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Pragmatic Product Leader Course

Become a Product Manager with Superpowers



Lesson 14J

AI Apps: Agents

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14.2. AI and ML Apps



AI apps



What is AI?

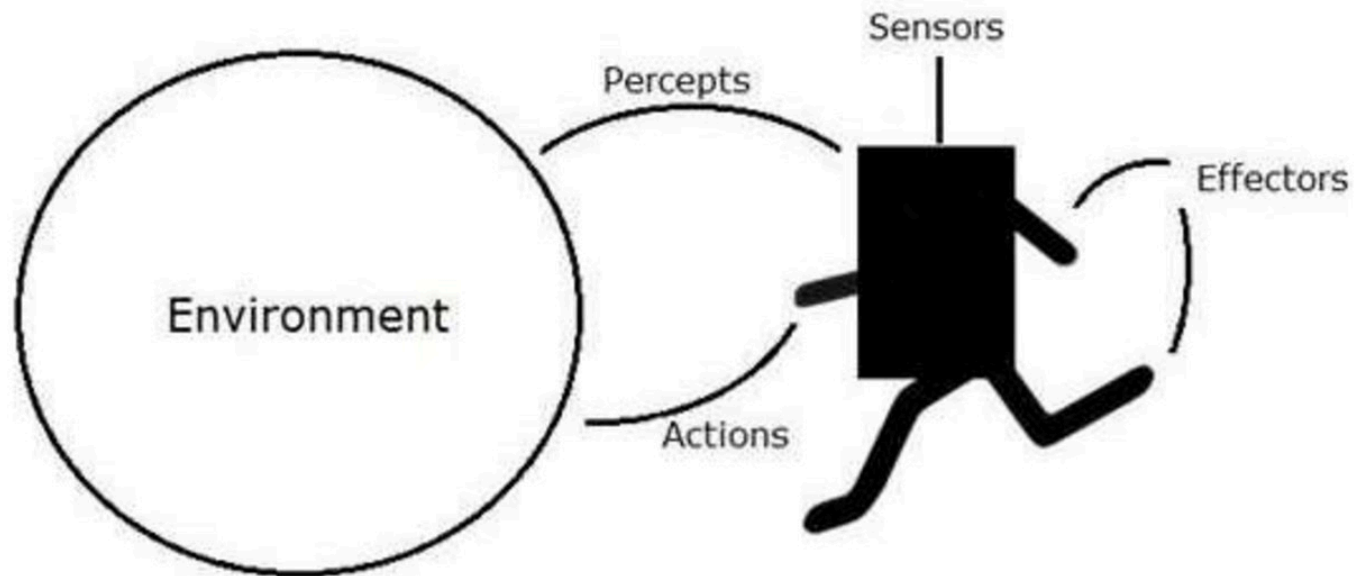
- In simple words, AI is a bunch of algorithms that make decision about data
- These algorithms enable computers to perform tasks autonomously without human intervention
- Goal of AI:
 - Creating expert systems
 - Create systems that behave and interact like humans
- Applications of AI:
 - Gaming
 - Natural Language Processing
 - Expert systems Eg: Flight Tracking Systems
 - Speech Recognition Eg: Bixby; Alexa
 - Handwriting Recognition
 - Intelligent Robots
 - Image processing



Components of an AI system

Two components make up the AI system:

- Agents
- Environment in which agents function



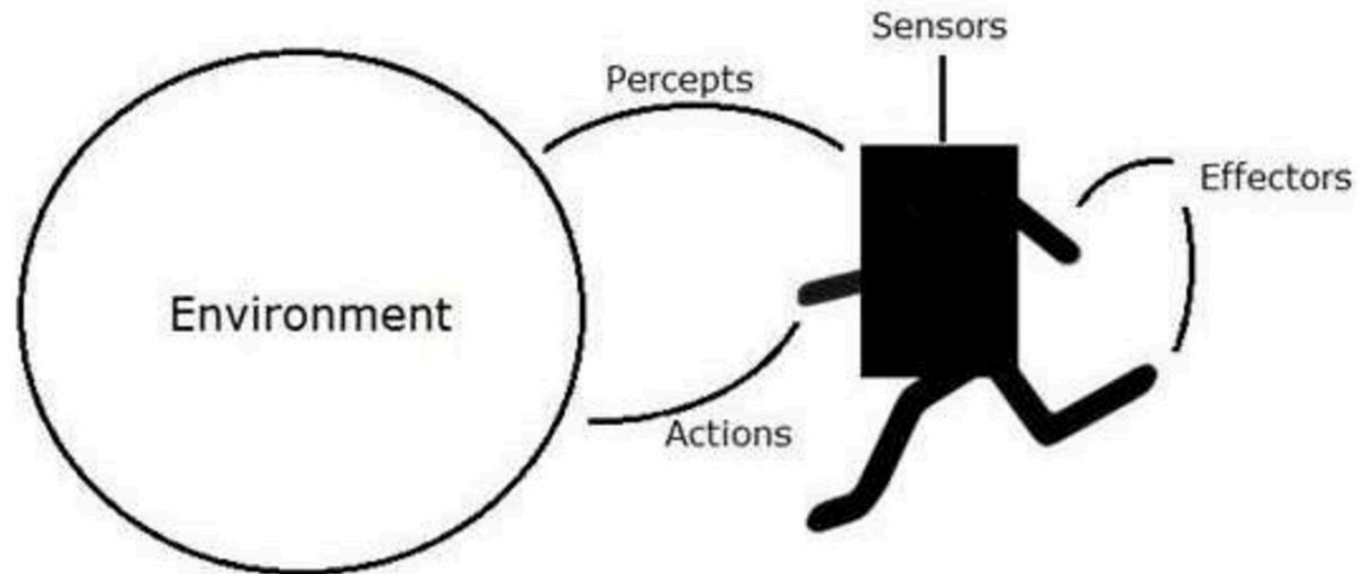


Agents



Components of an AI system - Agents

- Any program that can sense its surrounding through **sensors**
- Anything that can react to its surrounding through **effectors**
- Structure: Agent is defined by the **architecture** and **agent program**
 - **Architecture** - machinery on which an agent functions
 - **Agent Program** - Implementation of an agent function
- Example: Personal assistants on our cellphones





Types of Agents

Simple Reflex Agents

- Takes action only based on current environment
- Does not take into account historical actions
- Example: a robot vacuum cleaner that runs in an infinite loop of clean or dirty and decides to either clean dirt or continue moving

Model-Based Reflex Agents

- Needs memory to store historical actions
- Uses this historical memory to take into account unforeseeable aspects in the current environment
- Example: Self-steering cars

Goal-based Reflex agents

- These agents have a goal and a strategy to achieve that goal
- All its actions are geared towards reaching the goal
- Example: A search robot

Utility -based reflex agents

- Similar to goal based reflex agents
- But goal based agents are concerned only of achieving the goal, without regarding if the way it achieved the goal was the best
- Example: Best route feature on google map

Learning agents

- This agent learns from experience
- Has the ability to acquire information and integrate it with the system



To conclude

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Thank you.

