Meaning Machines
CS 672
Intro (1)

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Agenda

Meeting time

Syllabus

Requirements and procedures

Games

Demos

Issues

Meeting Time

Thursday 2:50-5:50
  Conflicts with semantics 3, phil colloq
Wednesday 9:50-12:50
  Conflicts with Prince sem, phon I, syntax I
Wednesday 11:30-2:30
  Conflicts with Prince sem, Goldman sem
Wednesday 1:10-4:10
  Conflicts with Goldman sem, Jimenez light sem

Syllabus

Three modules
  Language and representation in agents
  Collaborative dialogue agents
  Topics in meaning machines

Language and representation

Questions:
- When would a computational representation "really" mean something
- How do we build systems so they have representations that "really" mean something

Language and representation

Readings:
- Mental content in philosophy:
  - Fodor
  - Kripke
  - Putnam

Language and representation

Readings:
- Mental content in psychology:
  - Pylyshyn
  - Ballard
- Mental content in AI
  - Siskind
  - Agre

Collaborative dialogue agents

Questions:
- How can an agent whose thoughts have meaning put those meanings into words?
- How can it get those thoughts across to another agent?

Collaborative dialogue agents

Readings:
- Philosophy of language:
  - Grice
  - Lewis
  - Stalnaker

Collaborative dialogue agents

- Psychology of language:
  - Clark
  - Brennan
- AI
  - Grosz and Sidner
  - Traum and Allen
  - Cassell

Topics

Questions:
- How far can we go towards machines that use language meaningfully?
- How far can we go towards avoiding meaning by choosing better tasks and designs?
- Can we design practical AI experiments that will test our understanding of meaning?

Topics

Reference
- Deb Roy and colleagues

Clarification
- Jonathan Ginzburg and colleagues

Vagueness
- Barker, Graff

Acquisition
- Bloom, Roy again

Requirements and procedures

Background
- How to do interdisciplinary reading
- How to do interdisciplinary discussion
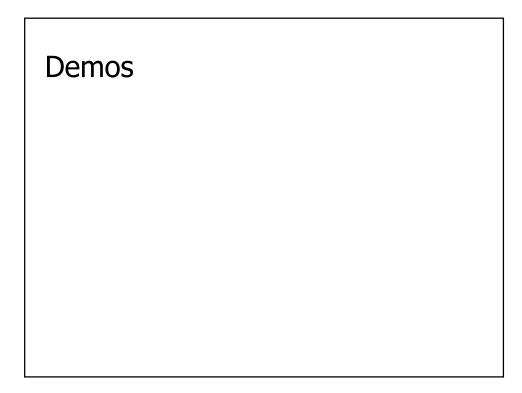- How to do interdisciplinary collaboration

Requirements and Procedures

Doing your part to contribute

Running one session

A final paper/project and presentation
- Really due in class Dec 8/9

Games

Demos

Enduring issues for this class

Who makes the meaning in an implementation?

McDermott

Life :-
    Perceive,
    Deliberate,
    Act,
    Life.

Enduring issues for this class

Who makes the meaning in system's utterances?

Winograd

User: I feel sad.

Eliza: What other feelings do you have?

Enduring issues for this class

What kinds of examples highlight the similarities and differences between computer representations and human representations?

Footprint	Swamp Man
Sunburn	Doppelganger
Photograph	Chinese Room
Encyclopedia	Watt governor

Enduring issues for this class

How much of our meaning comes from the rules of language, and how much comes from us and the way we use it?

Tomorrow is another day.

He's punctual & has excellent penmanship.

So they'll be you know they'll be feeling quite sort of ready for that.

Enduring issues

What can we build next?
What should we build next?