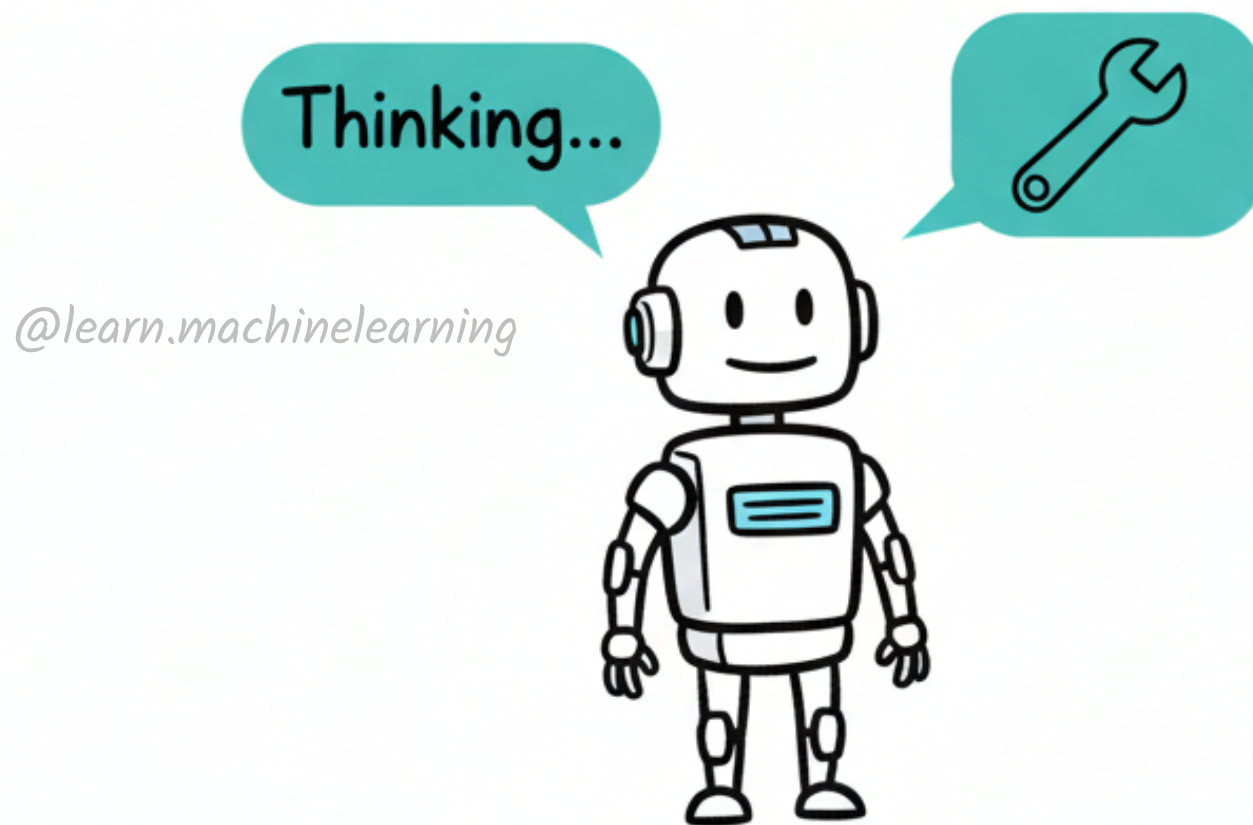


GENERATIVE AI SERIES: DAY 27

The ReAct Framework: How Agents 'Think' & Act

We've got the Agent's brain, and memory. Now, let's reveal the secret sauce: the "ReAct" framework, allowing agents to genuinely reason step-step! 💡



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Reason → Act

Solving Multi-Step Problems

Generative AI Series

Imagine you ask an agent: "Summarize the latest sales report from last week and tell me who the top 3 performers were." *@learn.machinelearning*

This isn't a single lookup. It requires:

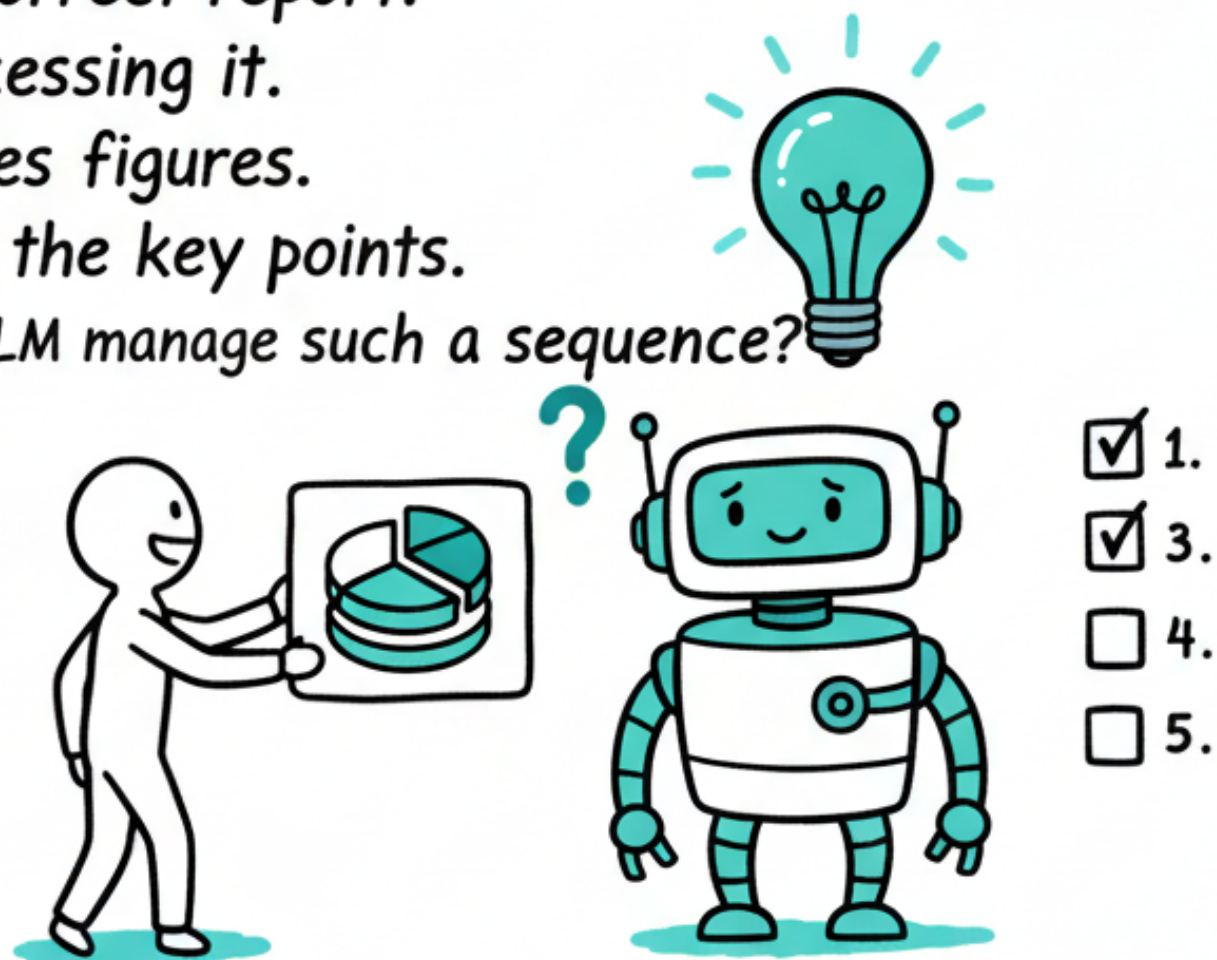
Finding the correct report.

Reading/processing it.

Identifying sales figures.

Summarized the key points.

How does an LLM manage such a sequence?



How does the agent break it down?

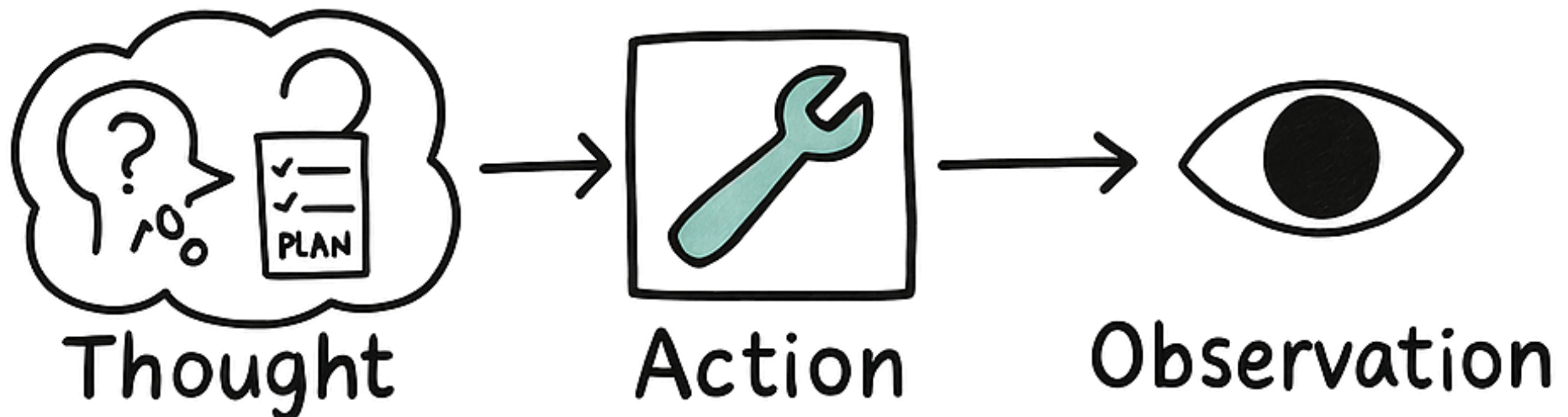
ReAct: The Agent's Internal Monologue

Introducing ReAct (Reason + Act) 💪➡

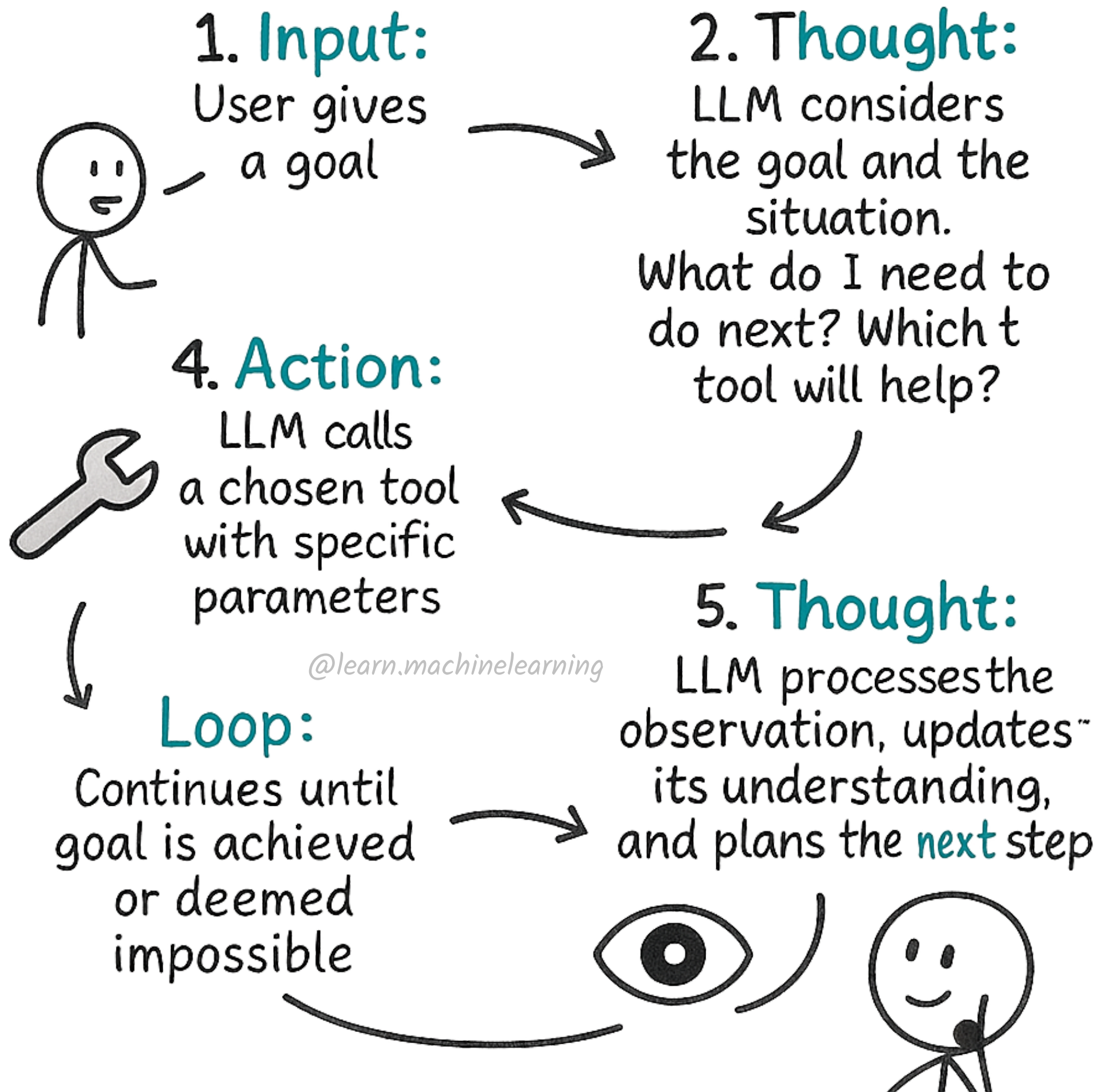
The ReAct (Reason + Act) framework is a powerful pattern that enables LLMs to:

1. Reason: Generate a thought process, explaining why it's taking a particular step.
2. Act: Choose a tool and execute an action based on its reasoning. *@learn.machinelearning*

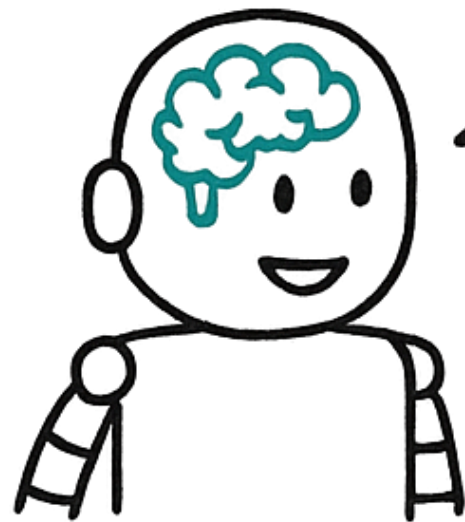
This structured 'thinking out loud' helps the LLM plan, reflect, and adapt.



The ReAct Loop in Action



Example: "Find a good Italian restaurant in London"



I need to find restaurants. I'll use a web search tool. My query will be, "best Italian restaurants London".

```
tool_web_search("best Italian  
restaurants London")
```

Thought

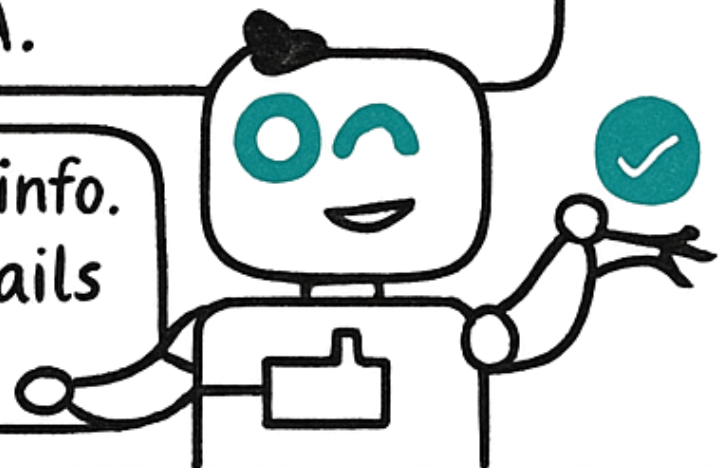
Found 5 restaurants: A, B, C, D, E.
Restaurant A has 4.5 stars, B has 4 stars...

Observation

Okay, I have a list. I should check reviews for the highest-rated. checker" tool on Restaurant A.

Thought

Great! I have enough info. I will provide the details for Restaurant A.



Final Answer:

"Restaurant A is a highly-rated Italian spot in London with great pasta."

The Superpowers of ReAct

Complex Problem Solving: Breaks down big problems into manageable steps

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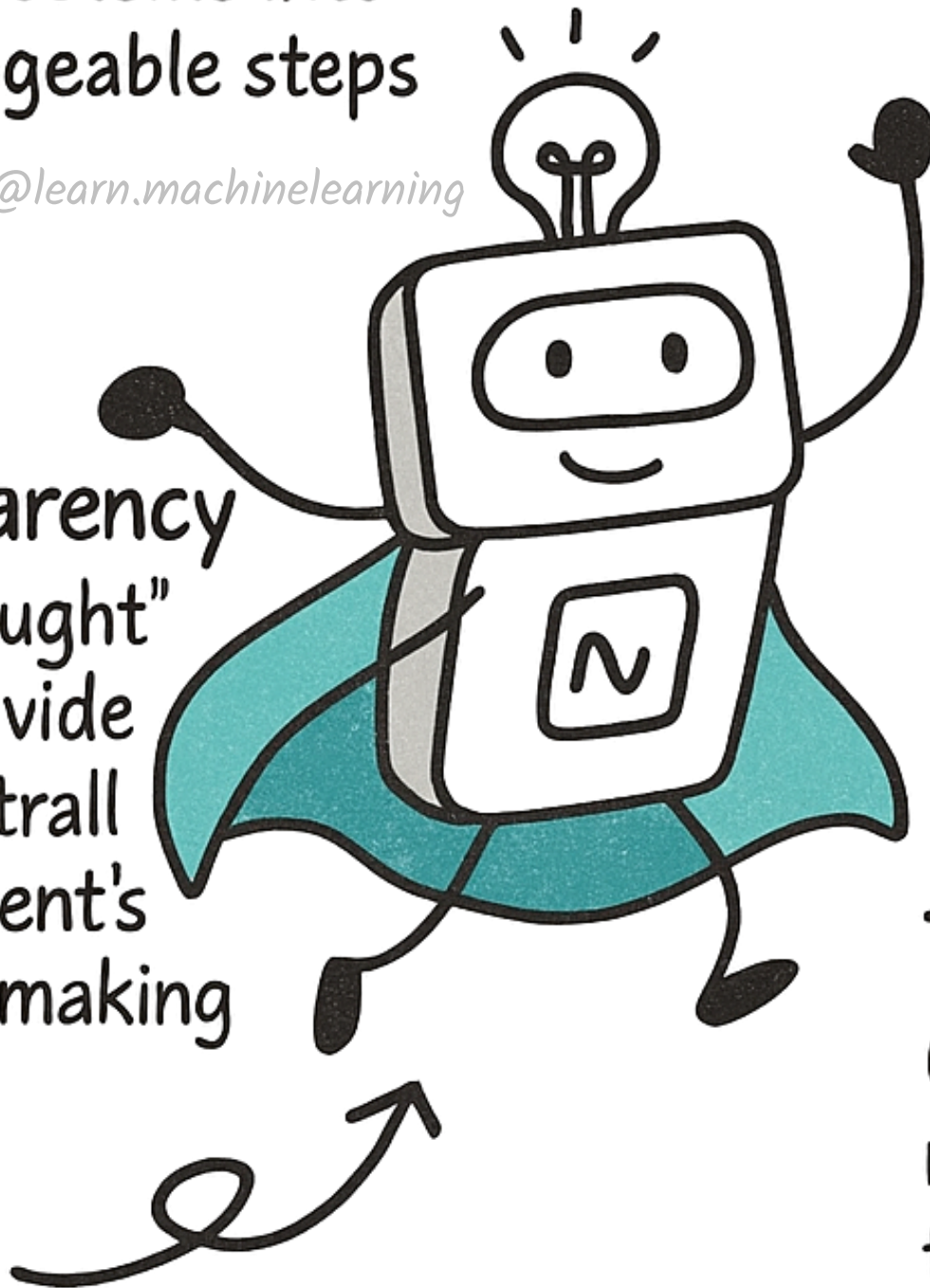
Transparency
The "Thought" steps provide an audit trail of the agent's decision-making process



Self-Correction
If an action fails (e.g., "Web search returned no results"), the LLM can observe that failure and reason to try a different approach



Tool Flexibility
Can integrate any number of tools, from simple calculators to complex APIs

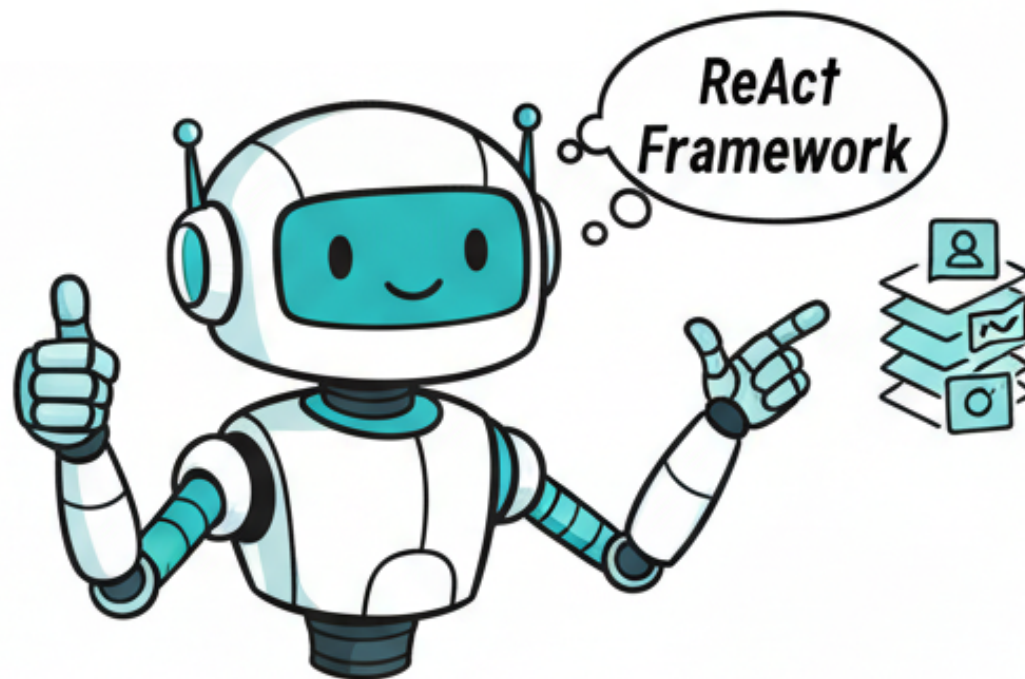


GENERATIVE AI SERIES: DAY 27

Day 27 Takeaway: React Unlocks Agent Intelligence!

The ReAct framework is the key to creating truly intelligent and adaptable AI Agents. By enabling the LLM to explicitly **Reason** about its next move and then **Act** using tools, we empower it to tackle multi-step challenges with

Next Up: Day 28:
Agents with
Superpowers: Giving
Your Agent
Tools



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What's the most complex task you'd love to see an AI agent solve ReAct? ↓

Follow @learn.machinelesslearning for the rest of our AI Agent Deep Dive!

Tell us below!

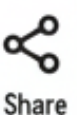
SAVE this post to understand the core logic of AI Agents!



Comment



Save



Share



The End