
Learning LangGraph



.....

Course by **Matteo Falcioni**

Unibo, DIFA
Science City Lab

Mail: ***matteo.falcioni3@unibo.it***

GitHub: ***<https://github.com/MatteoFalcioni>***

.....

Table of Contents

First Part (fundamentals)

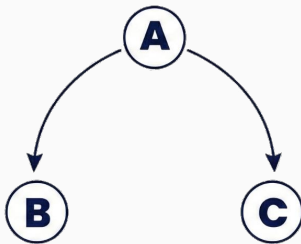
- 1. Introduction
- 2. A Simple Graph
- 3. LLMs & Agents in LangGraph
- 4. State Schema & Reducers
- 5. The Command Primitive
- 6. Agentic Graph
- 7. Agents With Memory
- 8. Human In The Loop
- 9. Agents Collaboration

Second Part (advanced)

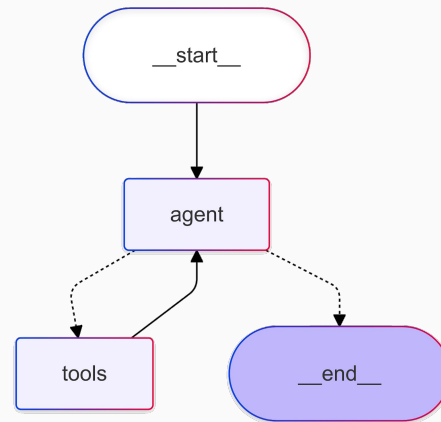
- 10. Deep Agents & Middleware
- 11. Supervised Graph
- 12. Hierarchical Agent Teams
- 13. **Project:** Multimodality - Vision Agents
- 14. **Project:** Multimodality - Voice Agents
- 15. **Project:** Towards *UrbIA* - complexifying our supervised graph
- 16. **Project:** RAG Agent
- 17. **Project:** *Your Suggestions*
- 18. Building a Production Ready Agent: *UrbIA* as an example of how to deploy and scale

LangChain & LangGraph

LangGraph is part of the LangChain ecosystem, but their structure is inherently different

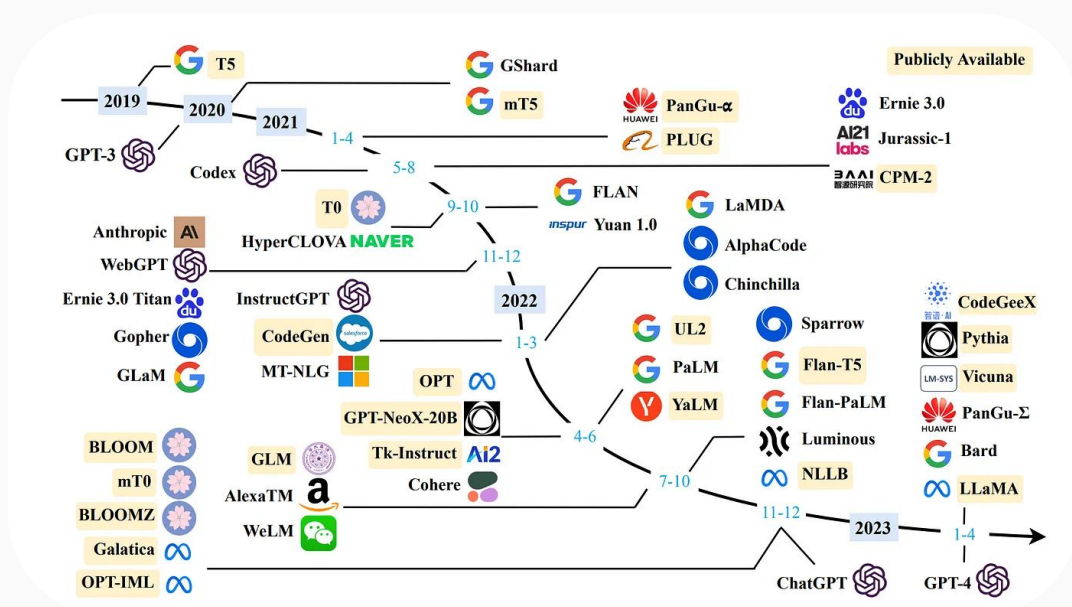
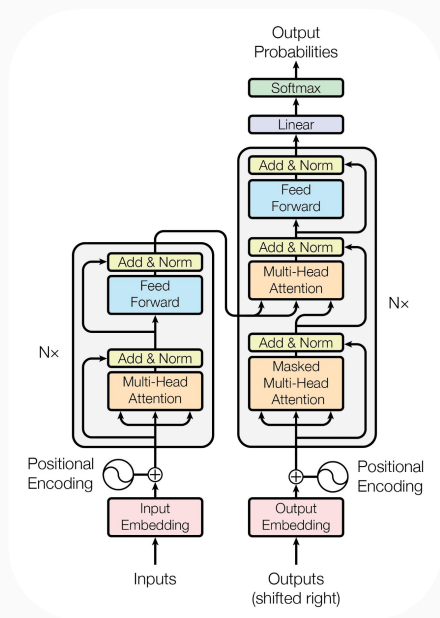


LangGraph allows us to have **loops** (→ agents with tools)



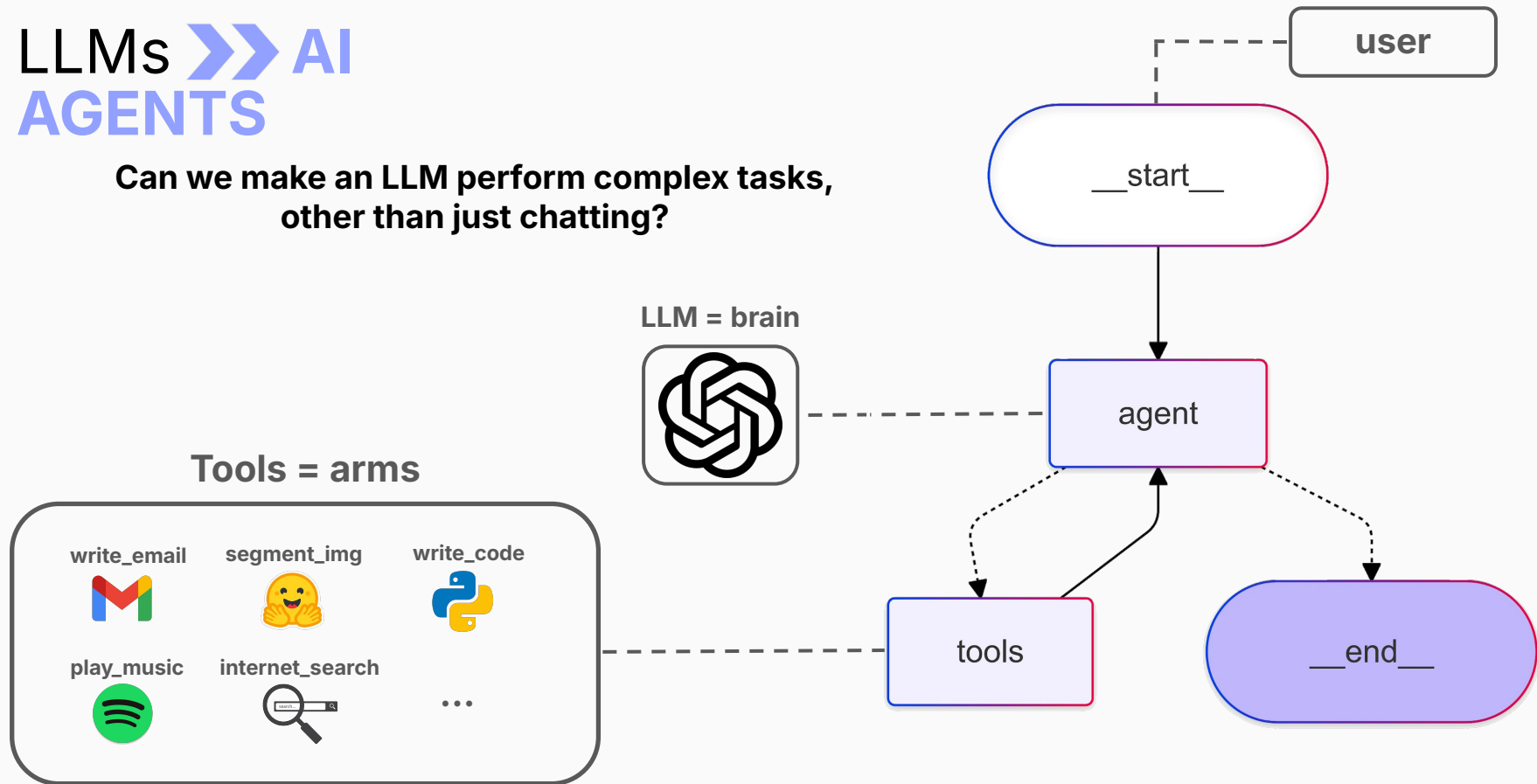
Large Language Models - LLMs

Attention is all you need!
(2017)



LLMs >>> AI AGENTS

Can we make an LLM perform complex tasks, other than just chatting?



Resources

- Course Notebooks on GitHub: <https://github.com/MatteoFalcioni/Learning-LangGraph>
- LangChain Academy: [LangChain Academy](#)
- LangGraph Graph API: [Graph API overview - Docs by LangChain](#)
- LangChain Docs: [LangChain overview - Docs by LangChain](#)
- LangChain Reference: [Home | LangChain Reference](#)
- LangChain OpenTutorial: [🔗 The LangChain Open Tutorial for Everyone](#)

For any information or doubts don't hesitate to contact me at matteo.falcioni3@unibo.it