (W15)
- CS498/698: Computer Vision
- CS798: Games for Health (S14)
- CS786: Prob. Inference and Machine Learning
- CS784: Computational Linguistics
- CS886: Sequential Decision Making and Reinforcement Learning
- CS886: Natural Language Understanding
- STAT440/840: Computational Inference
- STAT441/841: Statistical Learning - Classification
- STAT442/890 Data visualization

AI research group

- Web: ai.uwaterloo.ca
- Professors:
 - Shai Ben David (learning theory)
 - Chrysanne DiMarco (natural language processing)
 - Peter Van Beek (constraint programming)
 - Robin Cohen (multi-agent systems, user modeling)
 - Pascal Poupart (machine learning, health informatics, natural language processing)
 - Jesse Hoey (health informatics, machine learning, computer vision)
 - Daniel Lizotte (health informatics, machine learning)
 - Kate Larson (game theory, mechanism design)
 - Richard Mann (computer vision)

My research projects

- Reasoning Under Uncertainty and Machine Learning
 - Lifelong machine learning
 - Performance guarantees in planning and inference
 - Activity monitoring and prompting (NexJ Systems)
- Natural language processing
 - Chatbots (Kik Interactive)
 - Social media text mining (In the Chat)
- Computer Vision
 - Visual Product Search (Slyce)
 - Smart walkers (activity recognition, limb tracking)

AI jobs

- Data Science: golden age of Machine Learning
- All large companies have AI R&D groups
 - Intel, Microsoft, IBM, Google, Amazon, Yahoo
- Some companies want to be known as Machine Learning companies
 - Zynga, Huawei
- Many small companies use AI
 - Kik Interactive, In the Chat, Slyce, Maluuba, Milao Language,...
- AI is a growing industry: it has the potential to revolutionize the computer industry!