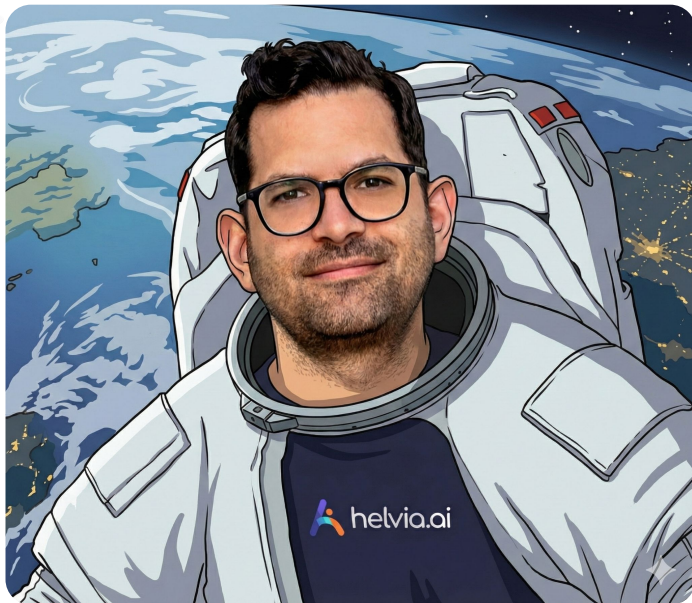


AI Bubble or AI Boom?

What's in it for you in the “Decade of AI Agents”

Stavros Vassos



Following the space theme of
GenAI summit 2025

About me

Diploma in Electrical &
Computer Engineering



National
Technical
University
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PhD, MSc in AI



UNIVERSITY OF
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Asst. Professor in AI



SAPIENZA
UNIVERSITÀ DI ROMA

Co-founder, CEO



helvia.ai

AI Bubble or AI Boom?

3 years of GenAI

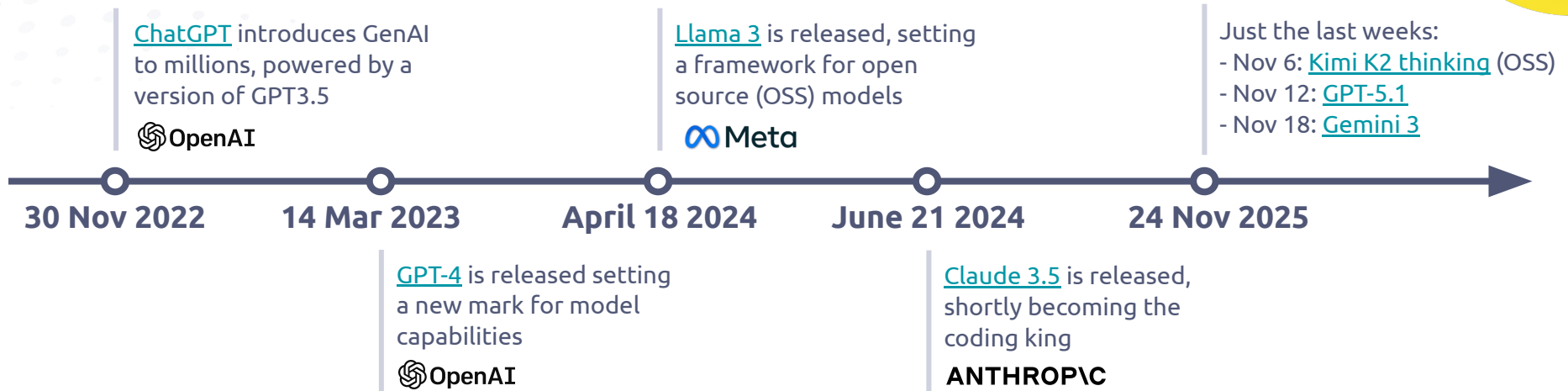
[ChatGPT](#) introduces GenAI to millions, powered by a version of GPT3.5



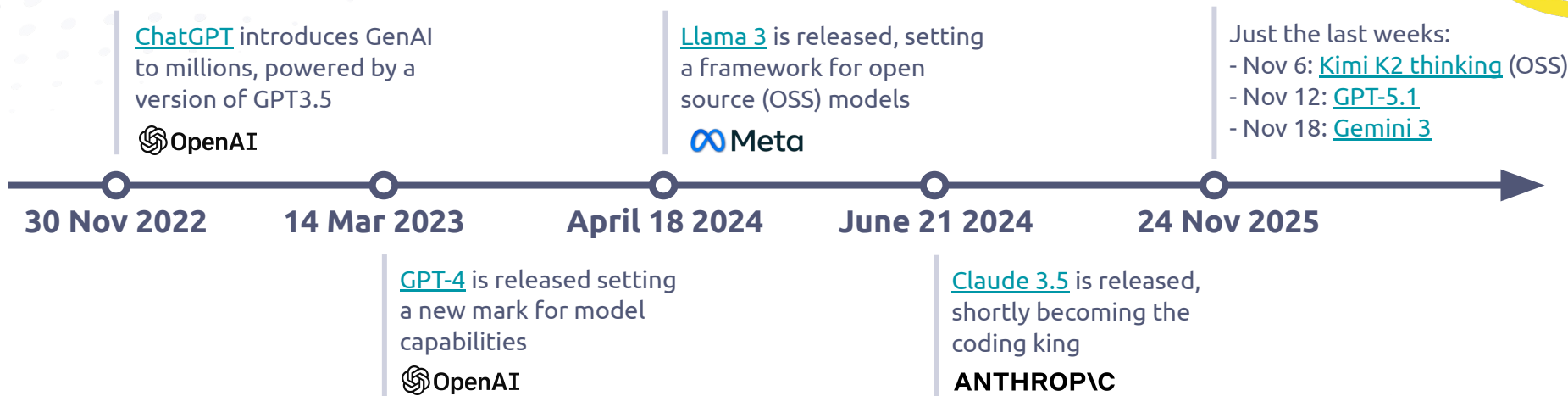
30 Nov 2022

24 Nov 2025

3 years of GenAI



3 years of GenAI



Within 3 years LLMs became the cornerstone of a new tech stack and an incredible ecosystem that blends research and development of new applications and services

Is it an AI Bubble or an AI Boom?

There is a wild spectrum of expectations

There are passionate debates about whether AI works or not

Let's look into two perspectives:

- **“Existential” Vision:**
Artificial General Intelligence (AGI)
- **“Industrial revolution” Vision:** Digital labor



“Existential” Vision – AGI

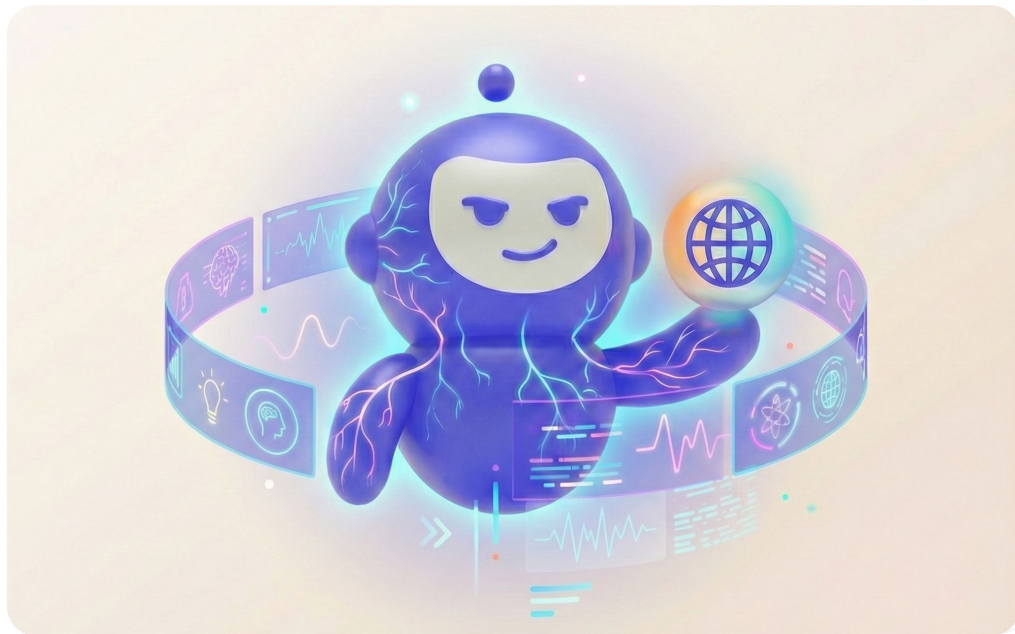
Artificial General Intelligence (AGI)

→ A digital system can perform equal or better than any human you pick

What this means:

- Super-intelligence! AI bootstraps itself to unbounded skills
- Essentially unbounded acceleration on science, economy, ...
- Possible extinction of humanity

Whoever gets there first will have tremendous advantage!



“Existential” Vision – Is it coming?

AI pioneer says its threat to world may be 'more urgent' than climate change



[Reuters](#)

The godfather of Meta's AI thinks the AI boom is a dead end



[Business Insider](#)

“Existential” Vision – Scaling up!

Feb 10 2025, Sam Altman:

The intelligence of an AI model roughly equals the log of the resources used to train and run it

These resources are chiefly training compute, data, and inference compute

It appears that you can spend arbitrary amounts of money and get continuous and predictable gains



“Existential” Vision – Scaling up!

According to this:

- To “double” intelligence, you might need 10× the resources (ie, data centers)
- To “triple” it? Maybe 100× the resources
- This makes progress increasingly expensive and perhaps infeasible due to bounds on infrastructure or energy or earth size :)



“Existential” Vision – AGI

Overall, there is an indication that more resources will give us better AI and get us closer to AGI – but it could be 5 years or 500 years to reach AGI and may require other unconceived breakthroughs

“Industrial Revolution” Vision – Digital labor

Digital labor

→ Hire digital employees that train themselves, onboard instantly, work 24/7, and cost less than human employees

Prominent use cases:

- Personal assistant
- Business automation
- Coding

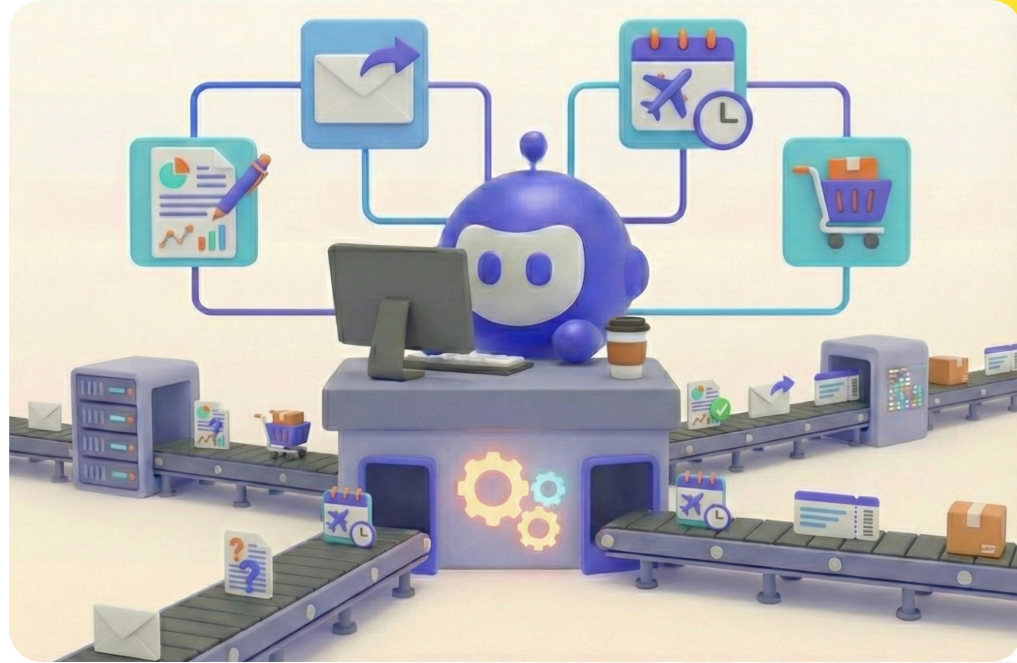


Personal assistant

Oct 15 2025, Financial Times:

- ChatGPT has more than **800 million** regular users
- 5% of those are paying subscribers
- This amounts to 70% of OpenAI annual revenue

Judging from OpenAI alone, the personal assistant is probably the biggest use case of GenAI at the moment



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This is changing our lives already and there is plenty of room to grow



Business automation

Gartner, Aug 2023: By 2026, investment in generative AI will lead to a **20% to 30% reduction of customer service human roles**

Gartner, Jun 2025: By 2027 **50% of organizations will abandon plans** to reduce customer service workforce due to AI

This shift comes as many companies struggle highlighting the complexities and challenges of transitioning to AI-driven customer service



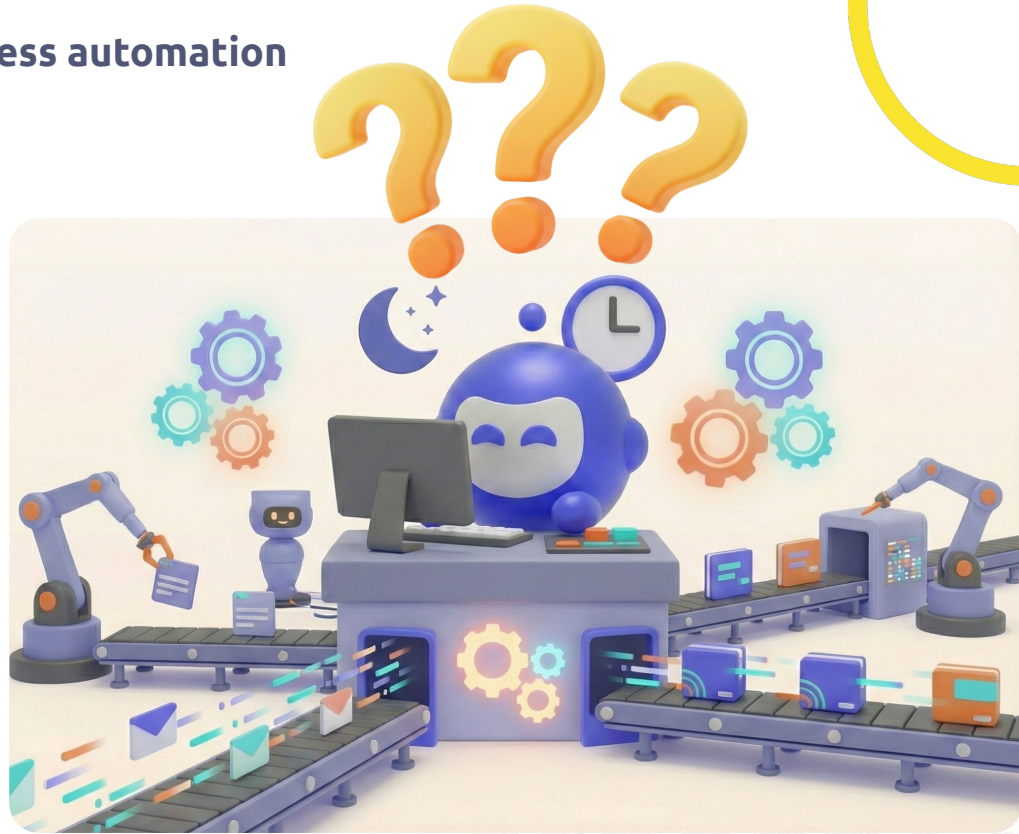
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Indicative of many cases trying to replace human roles entirely by AI Agents



What is an AI Agent? A practical definition for today



What is an AI Agent? A practical definition for today



If you are **not sure** what it's
going to do next,
then it's **probably an agent**

Business automation

AI Agents operate on an implicit tradeoff:

- Powerful – being able to handle scenarios that are not explicitly “programmed” for
- Predictable – acting in the way an existing employee would handle



Business automation

AI Agents operate on an implicit tradeoff:

- Powerful – being able to handle scenarios that are not explicitly “programmed” for
- Predictable – acting in the way an existing employee would handle

Need to be considered in the scope of a business AI Transformation

With careful preparation you can get meaningful gains and ROI



Coding

Coding has become a very large niche

- New command-line tools (CLI): codex, gemini-cli, github copilot, ...
- New integrated development environments (IDE): windsurf, cline, cursor, antigravity, ...
- New prototyping tools: lovable, v0.dev, ...
- The demand resulted in LLM providers creating models specialized for coding



Coding

Similar to business automation but more structured and much faster to iterate

Results seem to show that:

- AI can help junior software engineers learn faster if used as training aid
- AI can help senior software engineers do the heavy lifting of projects
- AI is changing the way software engineers interact with information on the web

Overall it provides the grounds for accelerating software engineering



“Industrial revolution” Vision – Digital labor

While fully replacing a human worker with a digital worker does not seem to work yet (or very soon), even if AI stopped progressing today, there are tons of practical use cases to transform and accelerate using the new technology



What's in it for you?
How to navigate in this new world?

AI is changing the world and it has just started

The technology is real: LLMs bring a new way of building "computers" and apps

It's the “**Decade of AI Agents**” in which we will transform culturally, socially, and operationally to incorporate new forms of autonomy in our personal and work lives

How can you make the most out of it now?

- At a personal level
- As an SME
- As an Enterprise



What's in it for you? As a person

It's like all the leading labs are building flying cars and they give away free kits to try flying in your backyard!

All major AI vendors offer a generous freemium and ~\$20 per month license for their personal assistant

Reinvent your interaction with technology with AI (for free!)

Learn how to code! Or “vibe code” something for fun :)



What's in it for you? As a person

Here's a mini game I did while creating this presentation: go.helvia.ai/bubble



What's in it for you? As an SME

As an SME typically there is no budget to build a tailored solution just for you

But you can use the built-in AI Agents on the SaaS platforms you use, eg, Atlassian offers [Rovo](#) to help with Jira, etc

You can learn to craft automation pipelines with AI-ready automation tools, eg, use [Make](#) to setup email automations

There are hundreds of tools to use with affordable cost and great ROI to help you become the AI expert of your own SME



What's in it for you? As a large organization

Employ personal assistants and SaaS in-app assistants company-wide so that people gets familiar with the AI transformation that's coming

Specialized AI Agents are for you!

The build-vs-buy decision here is about how to will become an AI-first company: with heavy internal resources or with trusted panthers or with a hybrid approach

It's the right time to get a competent team internally and trusted partners to help you navigate in this emerging landscape





What lies ahead

Artificial Jagged Intelligence (AJI)



Andrej Karpathy ✓

@karpathy



Jagged Intelligence

The word I came up with to describe the (strange, unintuitive) fact that state of the art LLMs can both perform extremely impressive tasks (e.g. solve complex math problems) while simultaneously struggle with some very dumb problems.

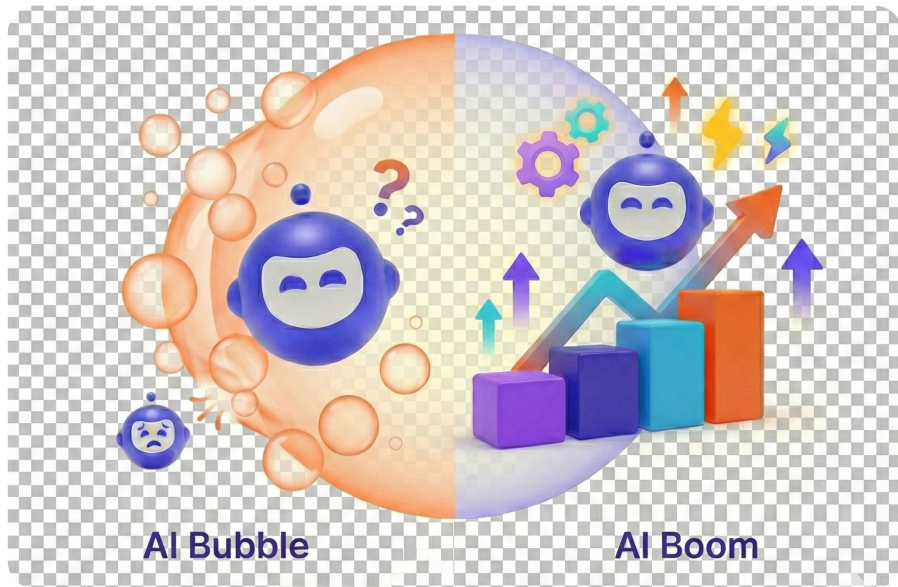
[X post](#)

Artificial Jagged Intelligence (AJI)

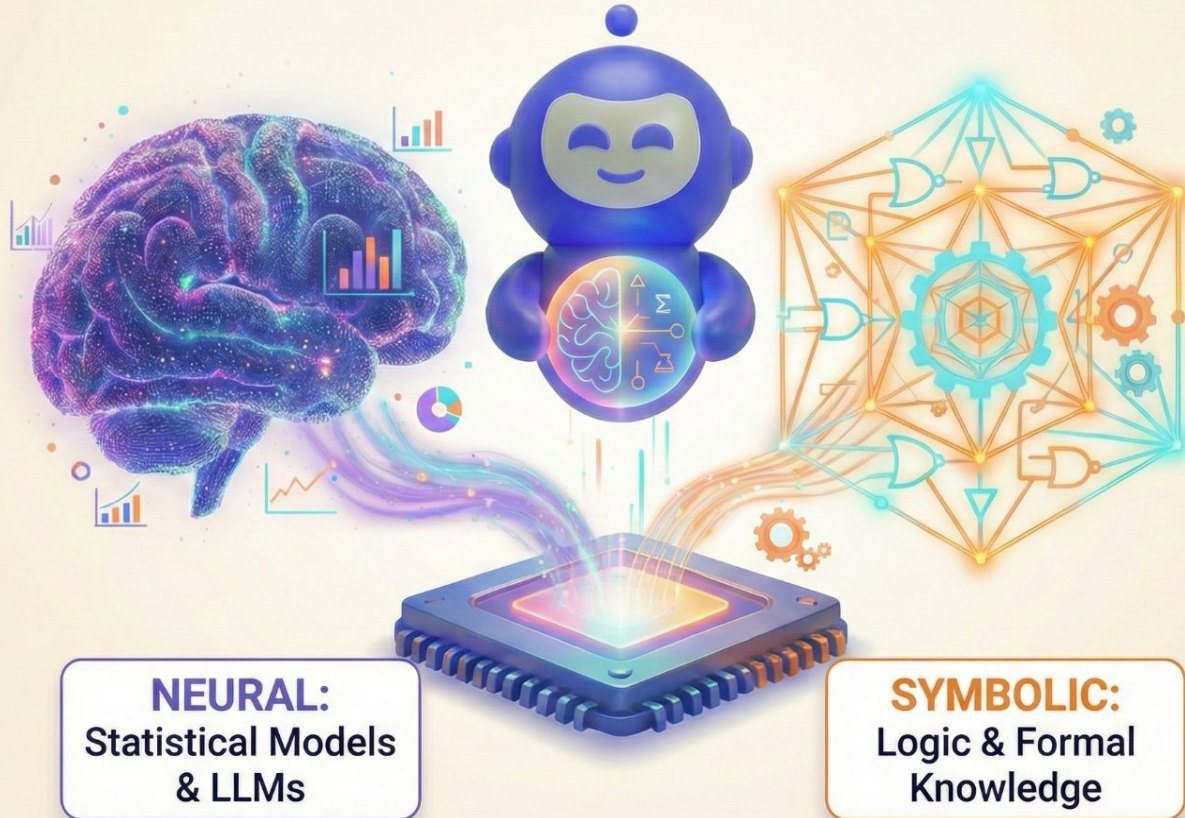
Reusing patterns seen at training time is a very central component on how LLMs work

Most models struggle with generating transparent images due to many images online marked as transparent but viewed as an image with checkers

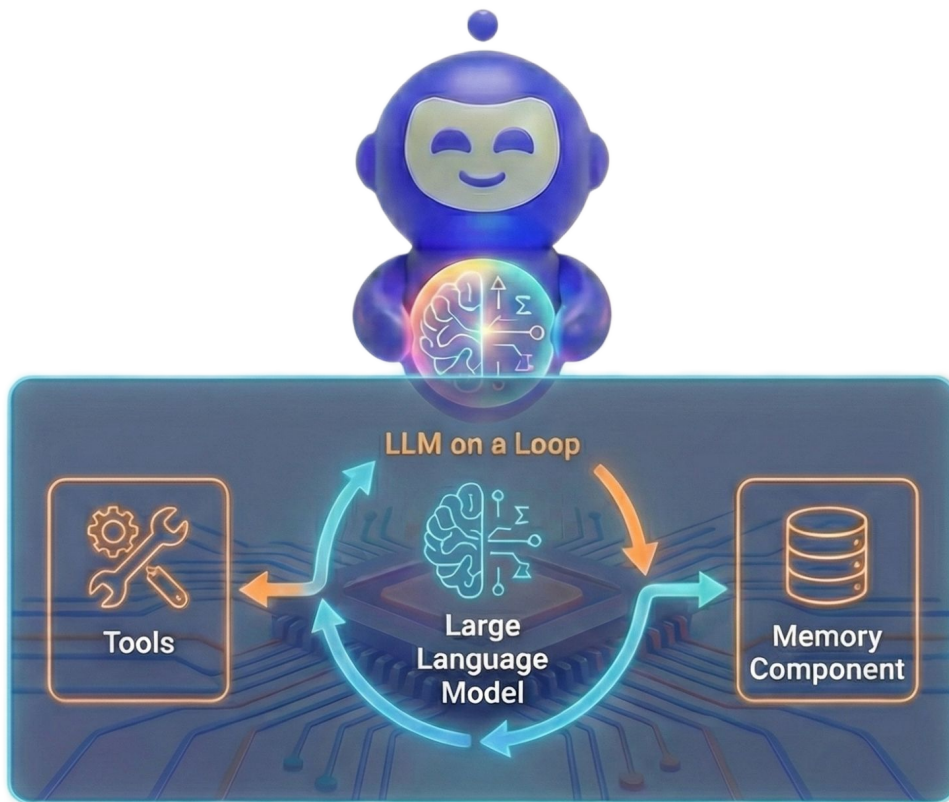
Here's one "transparency fail" from this presentation on one of the latest and most powerful models



NEUROSYMBOLIC AI: Combined Power



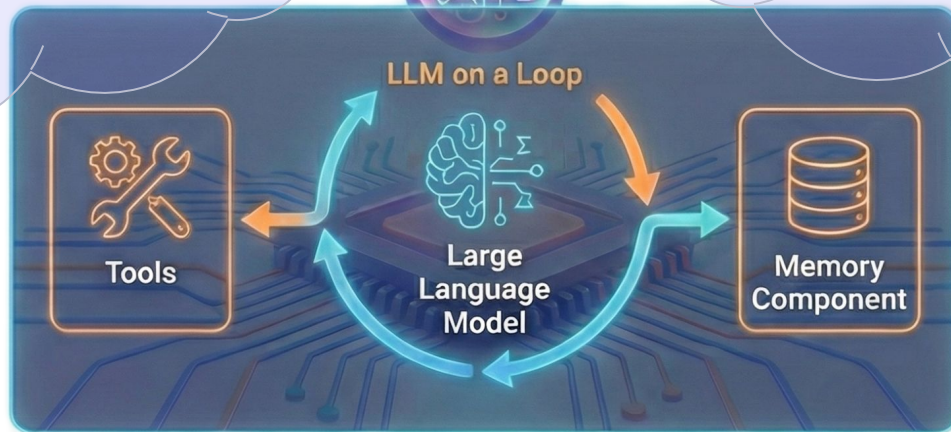
Lots of opportunities for service-like synergy



Lots of opportunities for service-like synergy

AI Agents often need to keep a persistent memory as a blackboard of past interactions and notes. This is typically done using LLMs to write the notes, and a retrieval mechanism for getting relevant notes and/or using LLMs to revise the memories

There is a large literature on “knowledge representation” and “belief revision” that formalizes the flow of information, the rules, defaults, and exceptions, and other useful machinery to make bookkeeping robust, fast, and inexpensive!



Closing

An exciting time to be alive technology-wise but also culturally, socially

We will get to shape how AI technology will be adopted and incorporated in our society

The biggest frontier seems to be the physical world, to me AGI will be when a robot can navigate in Athens and survive running errands in the city :)

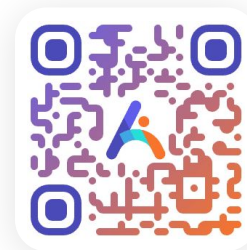




Happy to chat

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This is me! Original image
without space suit