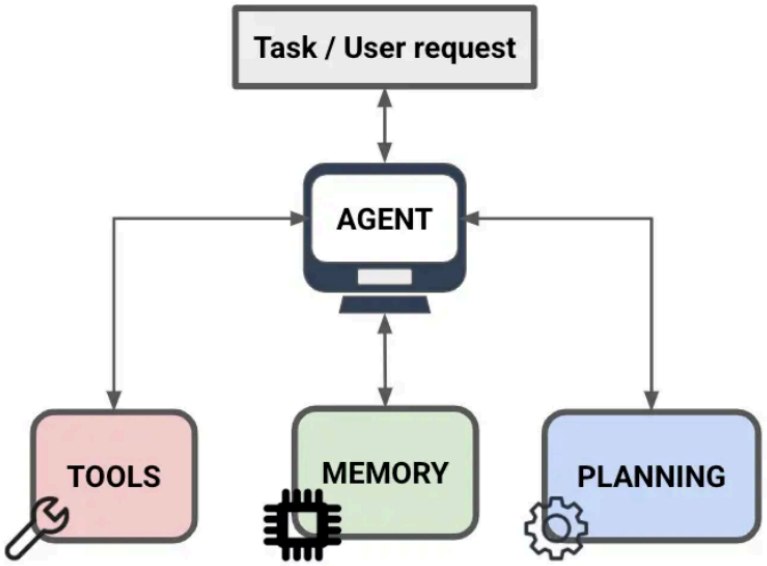
AI agents



An AI agent is a system that autonomously performs tasks by designing workflows with available tools.

AI agents can encompass a wide range of functions beyond natural language processing including decision-making, problem-solving, interacting with external environments and performing actions.

AI agents solve complex tasks across enterprise applications, including software design, IT automation, code generation and conversational assistance. They use the advanced natural language processing techniques of large language models (LLMs) to comprehend and respond to user inputs step-by-step and determine when to call on external tools.

Memory for AI agents

The memory of an AI agent refers to its ability to store, recall, and potentially learn from information over time. This can vary depending on the system, but in general, it can be broken down into a few different types of memory:

1. Short-Term Memory (Working Memory):

- This refers to the immediate information the AI is using to process and respond to the user at any given moment.
- Once the interaction is over, this information is often discarded unless the AI is explicitly designed to remember it for future conversations.
- For example, if you ask an AI agent for a recommendation, it may only "remember" your preferences for that specific conversation.

2. Long-Term Memory:

- In contrast to short-term memory, long-term memory allows an AI agent to retain information across multiple interactions.
- This could include things like user preferences, past conversations, or any other learned patterns.
- Memory in this context helps the agent offer more personalized and contextually aware responses over time.
- For instance, a personal assistant AI may remember your favorite restaurants or recurring tasks, which helps it make more tailored suggestions.

3. Episodic Memory:

- Some AI systems, especially those designed for more complex tasks (like robots or advanced personal assistants), might have episodic memory, where they remember specific past events or interactions.
- This allows them to recall not just information but the context and sequence of past events, similar to how humans remember life experiences.
- For example, a smart assistant could remember that you asked about a trip to Paris last year, and bring it up in a future conversation if it’s relevant.

4. Procedural Memory:

- This refers to remembering procedures or actions, rather than facts or events.
- In AI, it’s about learning the processes or steps involved in tasks, like how to process a request or optimize certain actions, without necessarily

remembering details of past interactions.

5. Adaptive Memory:

- This is when an AI can evolve or adapt its responses based on experiences, improving its behavior over time through learning. It's more about changing responses or behaviors based on patterns in data.
- For example, if an AI notices you prefer certain tones or certain types of responses, it could adjust future replies to suit that preference.

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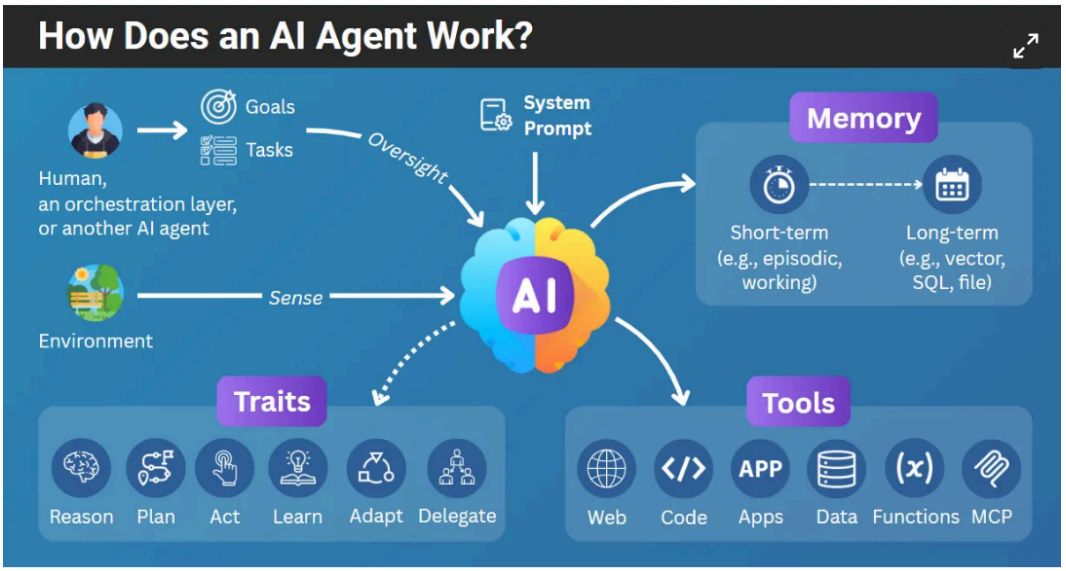
What is agentic AI?

Agentic AI is an artificial intelligence system that can accomplish a specific goal with limited supervision. It consists of AI agents—machine learning models that mimic human decision-making to solve problems in real time. In a multiagent system, each agent performs a specific subtask required to reach the goal and their efforts are coordinated through AI orchestration.



AI Agent Tools