



Pacman Project 1

Rule-Based System

【人工智慧概論】

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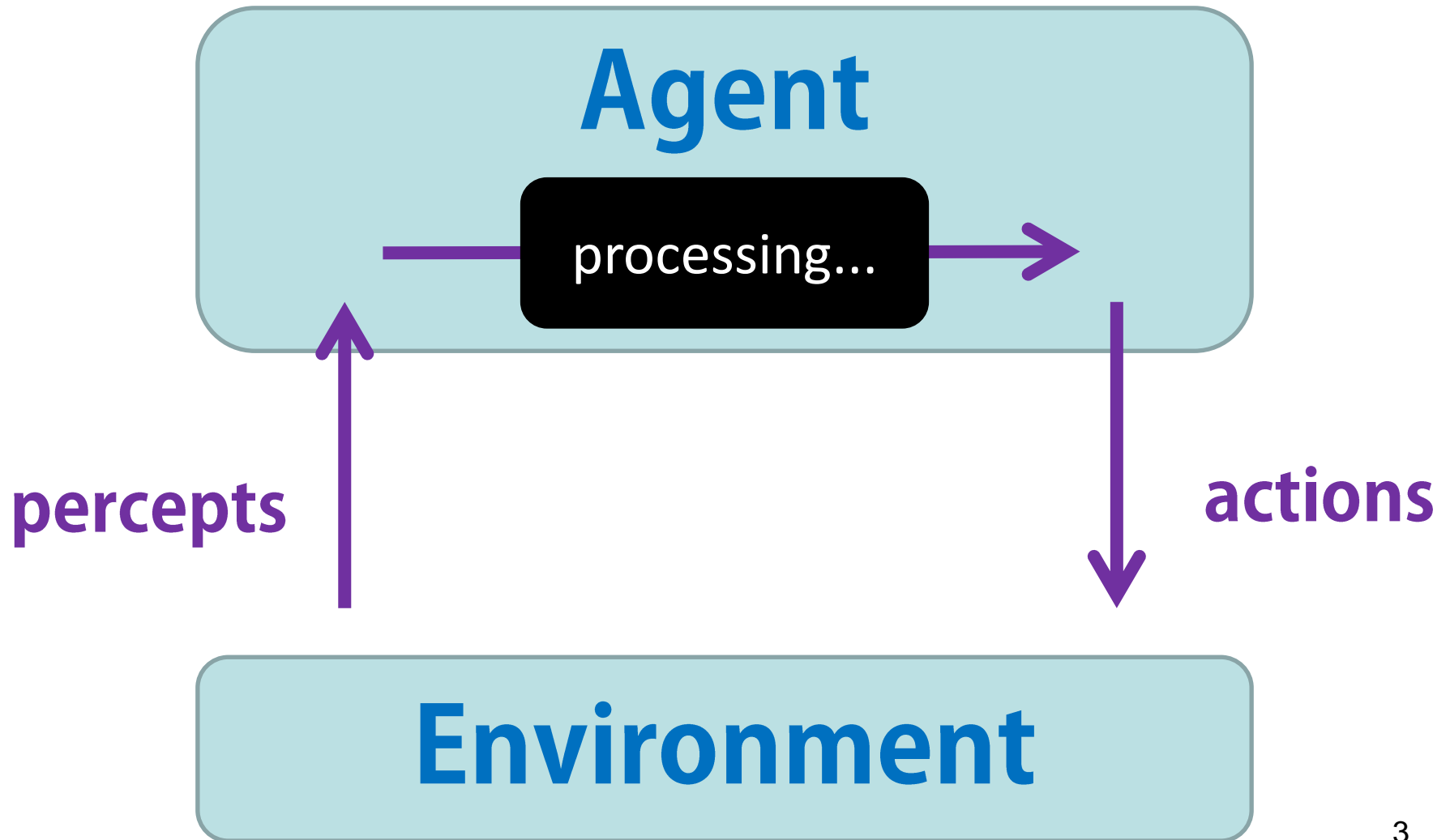




-
- **Rule-Based System**
 - **Objectives**



Agent





Rule-Based System

- A typical rule-based system has four basic components: A list of rules or rule base, which is a specific type of knowledge base. An inference engine or semantic reasoner, which infers information or takes action based on the interaction of input and the rule base.

[\(Wiki\)](#)



Rule-Based System Example

If Health < 25% **Then**

Drink potion

Else If Health < 50% **Then**

Run

Else

Attack



Rule-Based System

Cons

- Requiring lots of expert-knowledge
- Non-adaptive



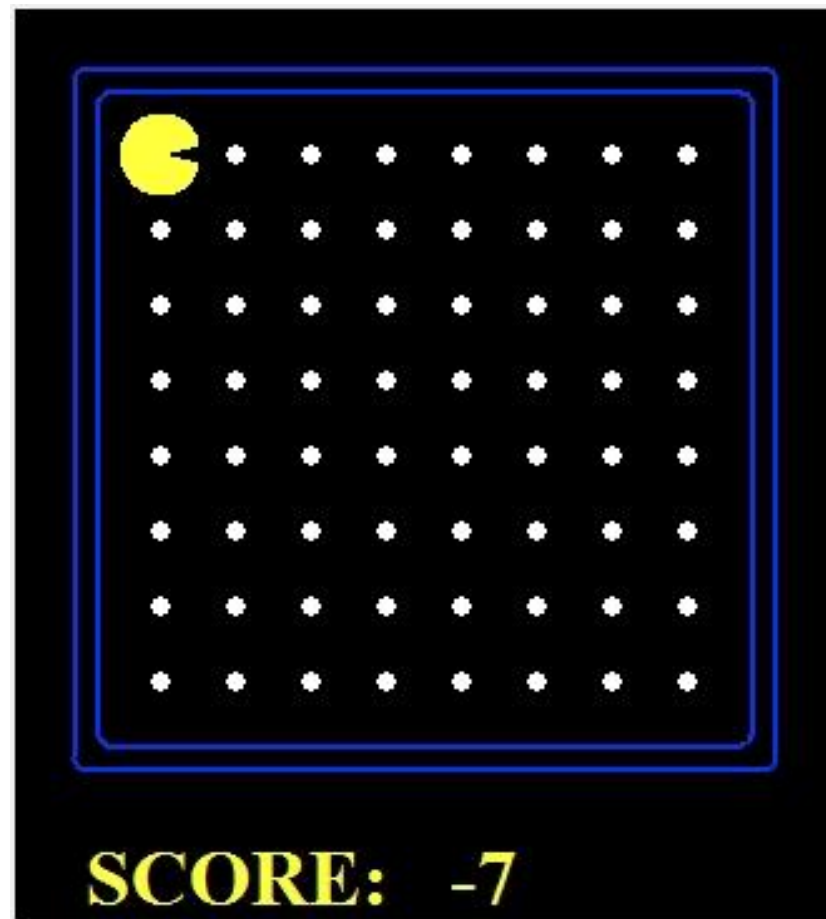
Objectives

- P1-1 CleanerAgent (30%)
- P1-2 FroggerAgent (30%)
- P1-3 SnakeAgent (20%)
- P1-4 DodgeAgent (20%)

Objectives (1/4)

CleanerAgent (30%)

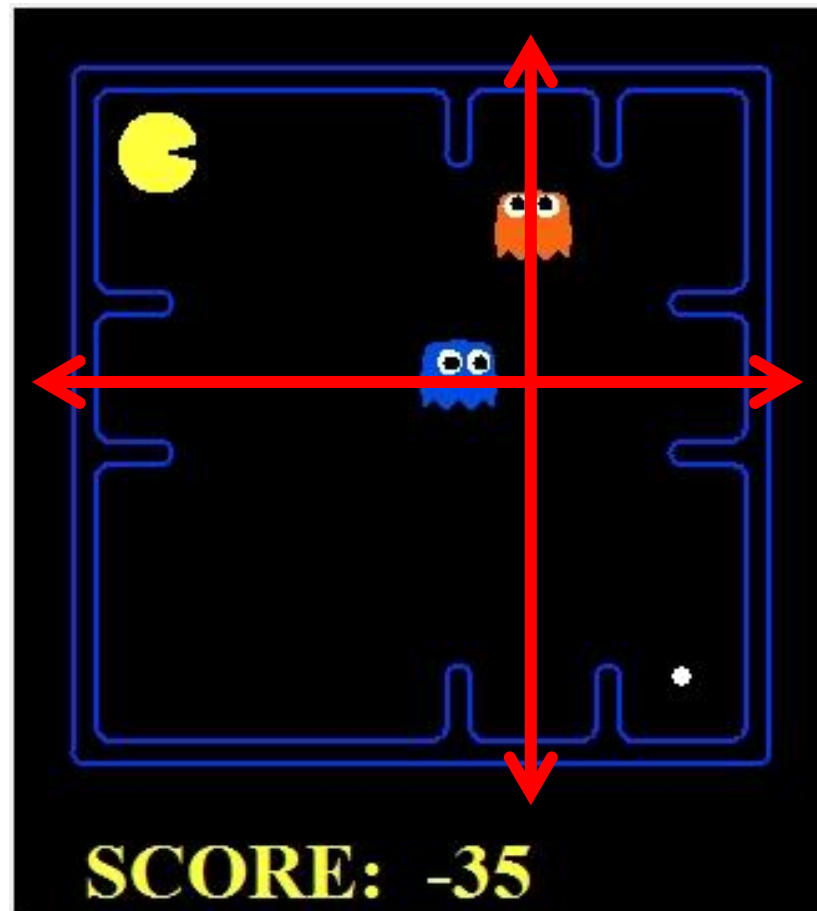
- -p CleanerAgent -l P1-1



Objectives (2/4)

FroggerAgent (30%)

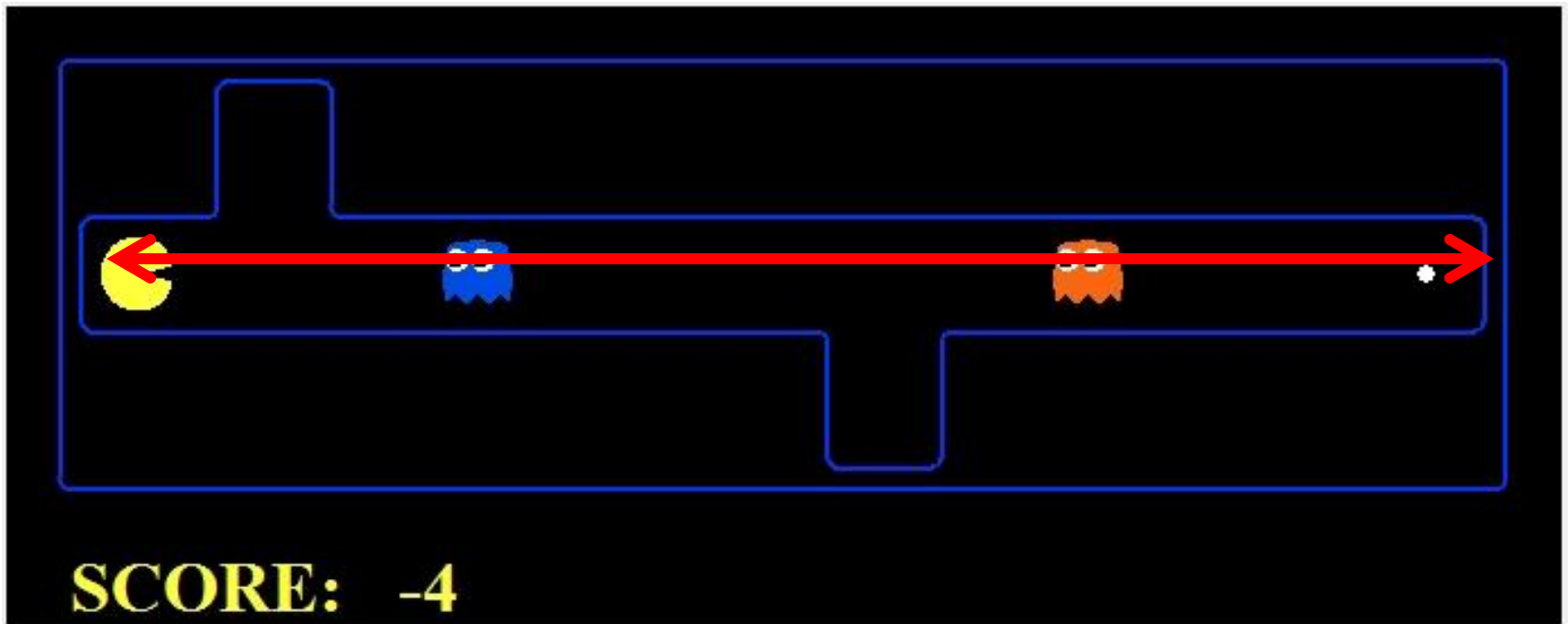
- -p FroggerAgent -l P1-2 -g StraightRandomGhost



Objectives (3/4)

SnakeAgent (20%)

- -p SnakeAgent -l P1-3 -g StraightRandomGhost



Objectives (4/4)

DodgeAgent (20%)

- -p DodgeAgent -l P1-4





Hints

- `pacman.py`
- `game.py`
- Read the comments.
- **print** is your friend!



Submit

- Edit and upload `searchAgents.py` to e3
- Search for “[Project 1] YOUR CODE HERE”
- Deadline: **3/17** 23:59 (2 weeks)
- Late policy: 80%
- **No plagiarism**