CS 4804: Introduction to Artificial Intelligence

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Plan

- Introductions

- Warmup discussion

- Course logistics

- Definitions

Introductions

Current AI Technology

- What are your favorite examples of current AI technology available to people living in 2018?

  - How would you guess the AI software works in these?

  - What are they good at and what are they bad at?

Definition of AI

- What is the simplest example of AI?

- What is the most advanced computer program that is not intelligent?

- What is the definition of artificial intelligence?

Syllabus

Agents

- Agent: computer program expected to be intelligent

  - Reflex agents: direct input-output

  - Model-based agents: store representation of environment

  - Goal-based agents: want to reach goal state

  - Utility-based agents: want to improve utility function

  - Learning agents: adapt to previous experience and data

Attributes of AIs

- Performance metrics

- Environment ⟶

- Actuators (outputs)

- Sensors (inputs)

- Observability

- Single-agent or multi-agent

- Deterministic/stochastic

- Episodic or sequential

- Static or dynamic

- Discrete/continuous

Favorite AIs?

Reading and Next Class

- Today's definitions: AIMA 2–2.4

- Search algorithms: AIMA 3–3.4