

# Artificial Intelligence

Introduction and Course Definition

# Course Information

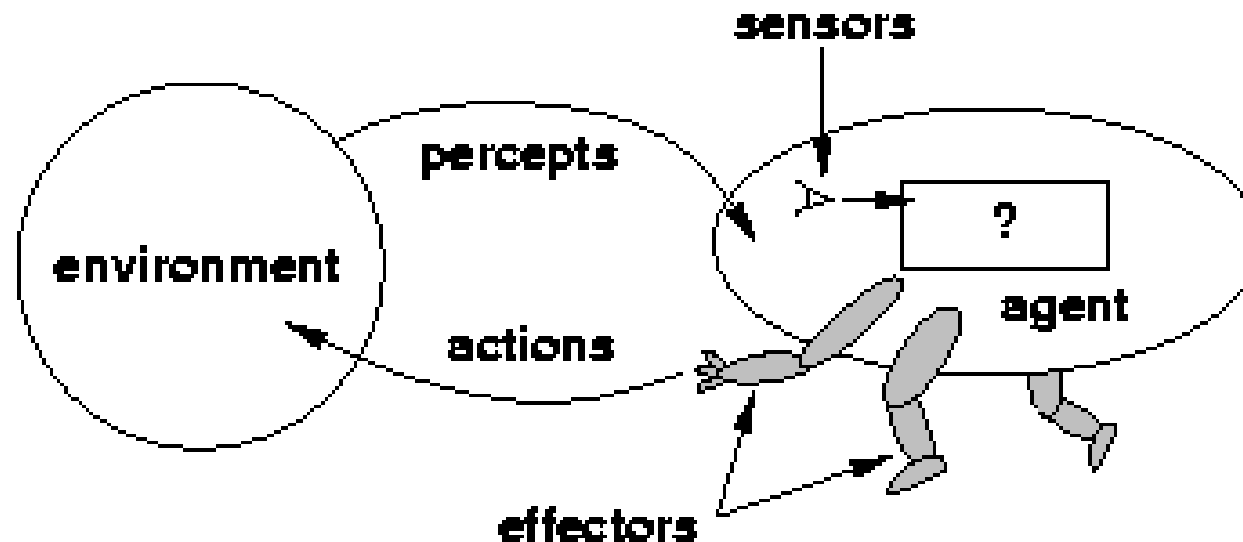
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- Course Webpage: [ceng466.cankaya.edu.tr](http://ceng466.cankaya.edu.tr)
- Text Book: S. Russell, and P. Norvig, Artificial Intelligence: A Modern Approach, Prentice-Hall, 3<sup>rd</sup> ed.

# What Is Artificial Intelligence

- “The art of creating machines that perform functions that require intelligence when performed by people” (Kurzweil, 1990).
- “The branch of computer science that is concerned with the automation of intelligent behavior.” (Luger and Stubblefield, 1993)

# Intelligent Agents

- An agent is something that perceives and acts in an environment
- An ideal agent always takes actions that maximizes its performance
- An agent adopts a goal and searches the best path to reach that goal



# Course Syllabus

- Introduction: What Is AI?
- Agents and Environments
- The Nature of Environments
- The Structure of Agents
  - Agent programs
  - Simple reflex agents
  - Model-based reflex agents
  - Goal-based agents
  - Utility-based agents
  - Learning agents

# Syllabus (Continued)

- Solving Problems by Searching
- Searching for Solutions
- Uninformed Search Strategies
- Informed (Heuristic) Search Strategies
- Advanced Search Strategies
- Knowledge-Based Agents
- Reasoning
- First-Order Logic
- Making Simple Decisions
- Learning

# Grading Policy

- Midterm 35%
- Final 35%
- Term Project 30%

Questions