20 AI Agents Terms

You MUST know

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1. Agent

An autonomous AI system that perceives its environment, processes information using prompts or inputs, and takes actions to achieve specific goals.

2. Environment

The digital or physical context in which an AI agent operates, including all elements, constraints, and tools the agent can interact with.

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3. Perception

The capability of an AI agent to gather, interpret, and understand information from its environment, often through sensors or data inputs.

4. Action

Any operation or decision executed by an AI agent (or a group of agents) in response to its perception and reasoning within the environment.

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5. State

A snapshot of all relevant variables describing the current situation of the agent and its environment at a given moment.

6. LLMs

Large Language Models: Advanced AI models trained on vast multimodal datasets, providing the agent with powerful natural language understanding and generation capabilities.

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7. LRMs

Large Reasoning Models: AI models designed to perform complex, context-aware reasoning, enabling agents to solve problems that require logical inference and multi-step thinking.

8. Tools

APIs, software libraries, or external services that agents use to extend their abilities and accomplish specific tasks within their workflows.

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9. Memory

A system that stores both the agent's current context and its historical interactions, enabling learning, adaptation, and continuity over time.

10. Knowledge Base

A structured repository containing facts, rules, and domain-specific information that agents access to enhance decision-making and generate accurate results.

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11. Orchestration

The coordination and management of multiple agents or processes, ensuring seamless interaction from initial input to final output.

12. Planning

The process by which an agent determines an optimal sequence of actions to achieve a defined objective, often involving foresight and strategy.

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13. Evaluation

The systematic assessment of an agent's performance, measuring how effectively it achieves its goals and identifying areas for improvement.

14. Architecture

The overall design and organization of an AI agent, detailing its core components, data flow, and how different modules interact.

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15. CoT

Chain of Thoughts: A reasoning approach where an agent explicitly breaks down complex problems into smaller, logical steps to arrive at a solution.

16. ReAcT

A framework that enables agents to alternate between reasoning and taking actions iteratively, improving problem-solving efficiency and adaptability.

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17. Multi-Agent Syst.

A setup where multiple AI agents operate and interact within a shared environment, collaborating or competing to achieve individual or collective goals.

18. Swarm

A collective behavior model where many simple agents interact locally, resulting in emergent, intelligent outcomes at the group level.

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19. Handoffs

The process of transferring tasks, responsibilities, or context between agents to leverage specialized capabilities and ensure workflow continuity.

20. Agent Debate

A structured interaction where multiple agents present and challenge arguments, leading to more robust reasoning and improved decision quality.

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