

Course wrap up

CS 486/686
University of Waterloo
Lecture 24: July 23, 2015

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 (F15 Ben-David, W16 Poupart)
- CS489/698: Big Data Infrastructure (W16)
- CS489/698: Computational Audio (W16)
- CS498/698: Computer Vision
- CS798: Games for Health (F15)
- CS786: Prob. Inference and Machine Learning
- CS784: Computational Linguistics
- 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 (computational linguistics)
 - Peter Van Beek (constraint programming)
 - Robin Cohen (multi-agent systems, user modeling)
 - Pascal Poupart (machine learning, natural language processing, health informatics)
 - Jesse Hoey (health informatics, machine learning, computer vision)
 - Kate Larson (game theory, mechanism design)
 - Richard Mann (computational audio, computer vision)

My research projects

- Reasoning Under Uncertainty and Machine Learning
 - Lifelong machine learning
 - Sum-Product Networks
 - Bayesian moment matching
 - Data Complexity Analysis
- Natural language processing
 - Conversational agents
 - Topic modeling
- Health Informatics
 - Mobile health, activity tracking

CS486/686 Lecture Slides (c) 2015 P. Poupart

7

AI jobs

- Data Science: golden age of Machine Learning
- All large companies have AI R&D groups
 - Google, Microsoft, IBM, Amazon, Yahoo, Baidu, Huawei, SAP
- Many small companies use AI
 - Kik Interactive, In the Chat, Slyce, Maluuba, HockeyTech
- AI is a growing industry: it has the potential to revolutionize the computer industry!

CS486/686 Lecture Slides (c) 2015 P. Poupart

8