CSC 2502/486

Knowledge Representation and Reasoning

Lecturer:

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Aim: Introduce

- Techniques used in KR to represent knowledge
- Associated methods of automated reasoning

Prerequisites: Course in AI + working knowledge of

- LISP/PROLOG
- First-order logic

Corequisites: CSC 2404 (more logic!)

Marking: 4 problem sets 60% + 2 tests 40%

No project but some programming

Text: Draft book chapters to be distributed in class

Occasional papers on reserve

Format:

- Lectures: Friday 12-2pm, SS 2130
- Tutorials: Tuesday 1pm, SS 2130
  by arrangement
- Office hours: Monday 1:30 - 3:30pm

CSC 2502/486 - Outline

(Approximate)

Knowledge Representation and Reasoning

Topics:

- Introduction
- First-order logic
- Expressing knowledge
- Full Clausal logic
- Horn Clause logic
- Procedural representation
- Production systems
- Description logics
- Frames
- Inheritance networks
- Probabilities
- Defaults
- Abductive explanation
- Action
- Planning
- Expresiveness/tractability

Tests:

1. Friday, October 27	20%
2. Friday, December 8	20%

Assignments:

1. out Sept. 22, due Oct. 13	15%
2. out Oct. 13, due Nov. 10	20%
3. out Nov. 10, due Dec. 1	15%
4. out Dec. 1, due Dec. 8	10%