

472 Recitation

Week 2

Contact

- Instructor: Dr. Yan-Bin Jia

Email: jia@iastate.edu;

Webex: <https://iastate.webex.com/meet/jia>

Office hours: Tuesday 11:00AM – 12:00PM & Wednesday 1:00-2:00PM

- TA

Xiaoqian Mu <muxiao@iastate.edu>

Webex: <https://iastate.webex.com/meet/muxiao>

Office hours: Monday, 9:00-10:00 AM & Thursday 10:00-11:00AM

Yuechuan Xue <yuechuan@iastate.edu>

Webex: <https://iastate.webex.com/meet/yuechuan>

Office hours: Friday 1:00 – 3:00 PM

Assignments & Exams

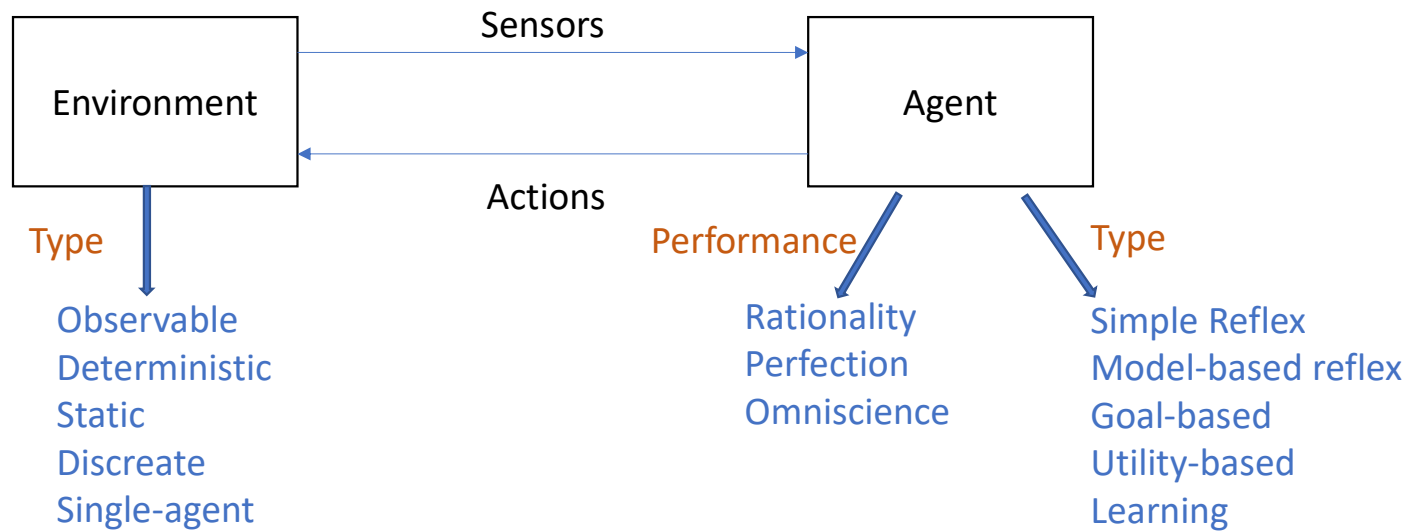
	Problem Sets	Projects	Midterm	Final	Essay
Undergrad	30%	20%	20%	30%	
Grad	27%	18%	18%	27%	10%

- Problem sets: <https://aimacode.github.io/aima-exercises/>
- Projects: **two** projects, **java** implementation
- **No late submission will be accepted**

Resource

- S. Russell and P. Norvig. *Artificial Intelligence: A Modern Approach* (4th edition). Pearson Education, Inc., 2020. ISBN: 9780134610993
- Online resources are available at the book's website: <http://aima.cs.berkeley.edu/>
- Questions can be posted on Canvas->Discussions

Intelligent Agents



Performance measure

- An omniscient agent knows the actual outcome of its actions.
- Rationality maximizes the expected performance.
- Perfection maximizes actual performance.

Environment Properties

- Fully or partially observable: the sensors can detect all aspects that are relevant to the choice of action
- Single-agent or multiagent
- Deterministic or stochastic : the next state of the environment is completely determined by the current state and the action executed by the agent.
- Sequential or Episodic: the current decision could affect all future decisions
- Dynamic vs. semi-dynamic vs. static
- Discrete vs. continuous

Agents

- Simple Reflex Agent: Select actions based on the current percepts and ignore the percept history.
- Model-based Reflex Agent: has a model for the partially observable environment
- Goal-Based Agent: taking the future into account
- Utility-Based Agent: maximize expected utility by selecting among conflicting goals or making selection based on likelihood of success and goal importance
- Learning-Based Agent

Learning-Based Agent

