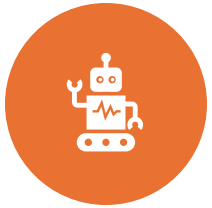

AI AGENTS

Core objectives of AI



ARTIFICIAL INTELLIGENCE (AI) IS THE SIMULATION OF HUMAN INTELLIGENCE IN MACHINES

LEARNING (FROM DATA AND EXPERIENCES),

REASONING (MAKING DECISIONS OR PREDICTIONS),

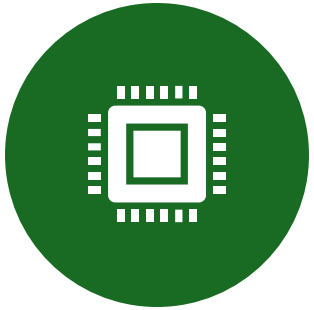
PROBLEM-SOLVING (FINDING SOLUTIONS TO COMPLEX TASKS),

PERCEPTION (INTERPRETING VISUAL, AUDIO, AND SENSORY DATA),

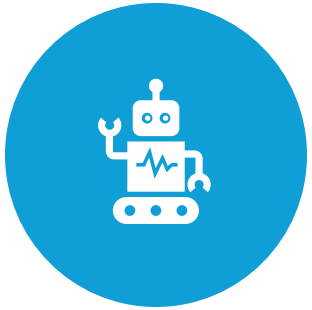
LANGUAGE UNDERSTANDING (INTERACTING THROUGH NATURAL HUMAN LANGUAGE).

Narrow AI, General AI, and Superintelligent AI

NARROW AI, GENERAL AI, AND SUPERINTELLIGENT AI



NARROW AI (WEAK AI): DESIGNED FOR SPECIFIC TASKS. EXAMPLES: SIRI, GOOGLE TRANSLATE, FACE RECOGNITION.

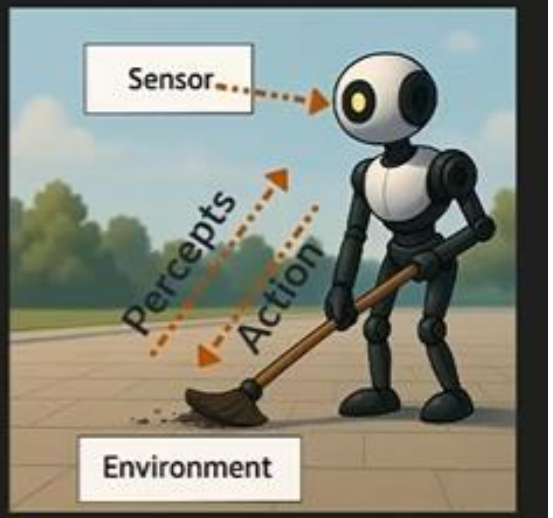


GENERAL AI (STRONG AI): HAS THE ABILITY TO UNDERSTAND, LEARN, AND APPLY KNOWLEDGE LIKE A HUMAN. STILL UNDER RESEARCH.

SUPERINTELLIGENT AI: HYPOTHETICAL FUTURE AI THAT SURPASSES HUMAN INTELLIGENCE IN ALL AREAS—PROBLEM-SOLVING, CREATIVITY, AND EMOTIONS.

What Is an Agent in AI?

Types, Examples & How They Think, Decide, and Act!



The Agent Loop: Perception → Decision → Action

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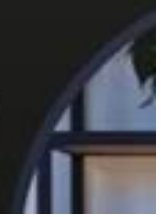
Types, Examples & How They Think, Decide, and Act!

The Agent Loop: Perception → Decision → Action

Example - thermostat	senses the room temperature	Decides: heat up or cool down	turn ON heater/ AC
Chatbot:	received user's message	decides what to reply back	replied



Types of Agents in AI:

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1- Simple Reflex Agents:

An automatic door:

"If I (Agent) see someone nearby, open door.'"

Types of Agents in AI:

2- Model-Based Reflex Agents:

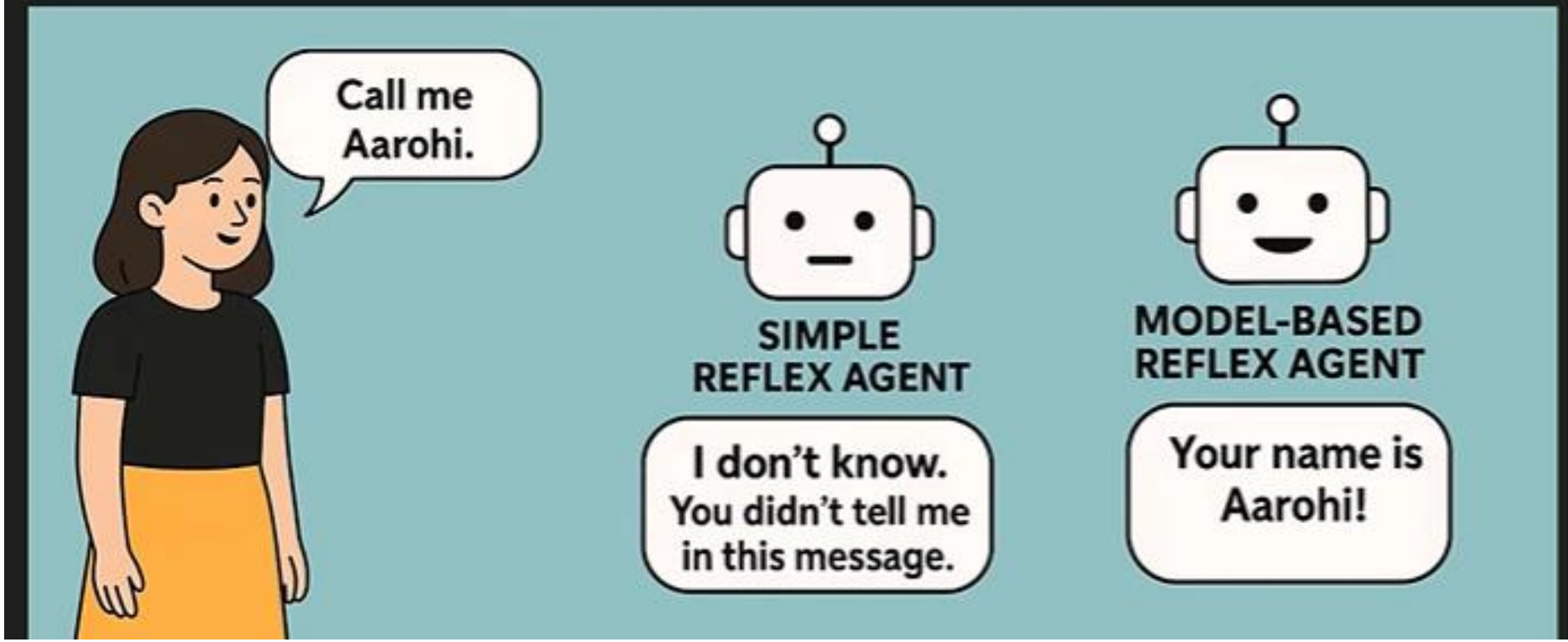
Simple Reflex Agent

Only looks at what's happening right now and reacts

model of the world

Instead of just reacting, it also remembers things

2- Model-Based Reflex Agents:

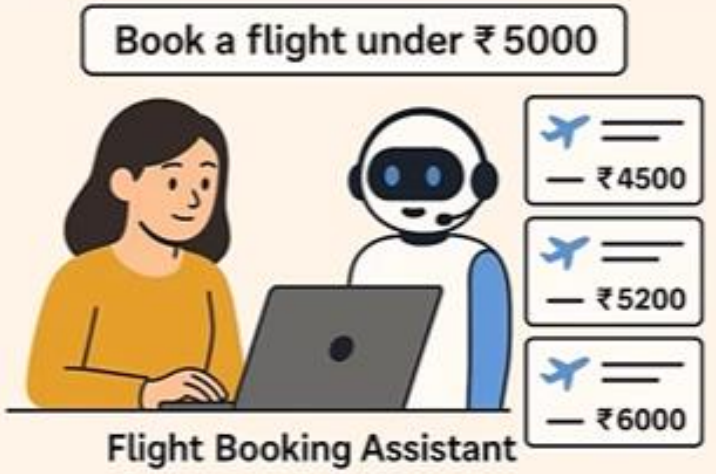



3- Goal-Based Agents:
It has a goal in mind
It plans.
Plans before acting.

Types of Agents in AI:

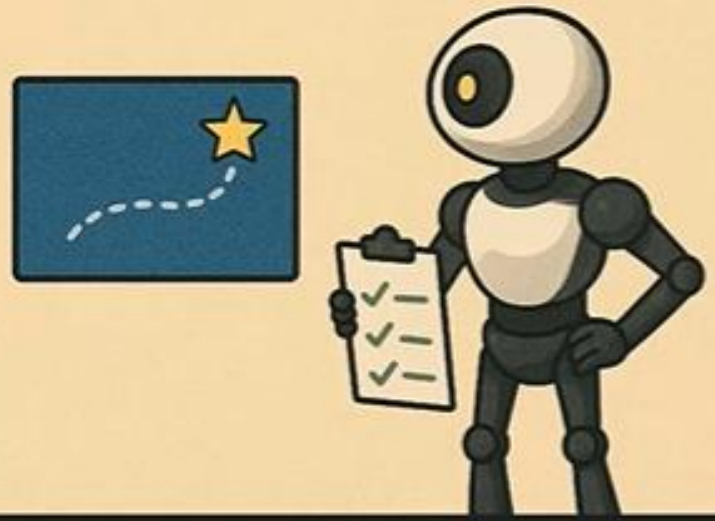
3- Goal-Based Agents:

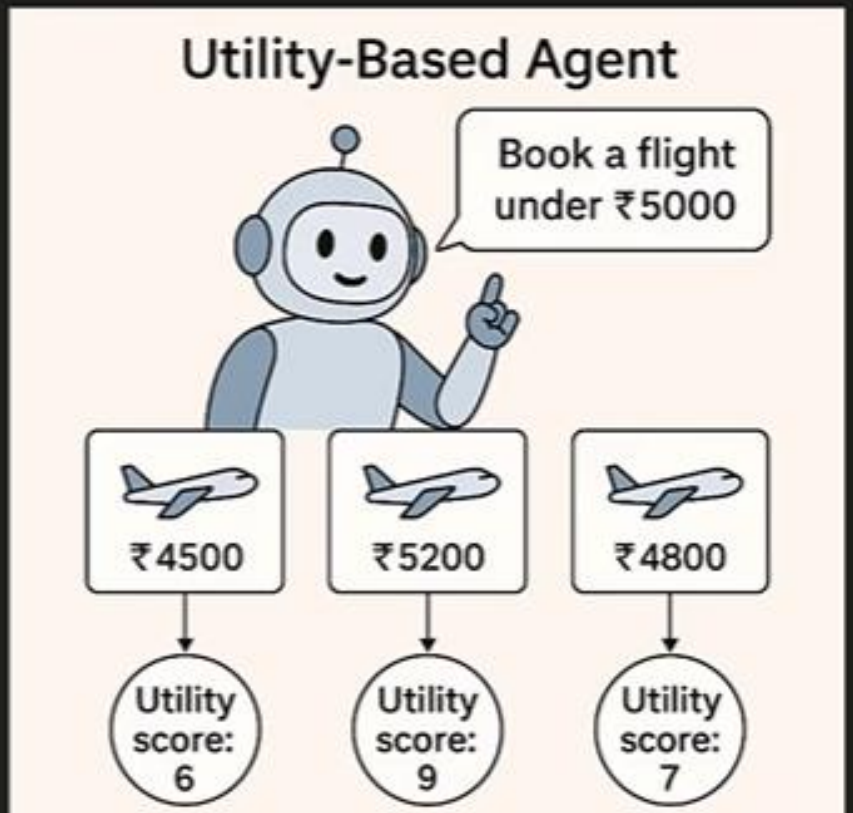
- Your Goal is to Reach the destination
- It checks roads, traffic, and suggests the best route.
- If one road is closed, it replans a new path



4- Utility-Based Agents:

Utility-Based Agent =
Goal-Based Agent
+ Smart Optimization





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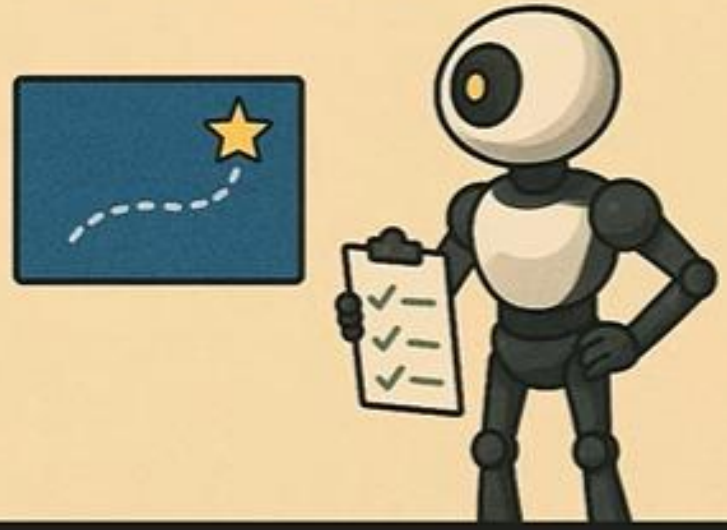
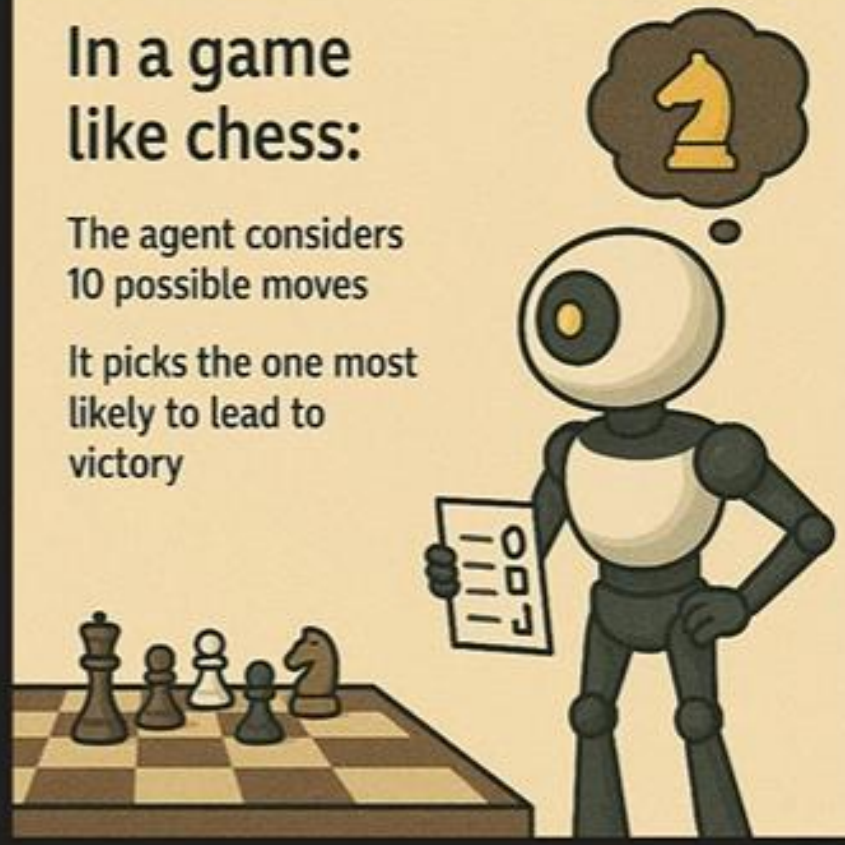


In a game
like chess:

The agent considers
10 possible moves

It picks the one most
likely to lead to
victory



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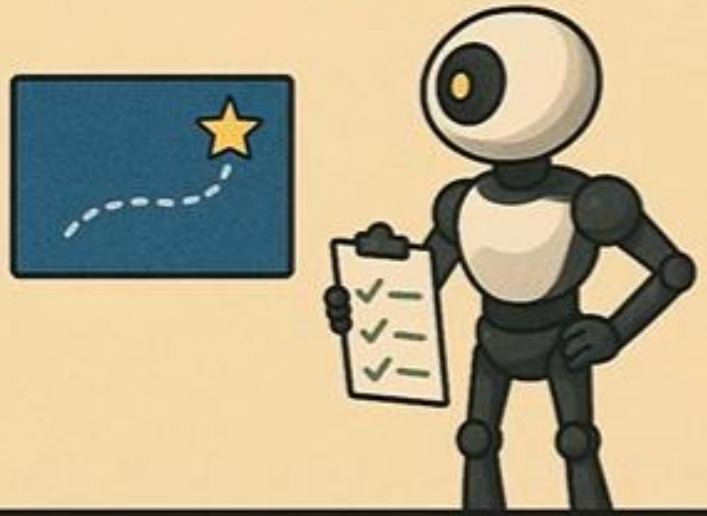

5- Learning Agents: