CS343
Artificial Intelligence

Prof: Peter Stone

Department of Computer Science
The University of Texas at Austin

Good Afternoon, Colleagues

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Are there any questions?

UTCS

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Logistics

- Problems with the assignment?

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  - 3.1: Goal formulation vs. problem formulation

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- Next week's assignments up

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- Comments on Forum for AI talk last Friday?

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- Reading responses good overall

An Example

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- You, as a class, act as a learning agent

- **Actions**: Wave, Stand, Clap

- **Observations**: colors, reward

- **Goal**: Find an optimal *policy*

  – Way of selecting actions that gets you the most reward

How did you do it?

How did you do it?

- What is your policy?

- What does the world look like?

Formalizing the Activity

Knowns:

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- Rewards in $\mathbb{R}$
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$$o_0, a_0, r_0, o_1, a_1, r_1, o_2, \ldots$$

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Unknowns:

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- $\mathcal{R} : \mathcal{S} \times \mathcal{A} \mapsto \mathbb{R}$
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- discrete vs. continuous
- known vs. unknown

Next week: Relaxing the Assumptions

- Textbook readings: continuous spaces, nondeterminism, partial observations, unknown environments, . . .

- Responses both Monday and Wednesday

- Search programming assignment

Peter Stone