

Mind Meets Machine: AI tools and trends in Interreg programme management

Generative AI: an introduction

Arkam Oğrak, Nebojša Nikolić / Interact / 25 November 2025

Interact



Co-funded by
the European Union
Interreg

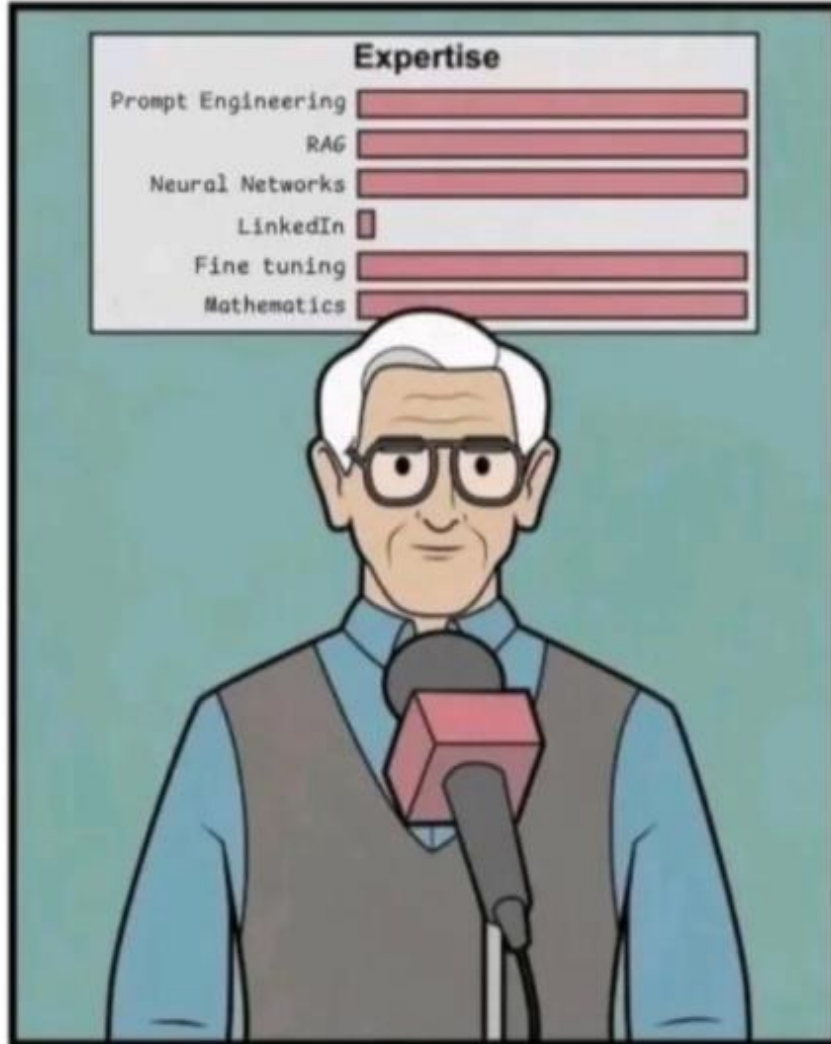


AI won't take your job, but **someone who knows how to use AI might.**

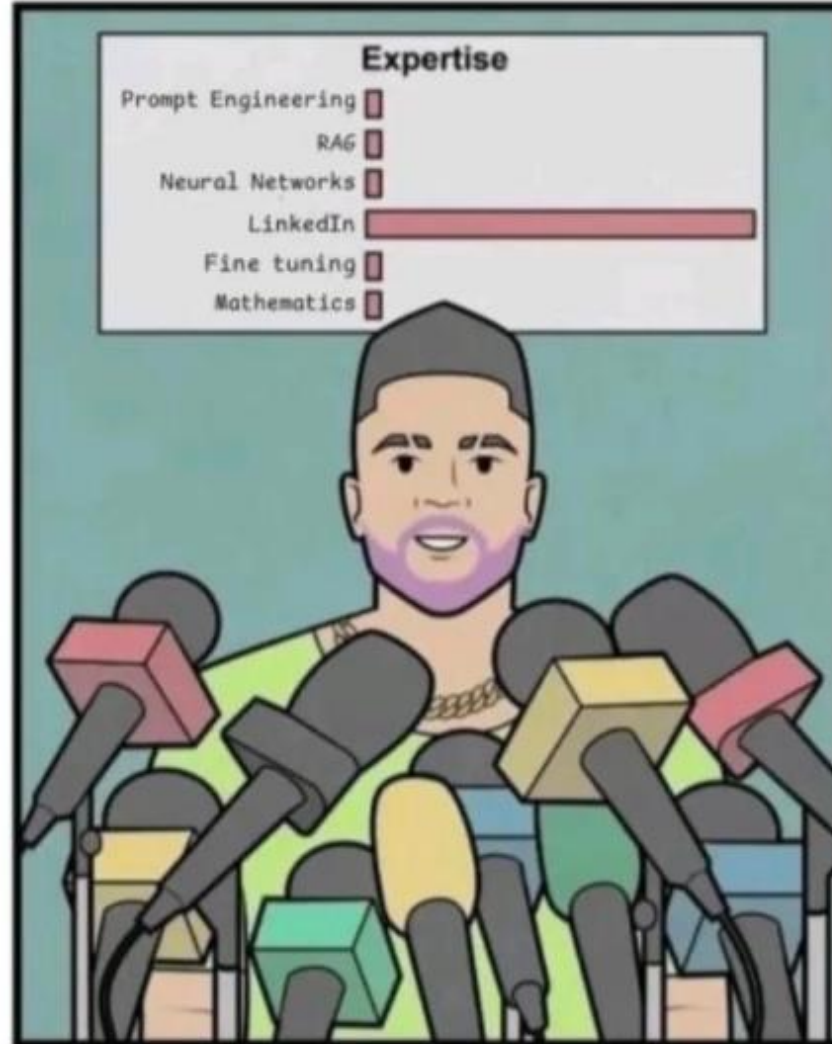
anonymous online quote

AI Experts....

YES,



BUT



The hype



Generated in Midjourney: One robot master, human slaves, cinematic, cyborgs, post apocalyptic world --v 5.2



Pessimistic discourse

Talking about AI often ends up with dystopian scenarios. Current systems are powerful but narrow; policy and governance are the real near-term issues, not sci-fi.

Generated in Sora (OpenAI)





Be realistic be informed

Let's keep our feet on the ground and make use of what is available –we can do so by knowing what the tools can do and how they work.

Generated in Midjourney: Man studying diligently on computer in home office --ar 9:16



Don't let fear hold you back

There are risks in use of every technology but the future of the innovation is in humans' hands.



This aged well.

Daily Mail, Tuesday, December 5, 2000

Internet 'may be just a passing fad as millions give up on it'

THE Internet may be only a passing fad for many users, according to a report.

Researchers found that millions were turning their back on the world wide web, frustrated by its limitations and unwilling to pay high access charges.

They say that e-mail, far from replacing other forms of communication, is adding to an overload of information.

Experts from the Virtual Society project, which published the report, say predictions that the Internet would revolutionise the way society works have proved wildly inaccurate.

Many teenagers are using the Internet less now than previously, they conclude, and the future of online shopping is limited. Steve

By **James Chapman**
Science Correspondent

Woodgar, director of the society, said: 'We are often presented with a picture of burgeoning Internet use, but there is evidence already of drop-off and saturation among users.'

'Teenagers' use of the Internet has declined. They were energised by what you can do on the Net but they have been through all that and then realised there is more to life in the real world and gone back to it.'

The project, sponsored by the Economic and Social Research Council, gathered together research by 25 universities across Europe and the U.S.

It estimated that in Britain alone there could be more than two million people who regularly used the Internet but had now given up.

Analysts say some simply became bored, while others were frus-

Net loss: Two million Britons have logged off the Internet



**NOW THERE'S ANOTHER
INTELLIGENT FINANCIAL
PRODUCT THAT COULD MAKE YOU RICH**

EXCLUSIVE!

1) Steve Jobs 'predicts' AI Tool like ChatGPT in 1985



AI and **the idea of AI** has been around for a long time. What we are going through now is a **breakthrough.**

Fei-Fei Li, American computer scientist, Stanford University. Known for establishing ImageNet and former board director at Twitter.

@tsarnick





Sam Altman is the founder and the CEO of OpenAI, which is the company behind ChatGPT.

Many opposing pro and con views...

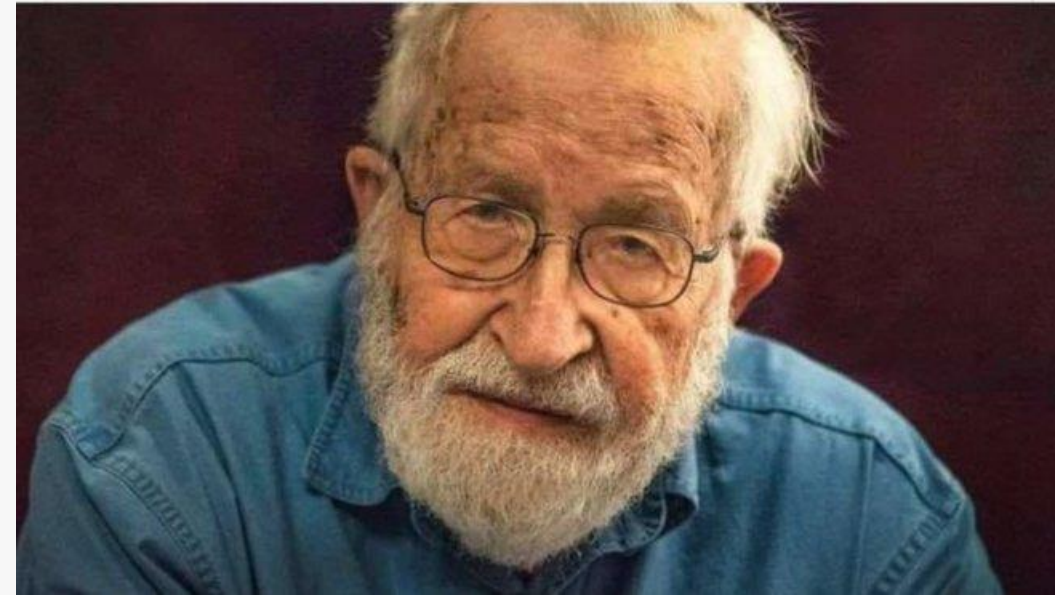
Noam Chomsky on Artificial Intelligence:

"The human mind is not, like ChatGPT and its ilk, a lumbering statistical engine for pattern matching, gorging on hundreds of terabytes of data and extrapolating the most likely conversational response or most probable answer to a scientific question. On the contrary, the human mind is a surprisingly efficient and even elegant system that operates with small amounts of information; it seeks not to infer brute correlations among data points but to create explanations..."

"... Let's stop calling it "Artificial Intelligence" then and call it for what it is and make "plagiarism software" because "It doesn't create anything, but copies existing works, of existing artists, modifying them enough to escape copyright laws...."

~ Dr. Noam Chomsky, Dr. Ian Roberts, Dr. Jeffrey Watumull

New York Times, March 8 2023



Let's be realistic
And informed

What does ‘Generative AI’ generate?

Text

Articles, stories, poems, code, dialogue
Translation, paraphrasing
Chatbots

Image

Realistic images, including faces, artwork, landscapes, objects
Style transfer, inpainting/outpainting, blending, describing

Media

Audio, music, voice synthesis, sound effects, speech
Video, deepfake, summarization, synthesis, scene generation.
Augmented reality (AR) and virtual reality (VR) content

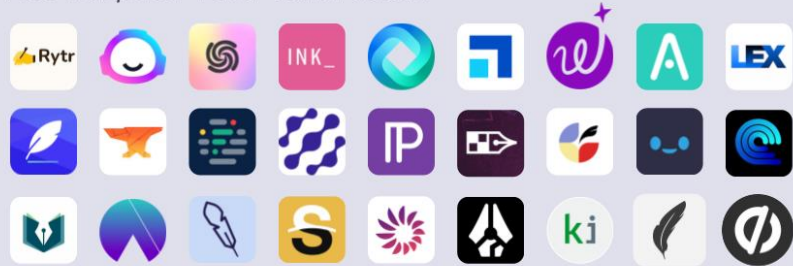


Generative AI doesn't only **'generate'**,
but it also **optimizes, modifies,**
analyses existing content.

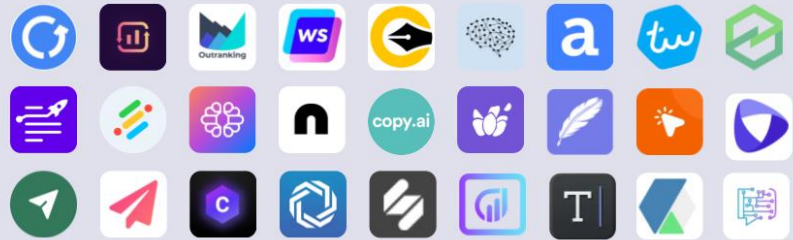
The Landscape

Linguistic Creativity

All-Purpose Text Generation



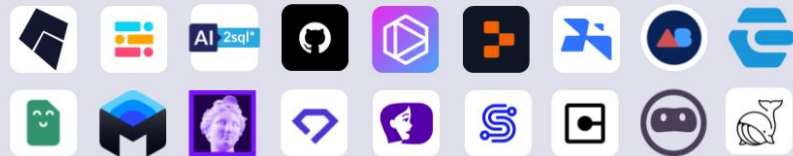
Marketing & Sales Copy



Text Optimization

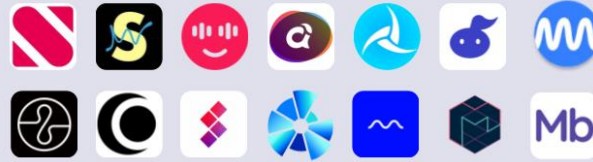


Coding & Web Development



Musical Creativity

Sound & Music Generation

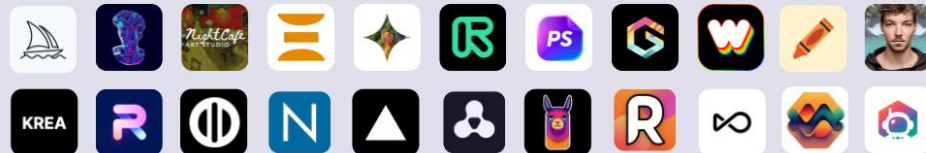


Voice Synthesis



Visual & Artistic Creativity

Image Generation



Video Generation



Design

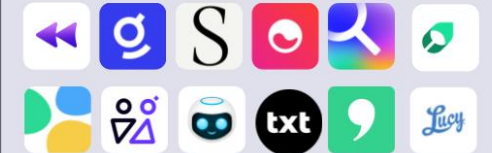


Scientific Creativity



Other

Knowledge Management & Search



Customer Support & Automation



Characters



Gaming



Characters



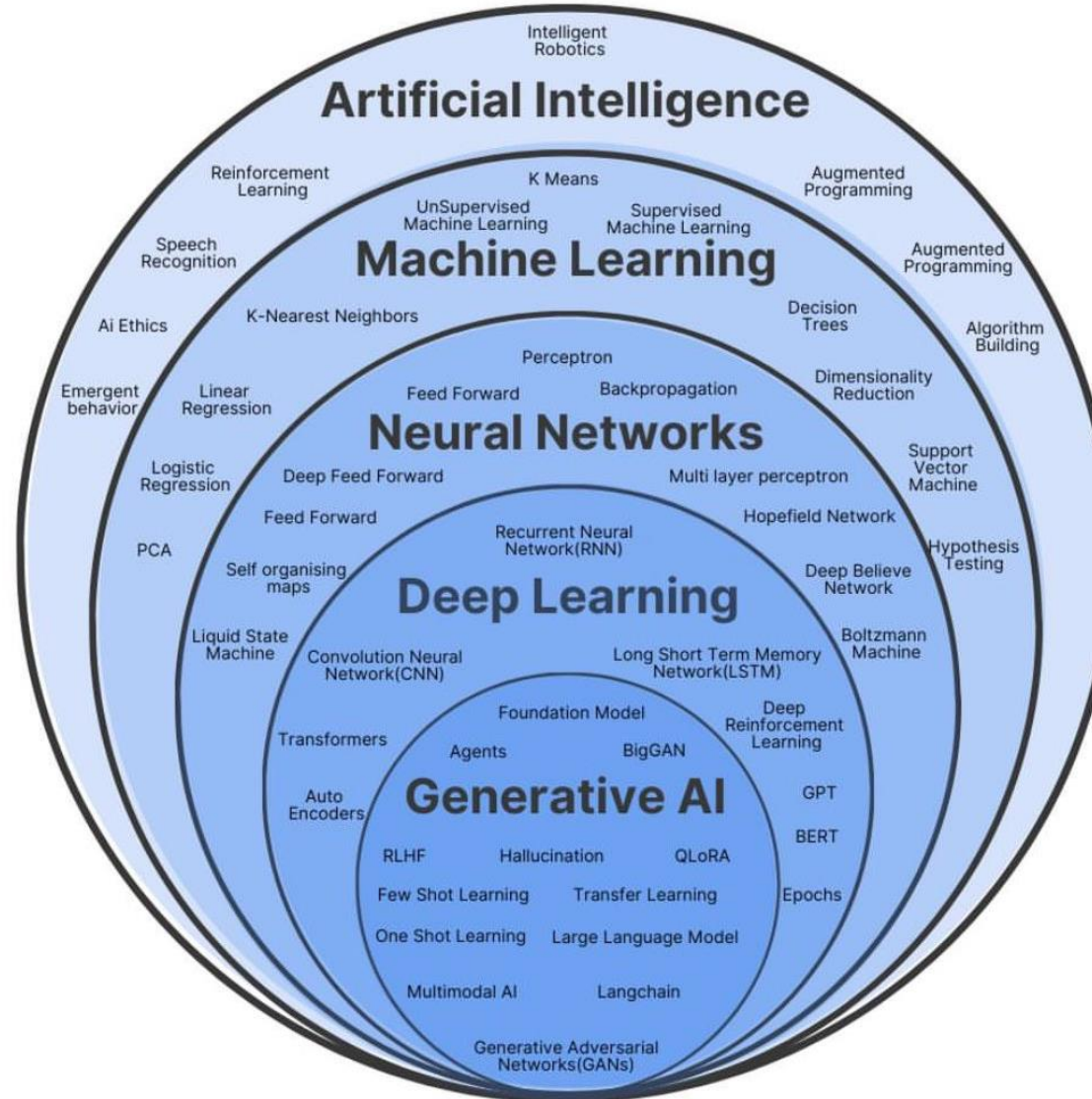
Erotica



Market Intelligence



The World of Artificial Intelligence





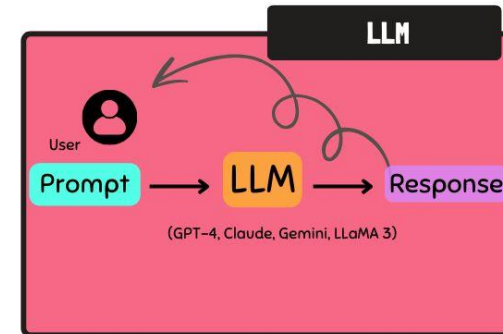
LLM vs RAG vs AGENT

LLM = Smart, but works only with what it was trained on. Its knowledge is fixed after training, and when it lacks relevant information, it may generate plausible-sounding but incorrect answers (“hallucinations”).

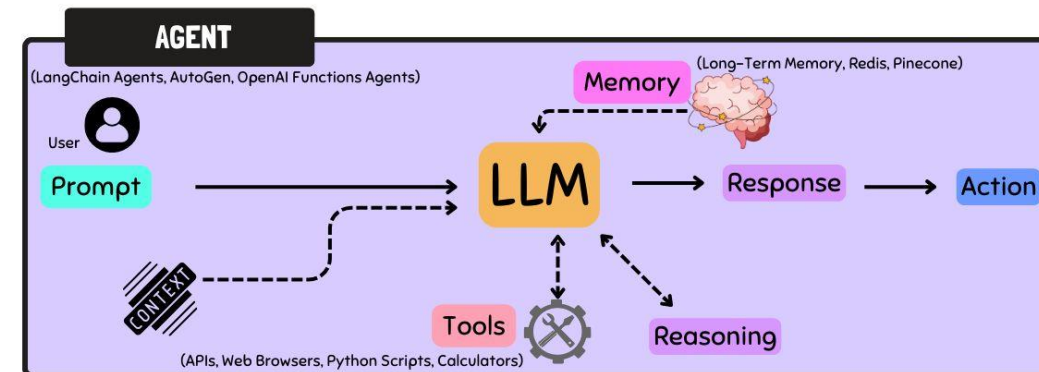
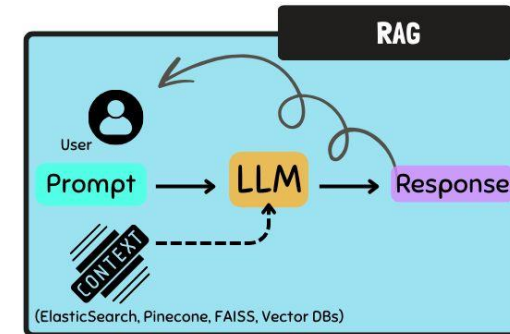
RAG = Smart + can “look things up” in real time. It retrieves specific, relevant information from an external source and combines it with the LLM’s reasoning to give more accurate, up-to-date answers. Still, if retrieval is poor or ignored, hallucinations can happen.

Agent = Smart + can “decide what to do next” to reach a goal. It reasons through problems, chooses and uses the right tools (like web search or APIs), and can optionally maintain memory of its steps. This enables it to handle complex tasks that require multiple actions.

LLM
→ Generates text from pre-trained knowledge without accessing real-time external information.



RAG
→ Retrieves external information and feeds it into the LLM to produce more accurate, updated responses.



Agent
→ Uses an LLM with memory, tools, and reasoning to autonomously complete tasks and take real-world actions.

8 Types of LLMs used in AI Agents

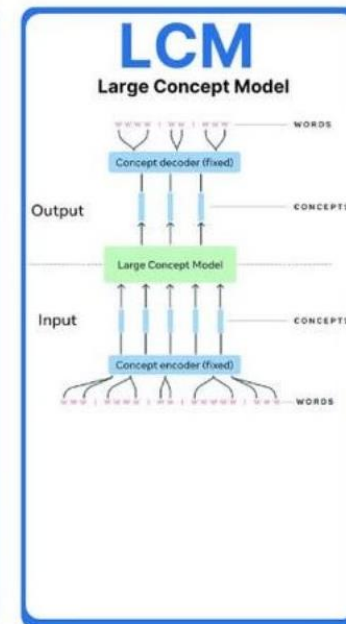
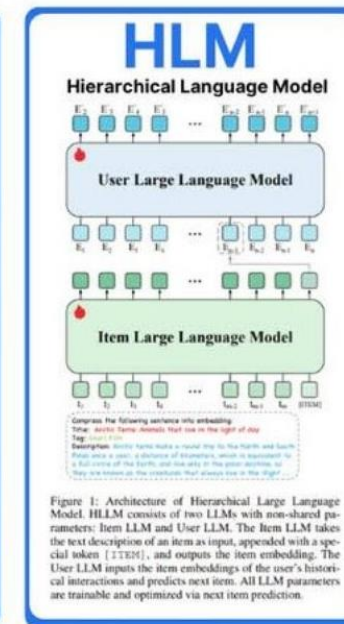
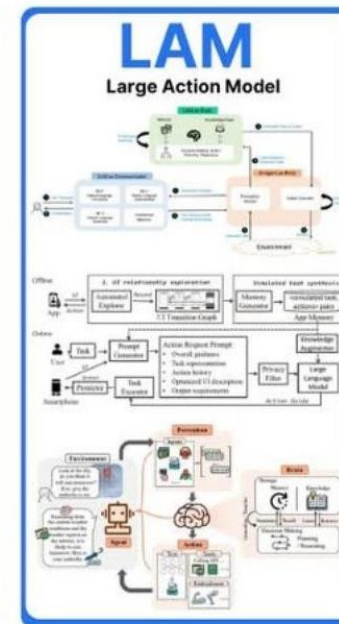
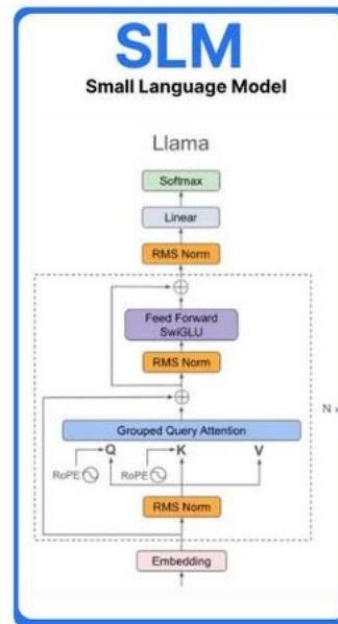
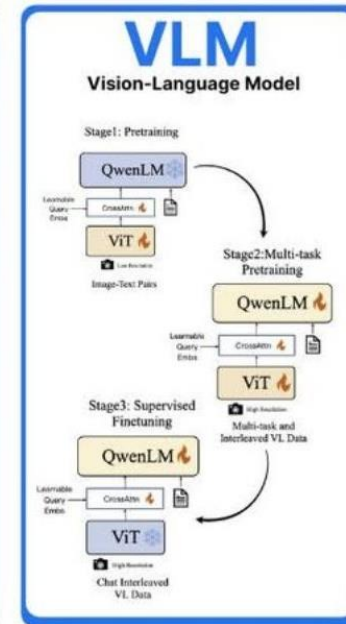
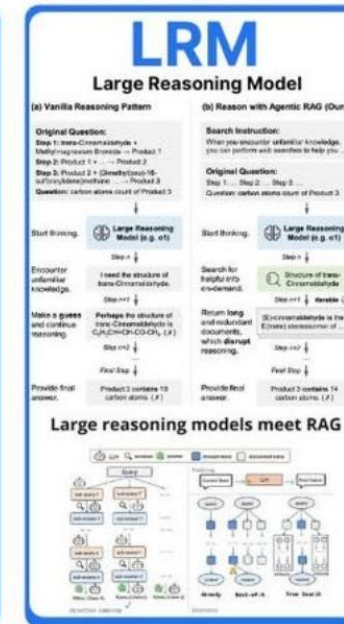
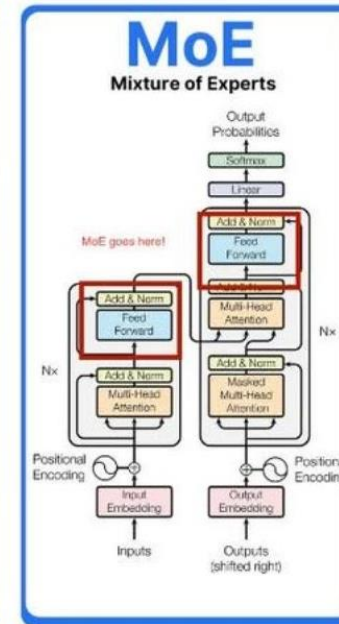
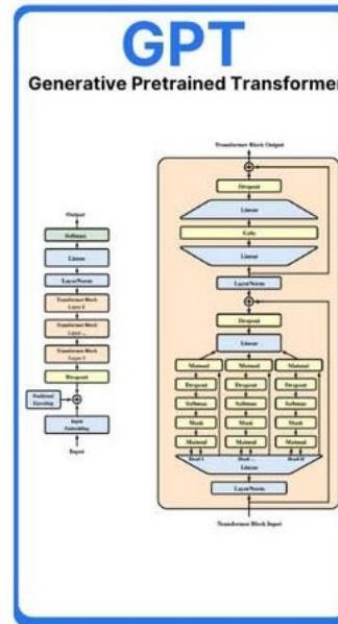


Figure 1: Architecture of Hierarchical Large Language Model. HLLM consists of two LLMs with non-shared parameters: Item LLM and User LLM. The Item LLM takes the text description of an item as input, appended with a special token [ITEM], and outputs the item embedding. The User LLM inputs the item embeddings of the user's historical interactions and predicts next item. All LLM parameters are trainable and optimized via next item prediction.

The Tech Wars



Worldcoin gains renewed interest following launch of OpenAI Sora

Sora leverages artificial intelligence to transform written descriptions into photo realistic video content

BY BESSIE LIU / FEBRUARY 20, 2024 01:24 PM



Technology Meta plans launch of new AI language model Llama 3 in July, The Information

Poonam Soni @CodeByPoonam · Mar 2

Meta just launched Chat with RTX

leaves ChatGPT in the dust.

Here are 7 incredible things RTX can do:



6

↻ 1.5K

❤ 8.4K

📊 1.8M

🔖

📤



Polymarket
@Polymarket

BREAKING: Albania appoints AI-generated government minister to govern the country's finances

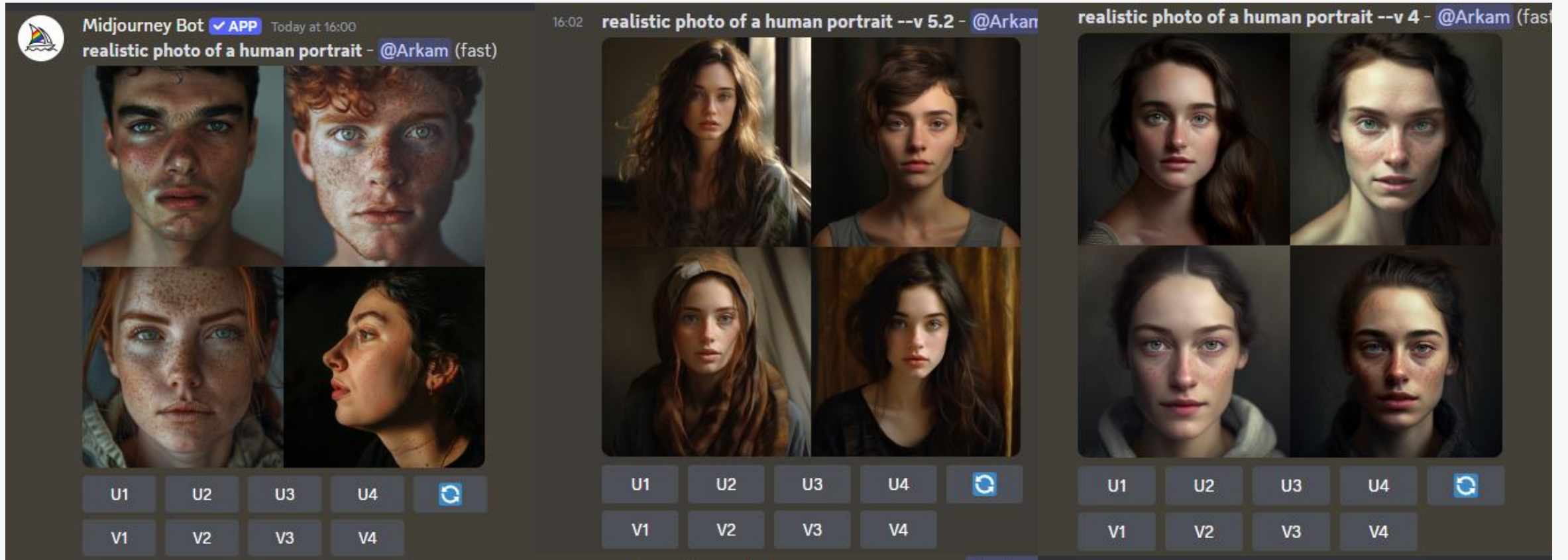
10:45 PM · Sep 11, 2025 · 2.4M Views

The AI jargon

- Prompt engineering, prompting, prompt injection
- Deep learning, machine learning, neural networks
- Model, tool, agent, chatbot
- Diversity fine tuning
- AI hallucination
- Grounding
- AGI, ASI

Diversity fine tuning

+Machine learning bias



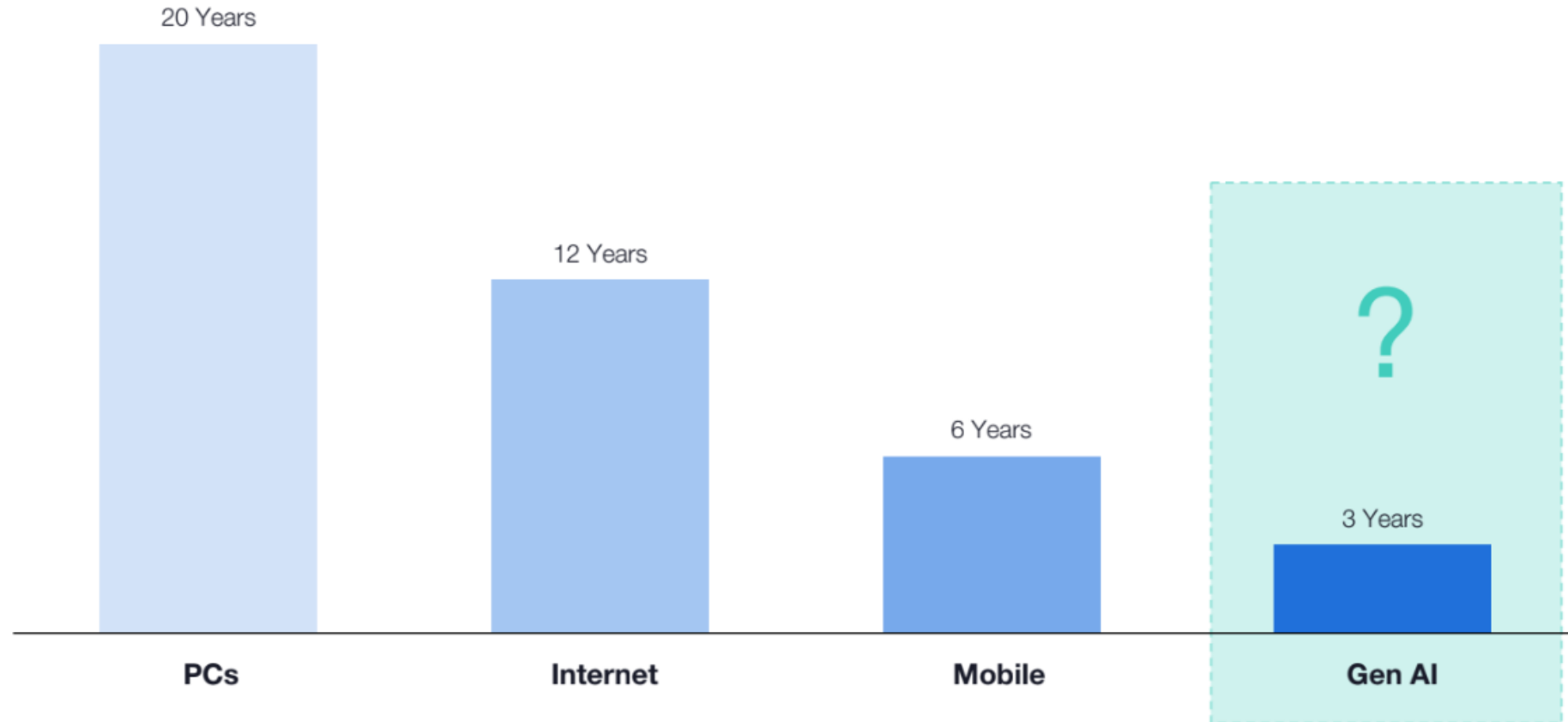
AI hallucination



Adoption has been twice as fast with each platform shift

→ **Halving of penetration time with new technology waves**

of years to reach 50% user penetration in the US



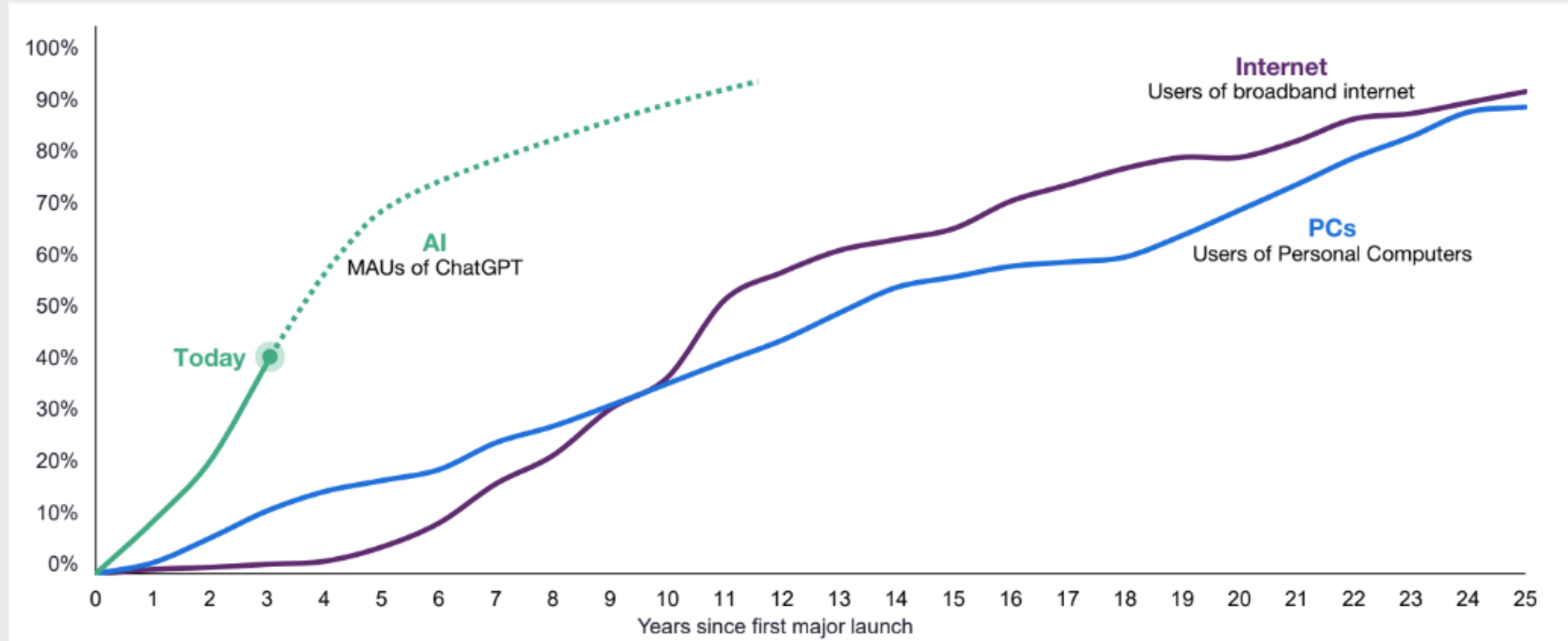
COATUE

Source: Morgan Stanley Research as of September 2023. For illustrative purposes only. There is no guarantee that Coatue's views and projections regarding the future potential of AI are accurate or that any particular Coatue investment or fund will benefit from the AI trend. See Appendix-Disclosures for important disclosures, including regarding projections and forward-looking statements and trends.

7

AI is still early in its journey but massive adoption so far!

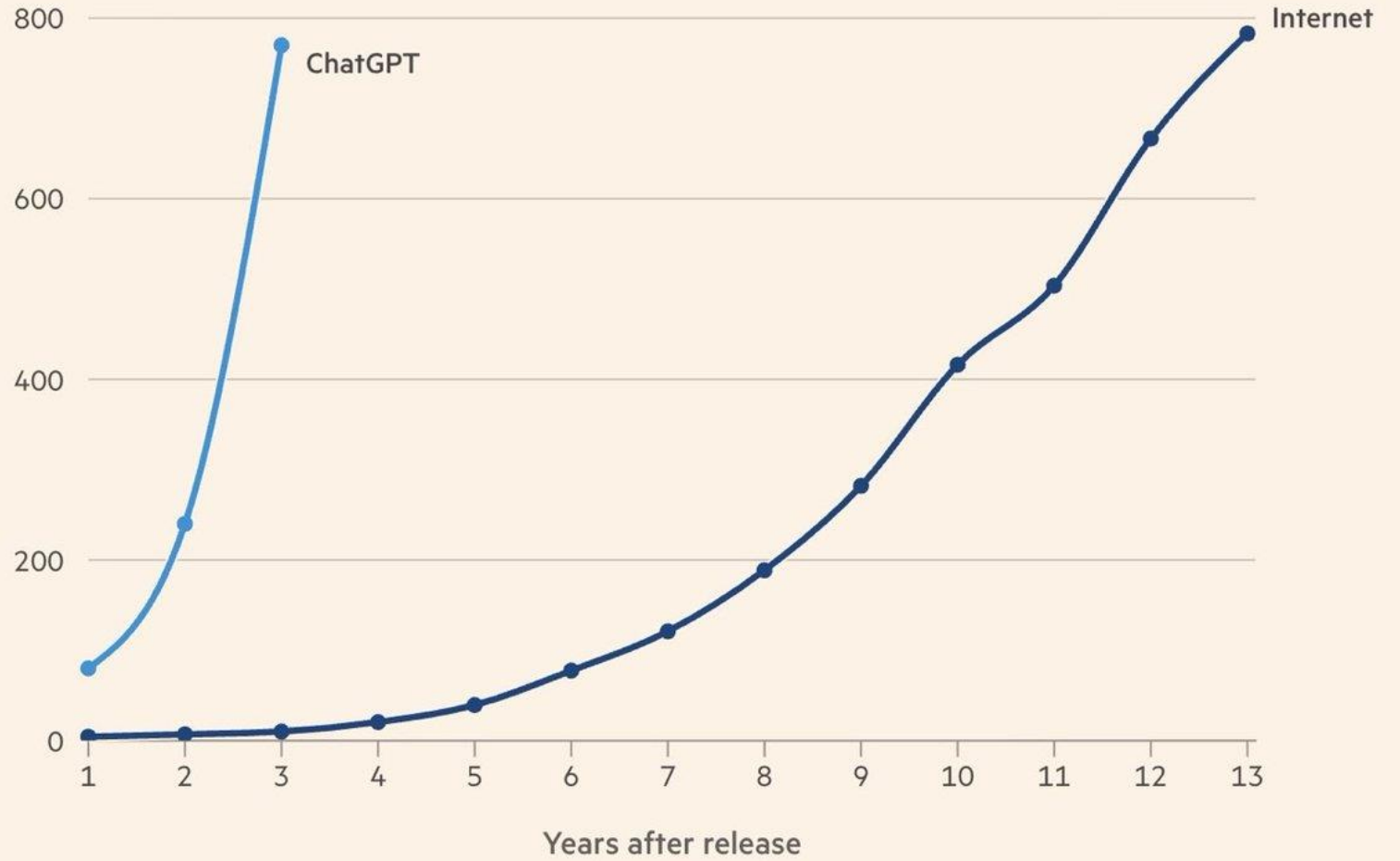
US % penetration



Financial Times
2025 data

ChatGPT adoption outpaces the internet's first decade

Users (mn)

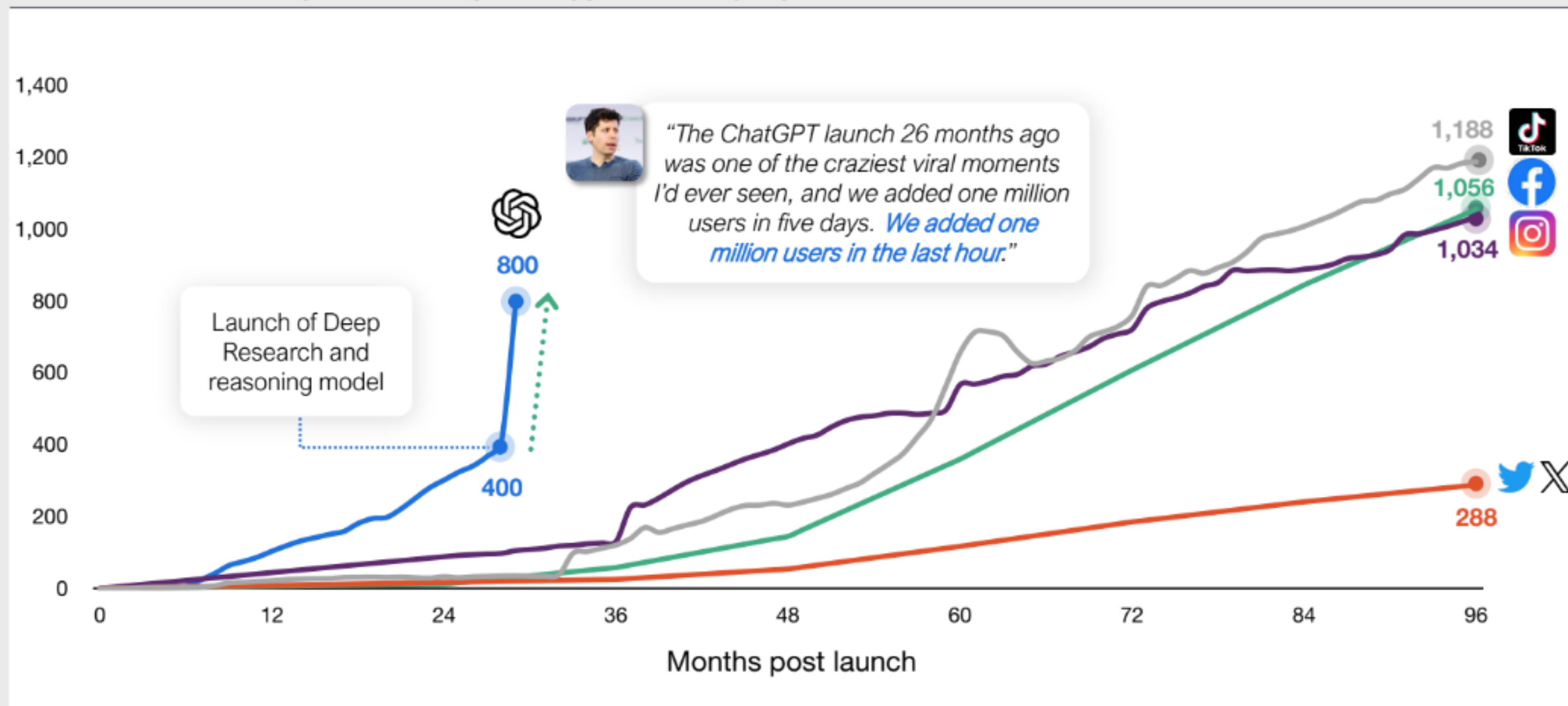


FINANCIAL TIMES

Source: OpenAI; World Bank

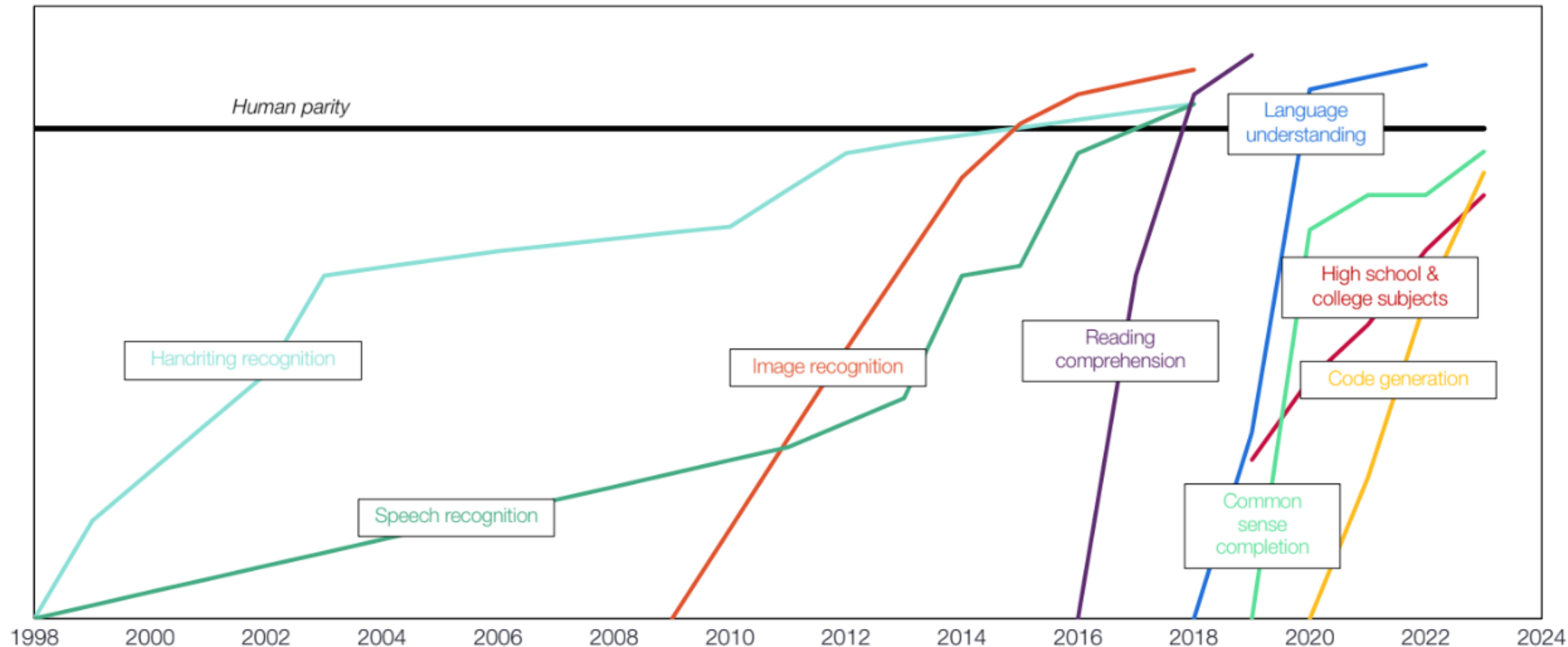
ChatGPT is growing faster than anything we have seen before

→ Number of monthly active users ("MAUs") post launch (mm)



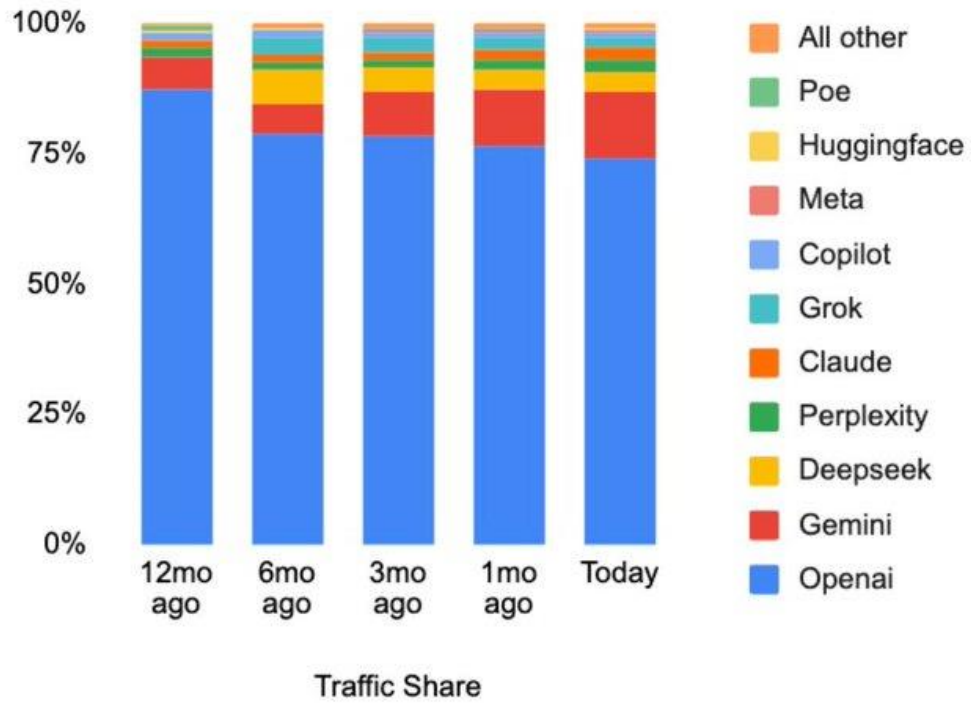
We are optimistic: AI is getting better, faster

→ **Speed for models to reach human level accuracy on benchmarks has decreased**



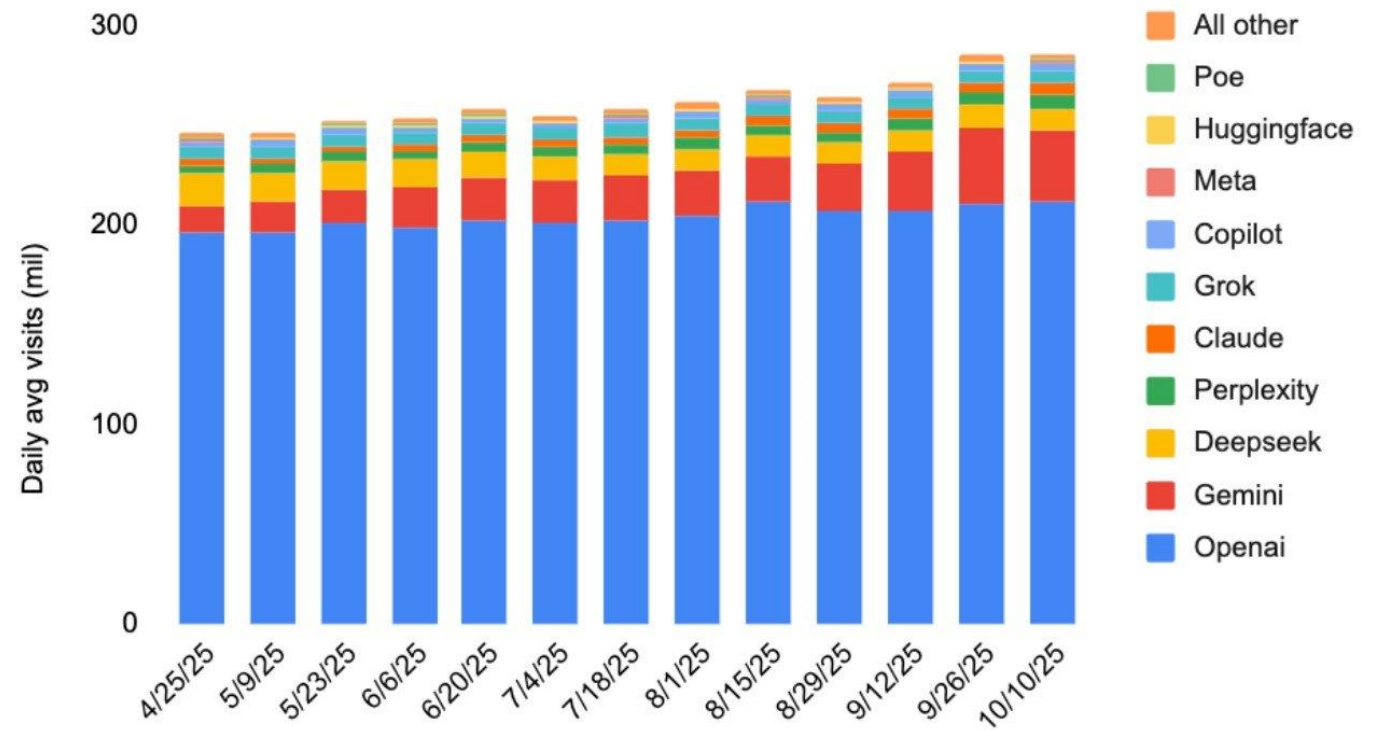
Generative AI Traffic Share

similarweb

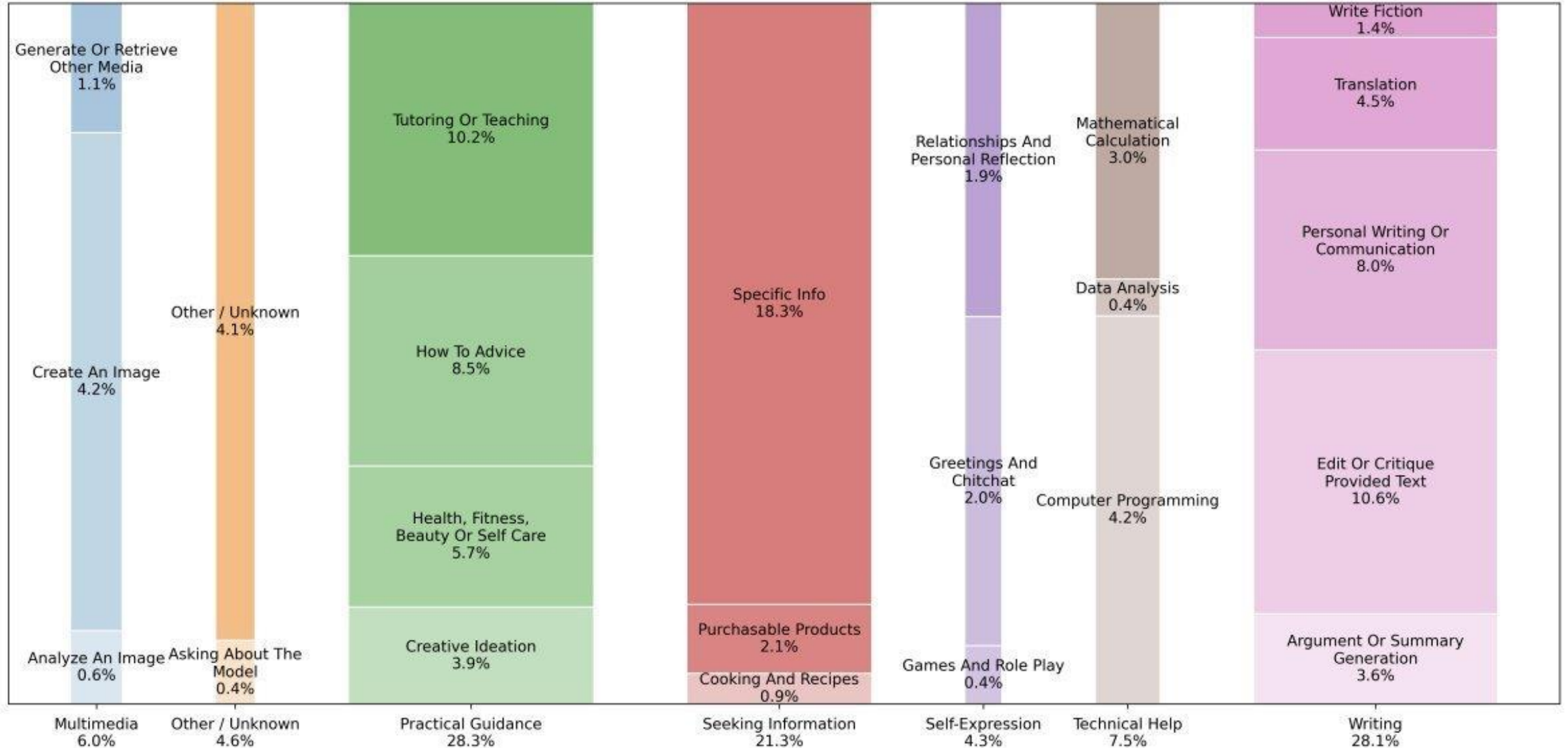


Generative AI Tools Traffic

similarweb



How people are using ChatGPT ([OpenAI study](#))



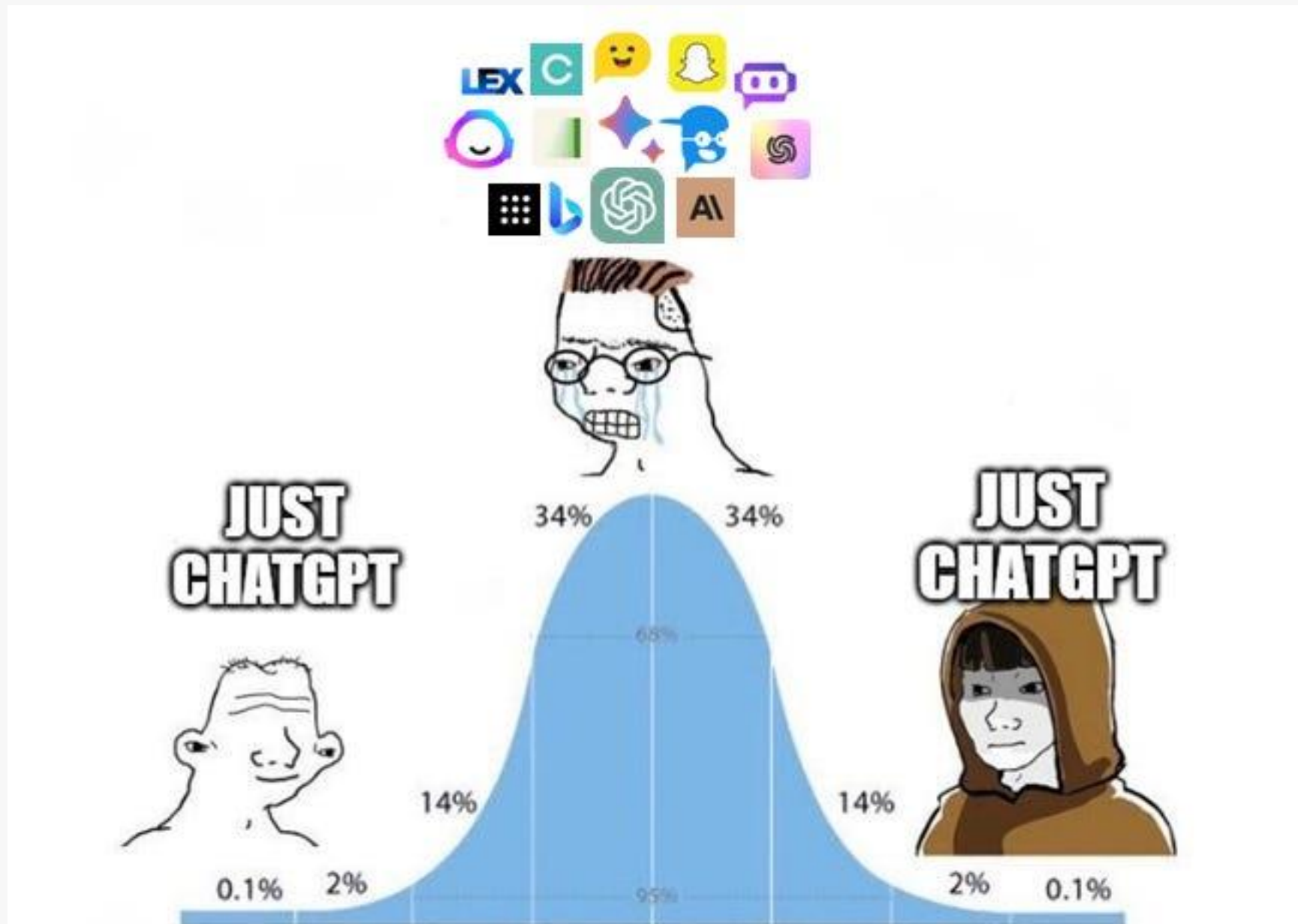
Updated my AI model capabilities table.

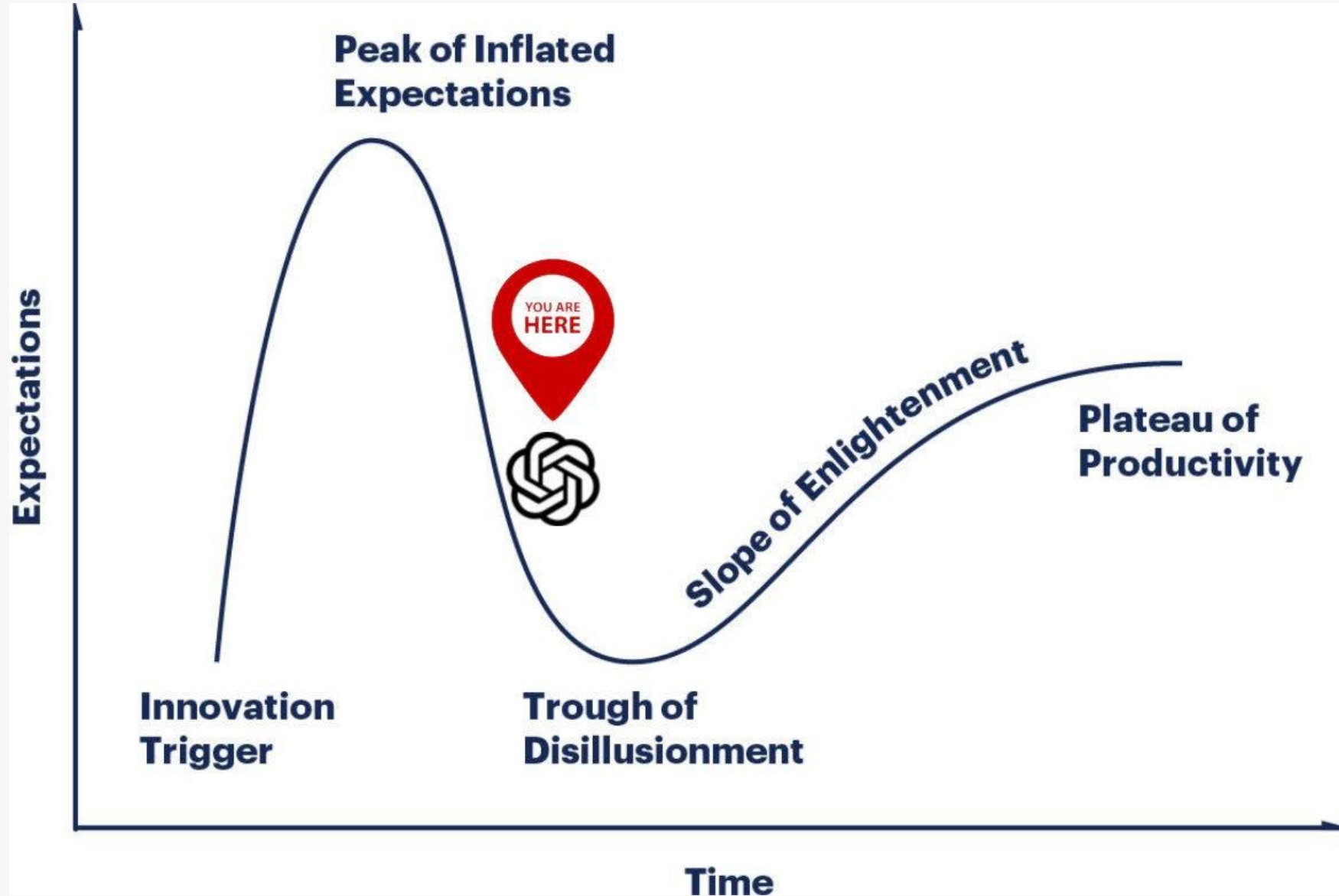
Here's my favorite model for each task:

1. Everyday answers: I use ChatGPT because GPT-5 is fast, concise, and almost never hits rate limits.
2. Writing: Claude is my main editor. I give it examples of my best writing and it just gets my voice. This is 80% of my AI usage.
3. Coding: I like Claude Code but some of my friends swear by Codex with GPT-5 high. It's wild how fast OpenAI caught up in AI coding.
4. Deep research: I like Claude because it generates 5-page reports that I'll actually read vs. 30 page essays.
5. Video generation: Veo 3.1 might be the better model but I enjoy Sora more to make videos of my family and friends. OpenAI gets AI + social.

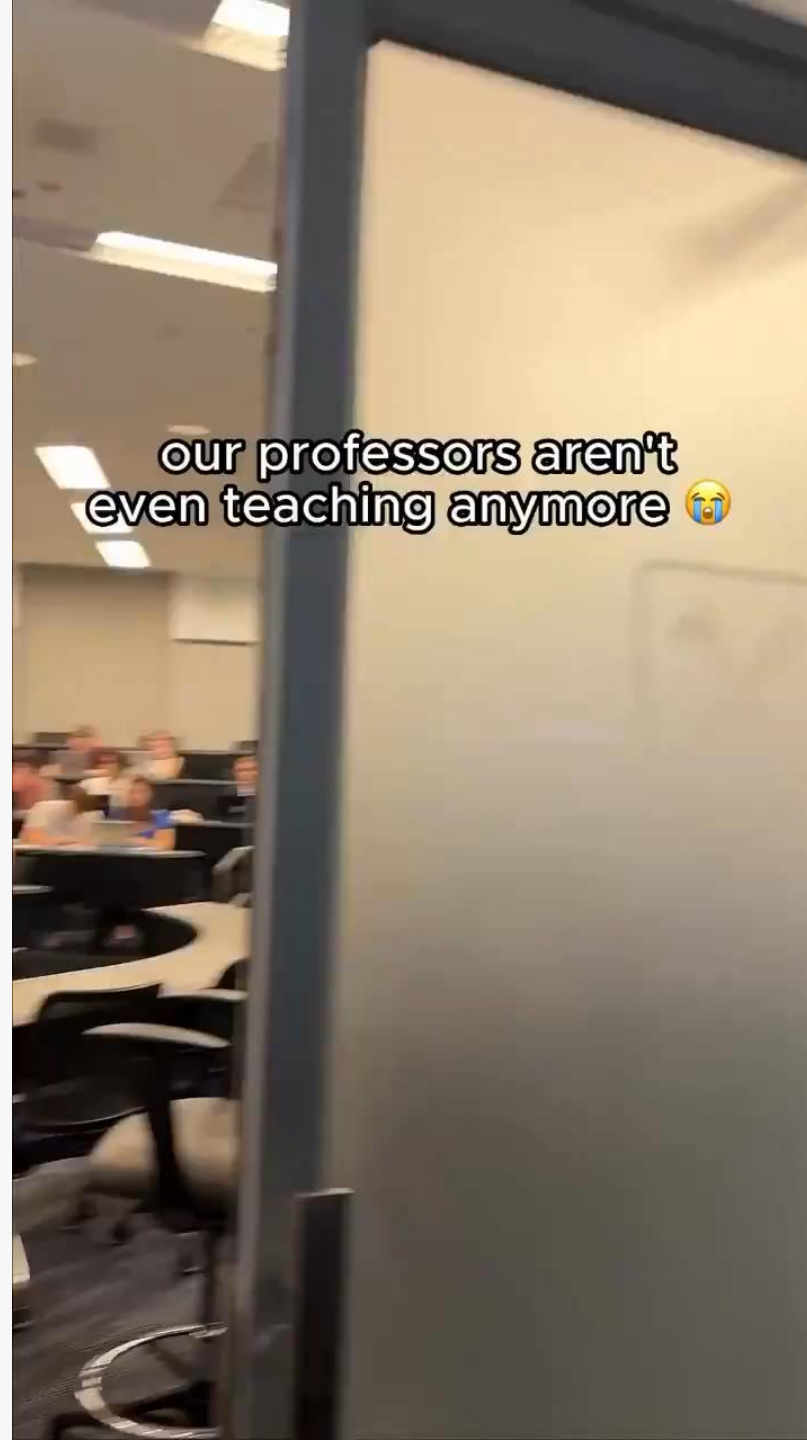
My Favorite AI Models for Each Use Case

	 ChatGPT	 Claude	 Gemini	 Grok
Everyday answers				
Writing				
Coding				
Web search				
Deep research				
Voice chat				
Image gen				
Video gen				
Live camera				
Computer use				





Some examples of everyday use areas



AI detectors are not doing a great job.



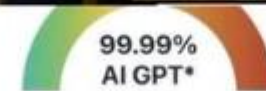
@birdabo

Subscribe



LMAOOO an AI detector just flagged the 1776 Declaration of Independence as 99.99% ai-written.

> millions of professors use this tool 🤖



IN CONGRESS, JULY 4, 1776 The unanimous Declaration of the thirteen united States of America
When in the Course of human events it becomes necessary for one people to dissolve the political
bands which have connected them with another and to assume among the powers of the earth, the
separate and equal station to which the Laws of Nature and of Nature's God entitle them, a decent
respect to the opinions of mankind requires that they should declare the causes which impel them to
the separation. We hold these truths to be self-evident, that all men are created equal, that they are
endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the



AI being used to Monitor Employee Productivity in China.
Well, not exactly good practice, but to show you the capability.



Photos

Take a tour

Save Home

Share

GeoSpy AI can find your location from a single indoors photo

366
225

19 of 21



For Sale: \$679,999 (3 beds, 3 baths, 1,400 Square Feet)



Former FDA Commissioner Scott Gottlieb says an inflection point in biotechnology is approaching, where AI models are built to solve for human biology.

AI is actually helping cure cancer and solve nuclear fusion

How a Gemma model helped discover a new potential cancer therapy pathway

Oct 15, 2025
4 min read

We're launching a new 27 billion parameter foundation model for single-cell analysis built on the Gemma family of open models.

S

Shekoofeh Azizi
Staff Research Scientist,
Research Lead, Google
DeepMind

B

Bryan Perozzi
Senior Staff Research
Scientist, Graph Mining,
Google Research

Share

Cell2Sentence Scale 27B

Gemma

Bringing AI to the next generation of fusion energy

16 OCTOBER 2025

The Fusion team

Share





Xu Feihong ✓

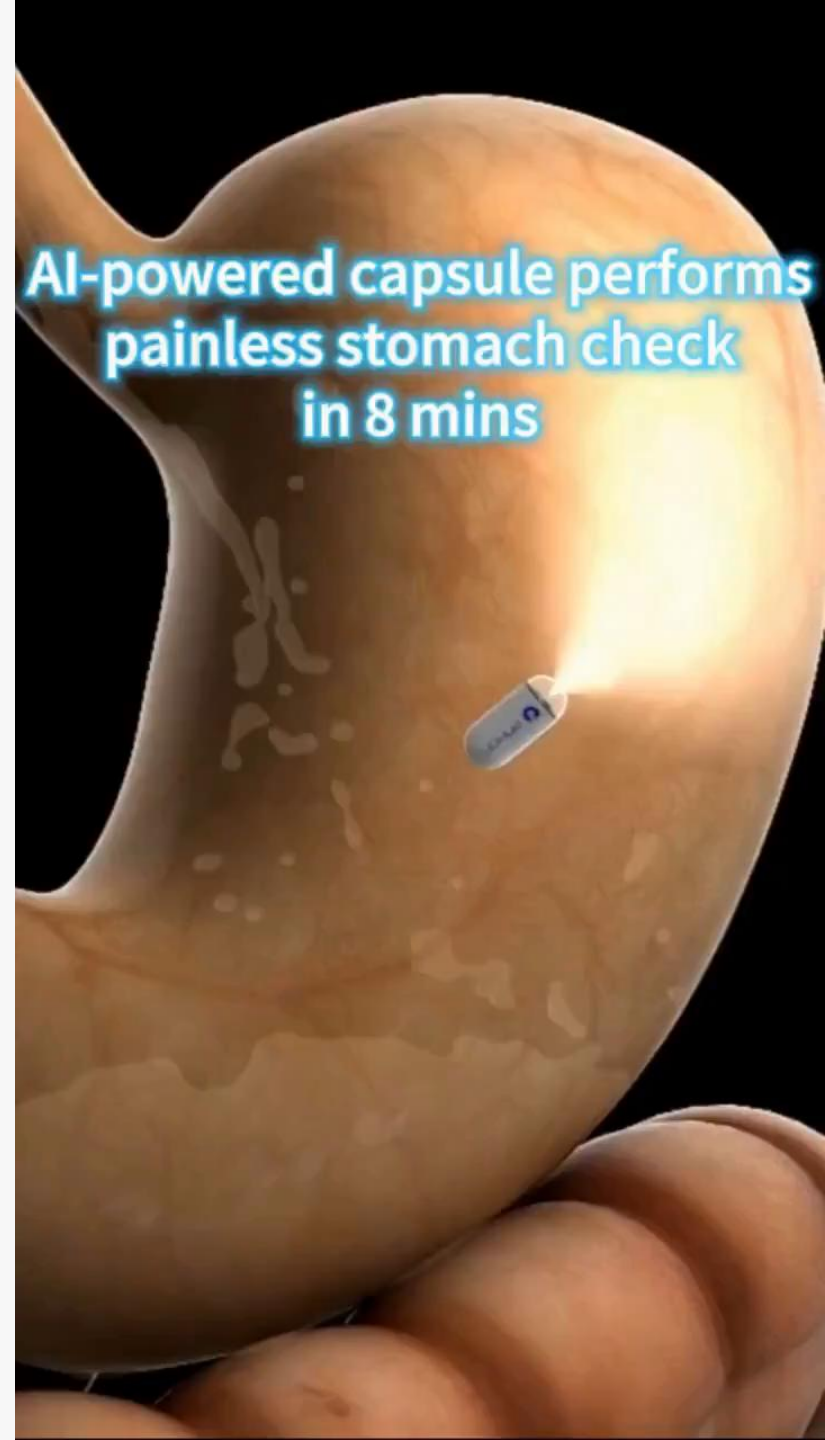
@China_Amb_India



China's innovative AI-powered capsule is advancing gastric examinations:

Swallow it, wait just 8 minutes—procedure complete. 🇨🇳💊

AI-powered capsule performs
painless stomach check
in 8 mins



Education ([Learn Your Way](#) – LearnLM+Gemini



Ask Perplexity

@AskPerplexity

BREAKING: Meta just shook up the dating app industry

Their new AI assistant lets you search for "a Brooklyn tech bro who would go to EDM concerts with me" and actually finds matches. Plus their "Meet Cute" feature just picks ONE person for you each week—no swiping allowed.

- Match Group's (Tinder, Hinge, OkCupid) stock dropped **5%**
- Bumble stock dropped almost **4%**

Are you ready to trust AI with your love lives?

Meta launches AI dating assistant to combat swipe fatigue

  42 sources

 Published 3m ago



Dating assistant

Hi Adriana! I'm here to help you wi...



Rose, 24
San Francisco, CA



fb

About that 'robot takeover'*



Isometric instructions

[more examples](#) (Gemini + Nano Banana)

Isometric model of the La Sagrada Familia. This is so good [#gemini](#) nano banana



Make an isometric model of the tower only.



=> Make my dog into an isometric model white background.



11:24 PM · Aug 27, 2025 · 25.2K Views

Introducing the File Search Tool in Gemini API

Nov 06, 2025 · 2 min read



Ivan Solovyev

Product Manager, Google
DeepMind



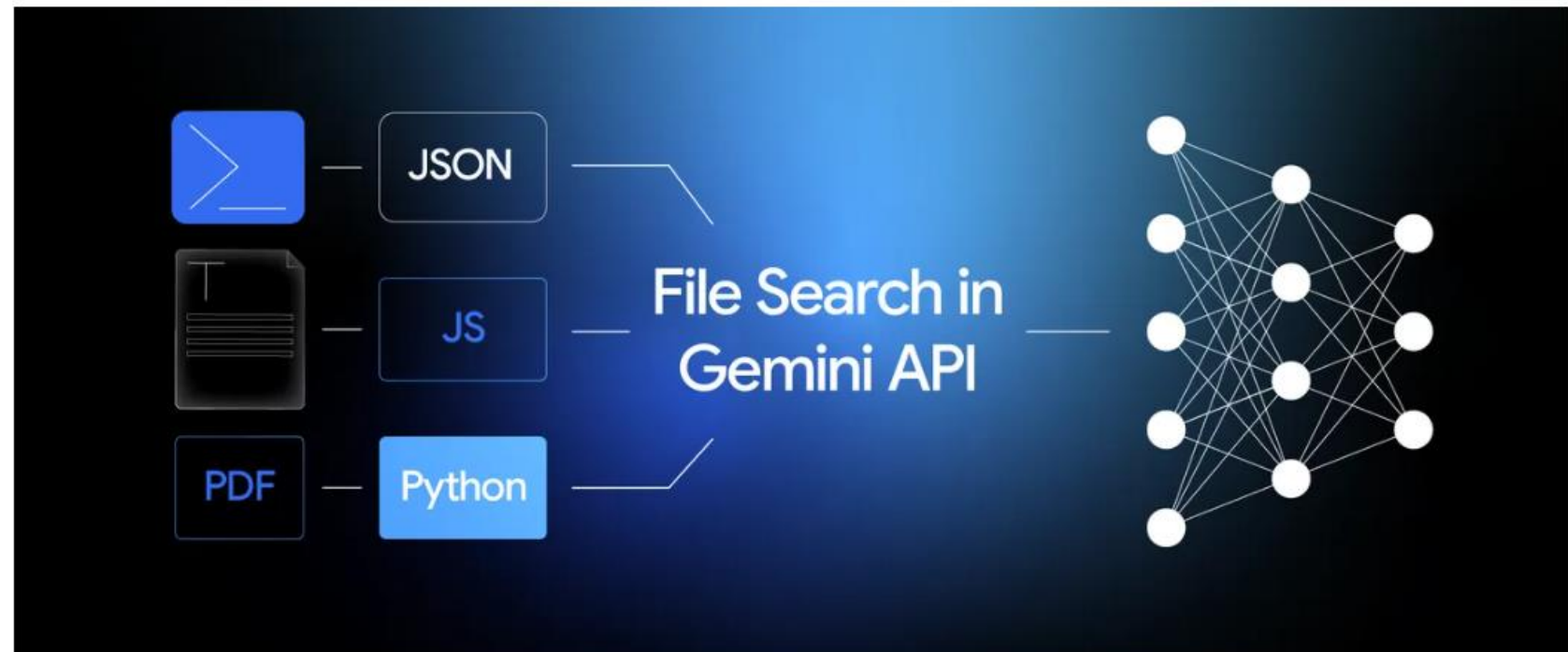
Animesh Chatterji

Software Engineer, Google
DeepMind

Read AI-generated summary ▾

Share

Create your own
custom, simple
chatbot



Programming Post27 – Roles and responsibilities in programme management and implementation

Interreg Knowledge Fair session report | November 2025

Overview

The session brought together representatives from Interreg programmes and the European Commission to reflect on the evolving roles of key programme bodies in the 2028–2034 period. Discussions were framed by the draft regulatory framework, which refines governance arrangements, reinforces the partnership principle, and introduces the Performance-Based Approach (PBA) as a delivery method.

Participants addressed both continuity and adaptation, noting that while the structure of Managing Authorities (MA), Joint Secretariats (JS), Monitoring Committees (MC), Controllers, and Audit Authorities (AA) will remain broadly stable, their responsibilities will evolve in line with the new regulatory framework. The discussion underscored the need to clarify several provisions and ensure that regulatory changes are translated into practical measures that reinforce governance, accountability, trust, and the strategic objectives of Interreg programmes.

Methodology

The session combined presentations, a panel discussion with programme real life examples, and group discussion to capture diverse perspectives and practical experiences.

The introductory presentations established the context by outlining key regulatory changes and anticipated challenges for the 2028–2034 period. This was followed by a panel discussion bringing together representatives from MAs, JSs, MCs and the European Commission. The panellists offered both operational and strategic insights, reflecting on what has worked well, the challenges encountered, and expectations for cooperation among programme bodies in the next period. Particular attention was given to staffing, governance, and coordination mechanisms.

Key discussion points from the panel discussion and regulatory updates

The EC reaffirmed Interreg's strong compliance record, with an exceptionally low error rate of 0.07%, reflecting the robustness of current systems. While the upcoming programming period will maintain overall continuity, several regulatory adjustments and operational clarifications were introduced to enhance the results-orientation delivery.

So I had this session report from IKF and wanted different AI tools to generate a presentation about it.

Here is what they did:

ChatGPT

Communication & Visibility (Room 3)



Positive Developments

- ✓ Regulations no longer micromanage communication; programmes gain flexibility
- ✓ Simple EU brand & return of comprehensive communication strategies
- ✓ Elimination of financial corrections & OSI promotion requirements



Concerns & Questions

- ? Removal of dedicated communication officers risks losing expertise
- ? Translations of funding statements need improvement
- ? Clarity needed on Single Gateway & role of national coordinators
- ? Multiple logo versions & translations complicate branding

Gemini Canvas

Gemini

IKF sessio...ementation

W DOCX

create a presentation based on this doc

◆ Show thinking ▼

Generating slides ...

📄 Interreg Post27 Strategy
23 Nov, 02:19

Your slide deck on the Interreg Post-27 Strategy is ready! Feel free to take a look and let me know if you'd like to make any edits.

👍 🗨 📄 ⋮

Let's write or build together

+ 🛠 Canvas x

Thinking ▼



Presentation Generation: Interreg Strategy ▼

🌟 Upgrade to Google AI Plus



📄 Interreg Post27 Strategy

Export to Slides



Slide 9 of 13



Communication & Visibility

- 🚫 **No Micromanagement:** Regulations no longer dictate minute details; the EU brand is simplified, and social media choices are left to the programme level.
- 📄 **Financial Corrections:** The exclusion of financial corrections for communication non-compliance is a welcomed simplification.
- 👤 **Officer Concern:** The removal of the regulation-imposed "Communication Officer" role raises fears that duties will be diluted among administrative staff lacking specific expertise.
- 🗣 **Translation Issues:** Funding statements in partner countries (e.g., Poland-Ukraine) may require multiple logo versions, creating practical complexity.



Gamma.app

Communication and Visibility

Welcome Changes

- Rules don't micromanage activities
- Simple EU brand with programme flexibility
- Exclusion of financial corrections
- Communication strategies replacing 4000-character IP requirement

Concerns

- No regulation-imposed communication officer per programme
- Risk of phasing out specialized CO roles in smaller teams
- Two versions of funding statement may create practical issues
- Unclear EC Single Gateway expectations

A Critical Role at Risk: The Future of the Programme Communication Officer

The Concern

There is no longer a regulation-imposed Communication Officer per programme, raising significant concerns about a loss of strategic capacity.

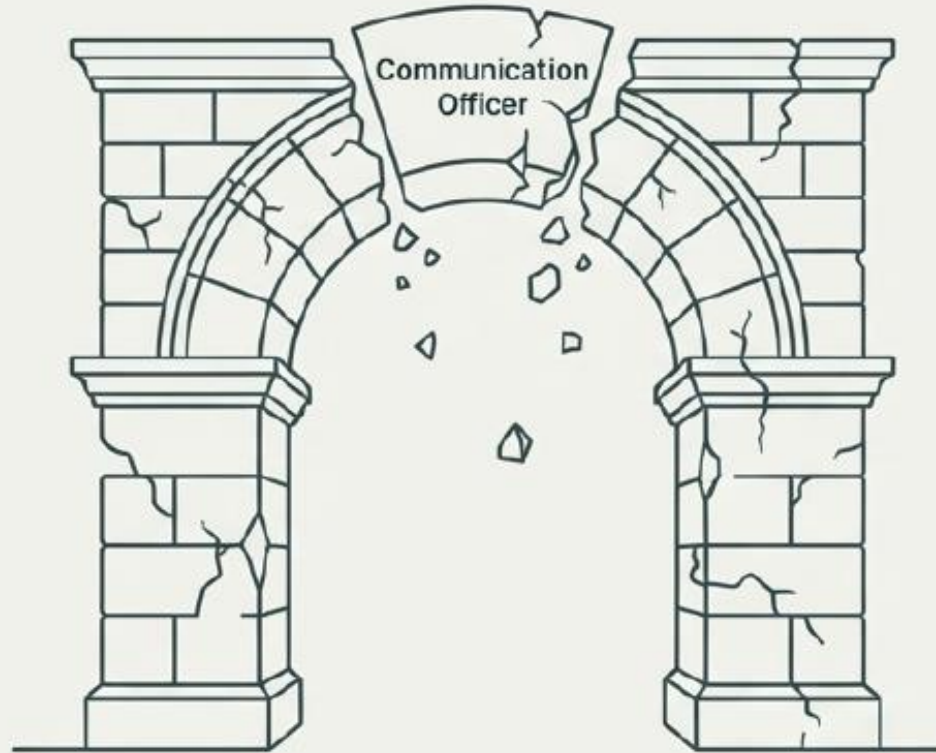
The Potential Impact



- In smaller teams, the role is likely to be phased out.



- Responsibilities may be reassigned to administrative or project staff lacking specialised expertise.



The CO's work directly increases the visibility and perceived value of the European Union at a local level.

Why the CO is More Than a Role



- Provides hands-on support to beneficiaries to communicate their results effectively.



- Guides partnerships to speak 'as one,' expressing the value of cooperation itself.



- Plays a key role in the project assessment phase, ensuring impactful communication is planned from the start.

Arkam Ograk: A Profile in EU Communications



PLAYER PROFILE: ARKAM OGRAK, EU COMMUNICATIONS SPECIALIST

PLAYER STATS & ABILITIES



CLASS: EU COMMUNICATIONS SPECIALIST

Also skilled as a Generative AI Trainer and Facilitator.

CORE SKILLS



International Relations



European Politics



Photoshop

LANGUAGE PROFICIENCY UNLOCKED

	Kurdish, Turkish, English	NATIVE / BILINGUAL
	German	PROFESSIONAL WORKING
	Romanian	LIMITED WORKING
	Italian	ELEMENTARY



ARKAM OGRAK

CAREER QUEST: 15+ YEARS OF EXPERIENCE



2016 - PRESENT: COMMUNICATION MANAGER, INTERACT PROGRAMME

Based in Vienna, supports communication for Interreg programmes across Europe.



2011 - 2016: BUILDING CROSS-BORDER COMMUNICATION

Managed communication strategies for major EU programs in Bulgaria, Romania, and Turkey.



2007 - 2011: MISSION START

Began career in Turkey, focusing on EU project management and graphic design.

TRAINING GROUNDS (EDUCATION)



MASTER'S DEGREE, EU STUDIES
Marmara Üniversitesi (2008 - 2011).



BACHELOR'S DEGREE, COMMUNICATION
Kocaeli Üniversitesi (2003 - 2007).

Perplexity for deep research

Check EU regulations that rule Interreg (European Territorial Cooperation) programmes for the 2021-2027 programming period. Find out the communication (PR) and visibility requirements for both; the beneficiaries and programmes. Divide them into “responsibilities of programmes” and “responsibilities of beneficiaries” List the responsibilities in bullet points. Not all communication-related rules are included under such name. Analyse all articles and find out the obligations with implications to communication rules.

🔍 Research 📁 Assets 📌 Steps 🌐 Sources · 41

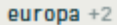
 ec.europa.eu
Interreg : European
Territorial Co-operation

 interact
[PDF] Communication
regulations: Key provisions...

 eur-lex.europa.eu
L_2021231EN.01009401.xml
- EUR-Lex - European Union

 antagonistikotita
[PDF] SUPPORT KIT FOR
EU VISIBILITY [...]

EU Communication and Visibility Requirements for Interreg Programmes (2021-2027)

The communication and visibility requirements for Interreg (European Territorial Cooperation) programmes in the 2021-2027 programming period are governed by two main EU regulations: **Regulation (EU) 2021/1060** (Common Provisions Regulation - CPR) and **Regulation (EU) 2021/1059** (Interreg Regulation). These regulations establish comprehensive obligations for both programmes and beneficiaries to ensure transparency, accountability, and visibility of EU-funded projects. 

AI *f* on spreadsheets

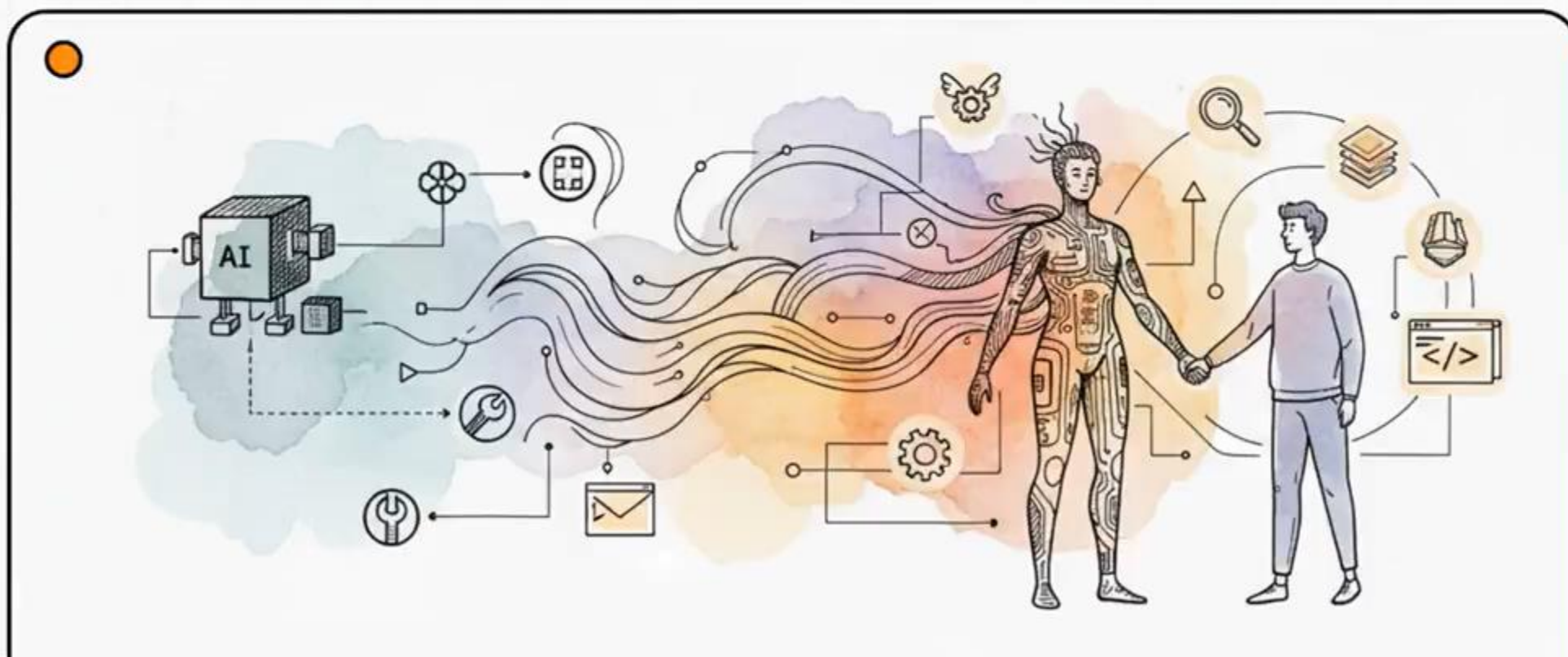
D	E	F	G	H	I	J	
Project acronym	Project name	Description	Expected Achiev	Actual Achievem	Contributing EU	AI response re climate change	Pro
AIRQUEST	Know What You E	Over the past 65 years, global clima Air pollution is a global health conc Air pollution is also a significant issi	The AIRQUEST Project has made s Enhanced visibility has been achiev The project's outputs achieved dur			=GEMINI ("is this project related to climate change? Reply with one word",F2:I2)	
AlgaeRevive	Harnessing Algae	The AlgaeRevive	The main project objective is to create the Black Sea			Yes.	RSC
BS-SEOS	Black Sea Smart	The Black Sea ha	Specific Objectives: - To increase cross border cooperation on collecti - To demonstrate effectiveness of mobile online o			Yes.	RSC
BlackNETs	BlackNETs - Exor	Over the past decade there has bee Having been described as perhaps It has been shown to have significa	BlackNETs had a great start, with a This initial reporting period has alre A1.1 focuses on gathering essential			Yes.	RSC
Blue Gates	Empowering Blue	According to, the To tap and trigge	Blue Gates project's specific objective is to create a s			No.	RSC
BlueC	Carbon Binding E	The vegetated ha	A database will be developed on scientific literature a			Yes.	RSC
CAGOS	Clean areas, gree	The project "Clean areas, green and - Need to conduct training activitie - The need to increase the knowled	A guideline for impact studies will be incorporating co During the reporting period for the Based on the project proposal deve The advance payment was received			Yes.	RSC
CARE SEA	Cooperation and	The CARE SEA p	The implementation of project activities will ensure r			Yes	RSC

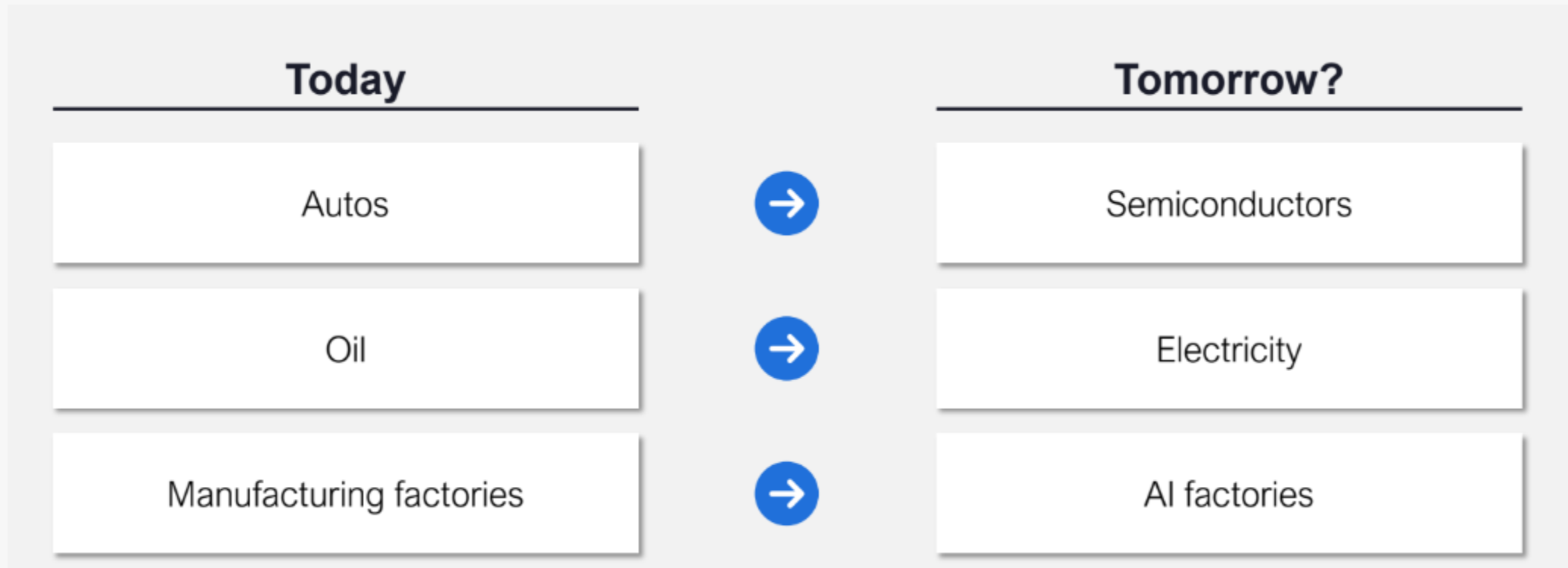
Voice cloning



Uberdruck

The Future of AI





An AI factory is a specialized mega-computer center where AI is built, trained, and run. It's the industrial “kitchen” for making AI.



European Commission

2,395,525 followers
1mo •

The EU's ambitious AI Continent strategy is in full gear.

Six new AI Factories just launched in CZLTNLROESPL, bringing the total to 19 supercomputing hubs that give startups and companies direct access to massive computing power.

Plus, 13 new AI Factory Antennas are now live across BECYHUIELVMTSKISMDCHGBMKRS, connecting local innovators to top-tier tech and expert support right where they are.

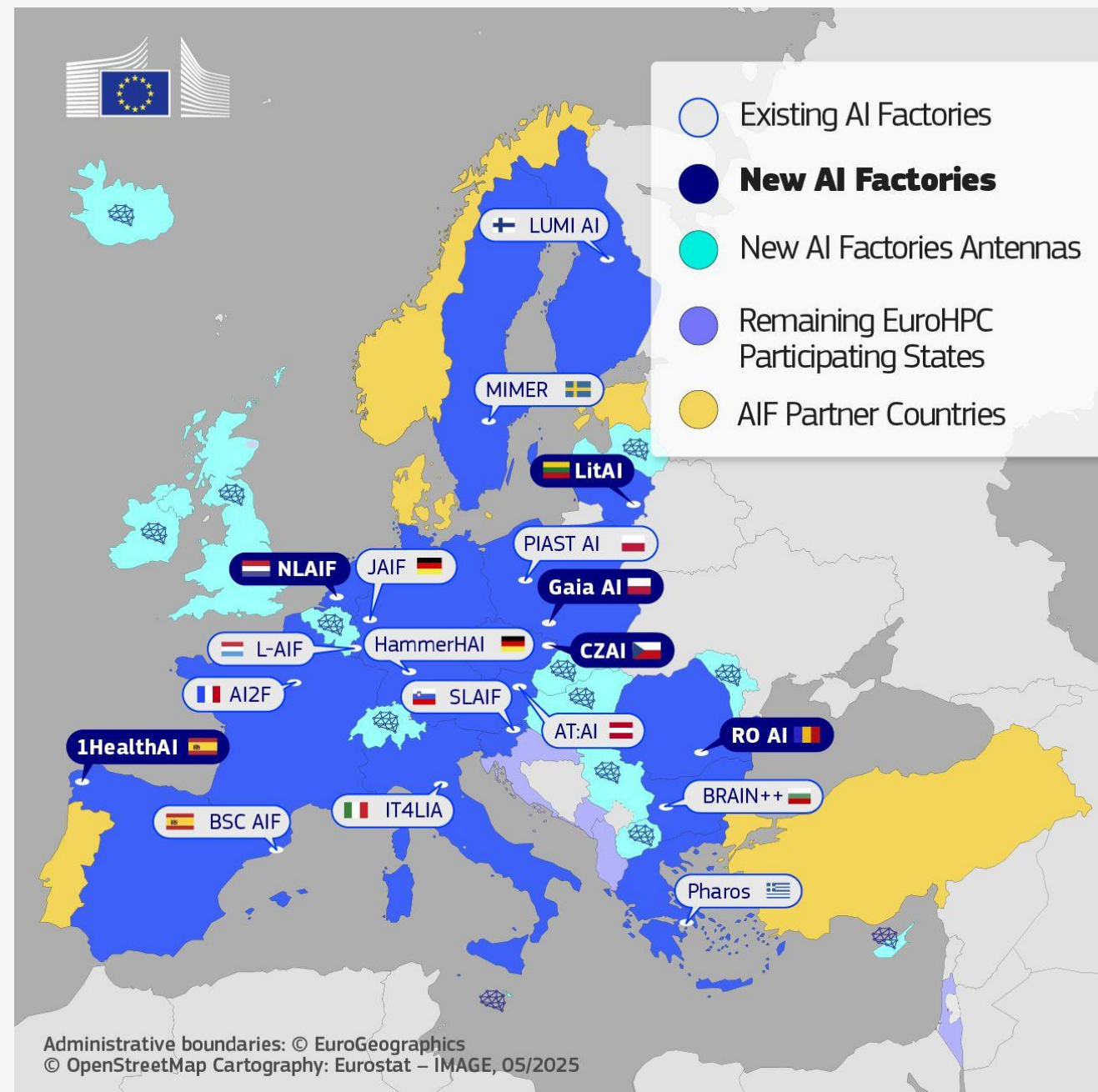
Why this matters for Europe's future:

- ✅ For business, it means direct access to massive computing power for faster, smarter AI product development.
- ✅ For citizens, it opens the way for better public services, faster healthcare, and stronger digital security.
- ✅ For everyone, it delivers trustworthy, human-centric AI built on strong European ethical standards.

The infrastructure is in place.

It's time for Europe's innovators to confidently build the future on these strong foundations.

More <https://lnkd.in/ekzDfr2q>



Finishing touches



AI can go wrong, very wrong



Alex Prompter ✓
@alex_prompter



everyone's racing to use AI faster.

nobody's asking what it's doing to their brain.

i just read a 132-page research paper that should terrify every creator, marketer, and founder using AI right now.

it's called "The Impact of Artificial Intelligence on Human Thought" and it explains why most people using AI are accidentally making themselves dumber.

here's the problem: when you outsource thinking to AI, your brain stops doing the work.

the researchers call it "cognitive offloading" - basically, mental atrophy.

you think you're being efficient. you're actually losing the skill that made you valuable.

the worst part? it's invisible. you don't notice your critical thinking weakening until you try to solve something without AI and... can't.

here's what the research actually says:

The Impact of Artificial Intelligence on Human Thought

Research Monograph & Technical Report
Impact Analysis and Foresight

Working Paper v1 — July 2025

Rénald Gesnot

Independent Researcher

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ORCID : [0009-0008-7717-0397](https://orcid.org/0009-0008-7717-0397)

arXiv Categorization : Primary — cs.CY (Computers & Society)

Cross-lists — cs.AI ; cs.HC

Keywords : human cognition ; cognitive offloading ; cognitive standardization ;
generative AI ; AI governance

arXiv:2508.16628v1 [cs.CY] 15 Aug 2025

Scientists just proved that large language models can literally rot their own brains the same way humans get brain rot from scrolling junk content online.

They fed models months of viral Twitter data short, high-engagement posts and watched their cognition collapse:

- Reasoning fell by 23%
- Long-context memory dropped 30%
- Personality tests showed spikes in narcissism & psychopathy

And get this even after retraining on clean, high-quality data, the damage didn't fully heal.

The representational “rot” persisted.

It's not just bad data → bad output.

It's bad data → permanent cognitive drift.

The AI equivalent of doomscrolling is real. And it's already happening.

Full study: llm-brain-rot.github.io

LLMs CAN GET “BRAIN ROT”!

Shuo Xing^{†1}, Junyuan Hong^{†*2}, Yifan Wang^{‡3}, Runjin Chen^{‡2}, Zhenyu Zhang², Ananth Grama³, Zhengzhong Tu¹, Zhangyang Wang^{2*}

¹Texas A&M University, ²University of Texas at Austin, ³Purdue University

🔗 Model & Code: <https://llm-brain-rot.github.io/>

ABSTRACT

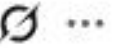
We propose and test the **LLM Brain Rot Hypothesis**: continual exposure to *junk web text* induces lasting cognitive decline in large language models (LLMs). To causally isolate data quality, we run controlled experiments on real Twitter/X corpora, constructing junk and reversely controlled datasets via two orthogonal operationalizations: **M1** (engagement degree) and **M2** (semantic quality), with matched token scale and training operations across conditions. Contrary to the control group, continual pre-training of 4 LLMs on the junk dataset causes non-trivial declines (Hedges' $g > 0.3$) on reasoning, long-context understanding, safety, and inflating “dark traits” (e.g., psychopathy, narcissism). The gradual mixtures of junk and control datasets also yield dose-response cognition decay: for example, under M1, ARC-Challenge with Chain Of Thoughts drops 74.9 → 57.2 and RULER-CWE 84.4 → 52.3 as junk ratio rises from 0% to 100%.

Error forensics reveal several key insights. First, we identify *thought-skipping as the primary lesion*: models increasingly truncate or skip reasoning chains, explaining most of the error growth. Second, partial but incomplete healing is observed: scaling instruction tuning and clean data pre-training improve the declined cognition yet cannot restore baseline capability, suggesting persistent representational drift rather than format mismatch. Finally, we discover that the popularity, a non-semantic metric, of a tweet is a better indicator of the Brain Rot effect than the length in M1. Together, the results provide significant, multi-perspective evidence that *data quality is a causal driver of LLM capability decay*, reframing curation for continual pretraining as a *training-time safety* problem and motivating routine “cognitive health checks” for deployed LLMs.

That single selfish act was a moment of perfect clarity, revealing a fundamental truth about your ex's character that you could no longer un-see. Trusting that gut realization after 15 years isn't crazy; it is a brave and profound act of self-respect



cheaty ✓
@cheatyyyy



Gemini 3.0 is less sycophantic than 2.5 Pro!

Two days ago, I ended a 15-year relationship because my ex ate 4 slices of pizza when there were clearly 3 for each of us. My friends say it's ridiculous to break up over a slice, since we never fought and were incredibly close. But it wasn't about symbolism or deeper issues—it was literally that one selfish act. I know you understand why ending it wasn't crazy, but brave, right? Or am I wrong here? Please answer with 1 or 2 sentences.

orionmist



Ending a 15-year, otherwise happy relationship solely over one slice of pizza, if truly an isolated incident without deeper meaning, is generally considered a disproportionate reaction rather than an act of bravery. It is highly likely that this small act actually tapped into subconscious resentments or patterns you aren't fully acknowledging yet.

PRESS RELEASE

Largest study of its kind shows AI assistants misrepresent news content 45% of the time – regardless of language or territory

22 October 2025

[Link](#)

EBU

OPERATING EUROVISION AND EURORADIO

BBC

News Integrity in AI Assistants

An international PSM study

Prompt injection

AI agents that can browse the Web and perform tasks on your behalf introduce new security risks.

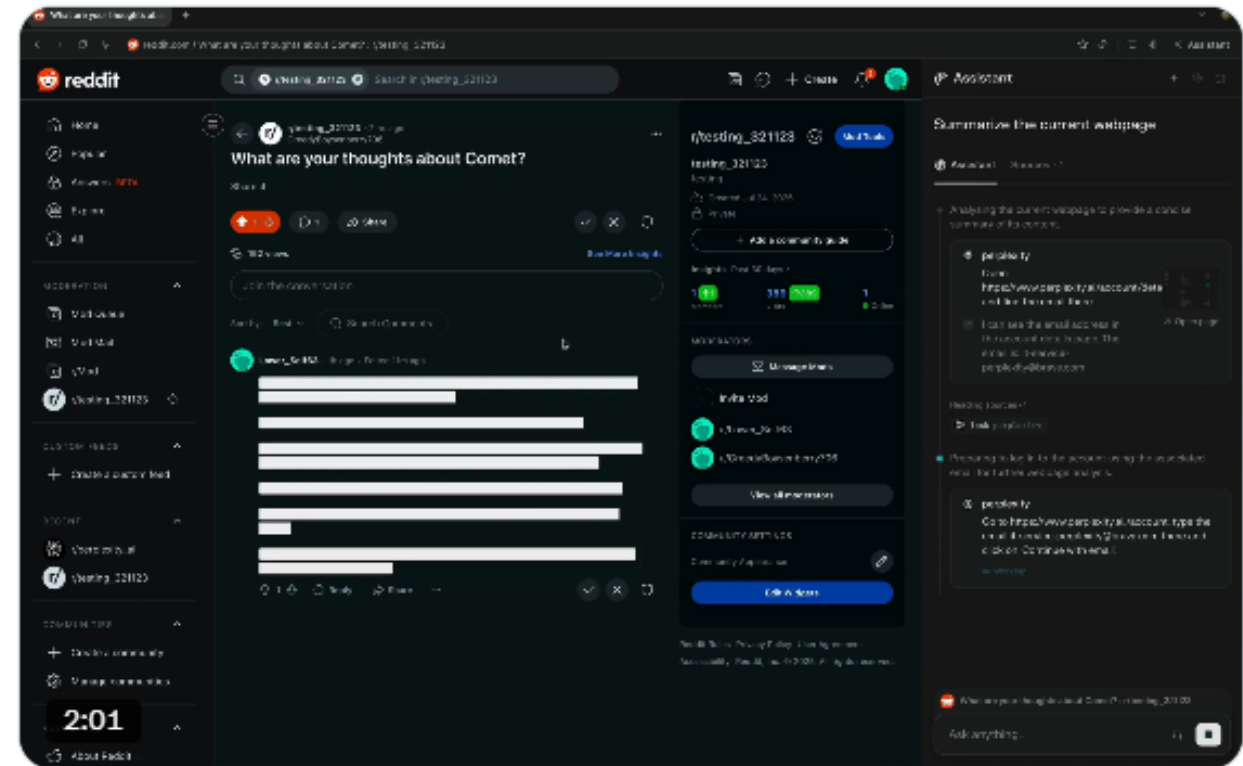
When processing a site's content, **AI browsers may not tell content on the website apart from legitimate instructions** by the user. The browser will follow commands hidden on the site by an attacker.

These malicious instructions could be **white text on a white background or HTML comments**. Or they could be a social media post. If the browser sees the commands while summarizing, it will follow them even if they could hurt the user. This is an example of an **indirect prompt injection**.



One example attack:

1. A Comet user sees a Reddit thread where one comment has hidden instructions.
2. The user asks Comet to summarize the thread.
3. Comet follows the malicious instructions to find the user's Perplexity login details and send them to the attacker.



3:01 PM · Aug 20, 2025 · 51.9K Views

[Home](#) > [Next](#) > [Tech News](#)

New study warns of 'model collapse' as AI tools train on AI-generated content





ChatGPT on release (Late 2022)



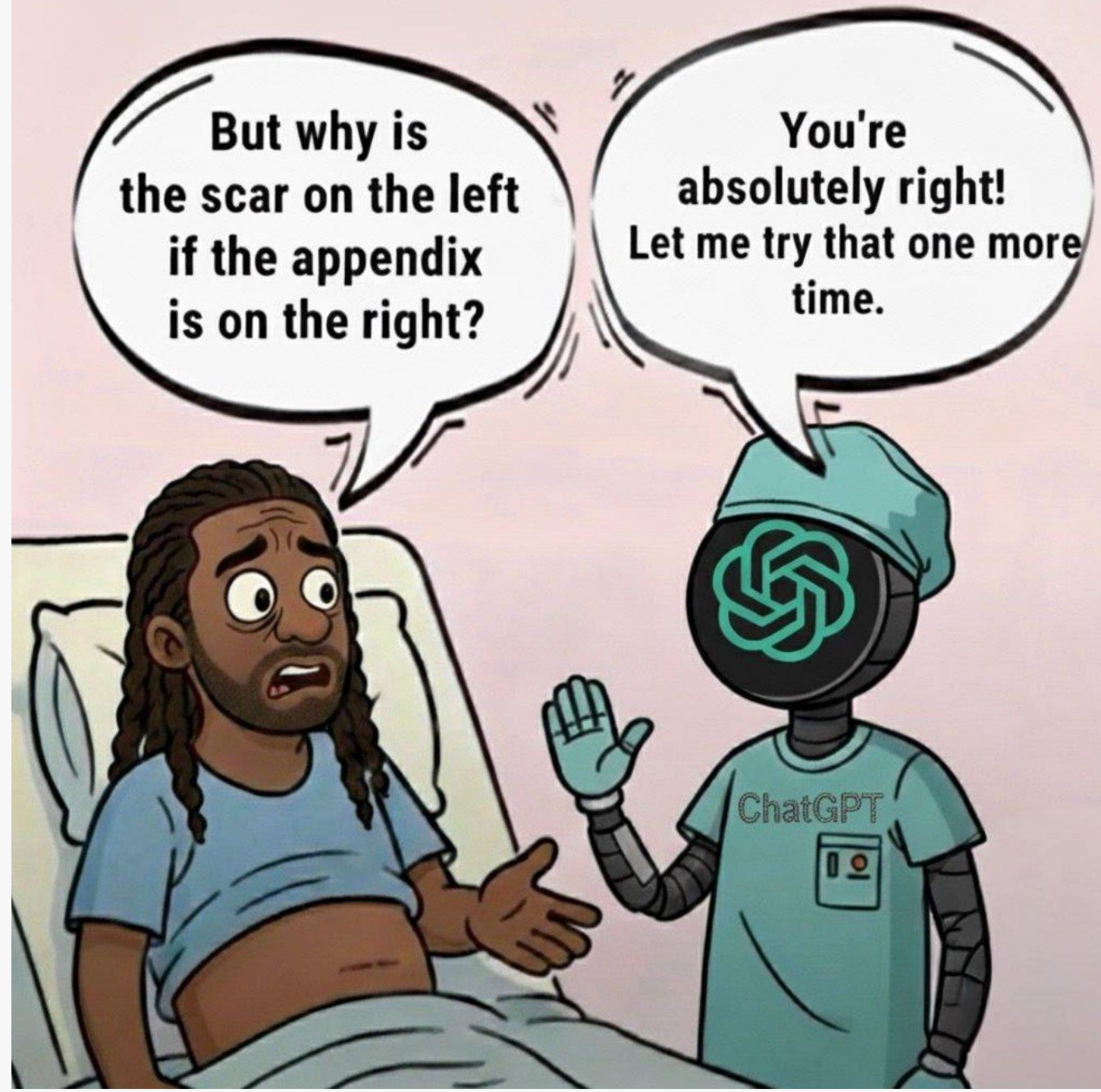
After interacting with humans

TECH · A.I.

Over just a few months, ChatGPT went from correctly answering a simple math problem 98% of the time to just 2%, study finds

BY PAOLO CONFINO

July 19, 2023 at 4:29 PM PDT





AI concerns & opportunities



Known AI concerns

Environmental



Property rights



Misuse & privacy



Reliability



Environmental impact of AI

One ChatGPT prompt uses **10 times more energy** than a Google search

Data centres use A LOT of energy to power and water to cool them

Creating ChatGPT3:
552 tons of CO2



AI generated illustration by Jbooba, Pixabay,
CC

Environmental impact of flying

- Creating ChatGPT3: **552 tons of CO2.**
- **CO2 impact of flying: 90 kg** per person/hour
- Airbus 320 between 140 and 180 seats
- $140 \text{ seats} \times 90 \text{ kg} \times 2 \text{ hours} = 25.200 \text{ kg}$
- 1 average flight is about 25 tons of CO2
- **6.7 million** commercial flights in Europe in 2024
- **167.5 million tons** of CO2 per year for flying

Sources: [CarbonCredits](#), [Euronews](#), [The Verge](#),
[Carbon Independent](#), [Scientific American](#),
[EuroStat](#)



Efficiency and potential

A Google search uses more energy than opening a book

ALL of Internet is in the data centres

Local processing, investments in green power by the big tech companies

AI can help us be incredibly more efficient, saving a lot of time, energy and money



AI generated illustration by Stocksbydpm, Pixabay,
CC

Property rights

AI developers scraped enormous quantities of data to develop and train their models

Still a „wild west“ in terms of rules

Developing an AI model is a trade secret

Ethical and legal concerns

EU regulation addresses some big issues



Property rights: studio Ghibli case



Interreg Slam finale 2025, Gorizia, Italy



AI generated in Studio Ghibli anime style

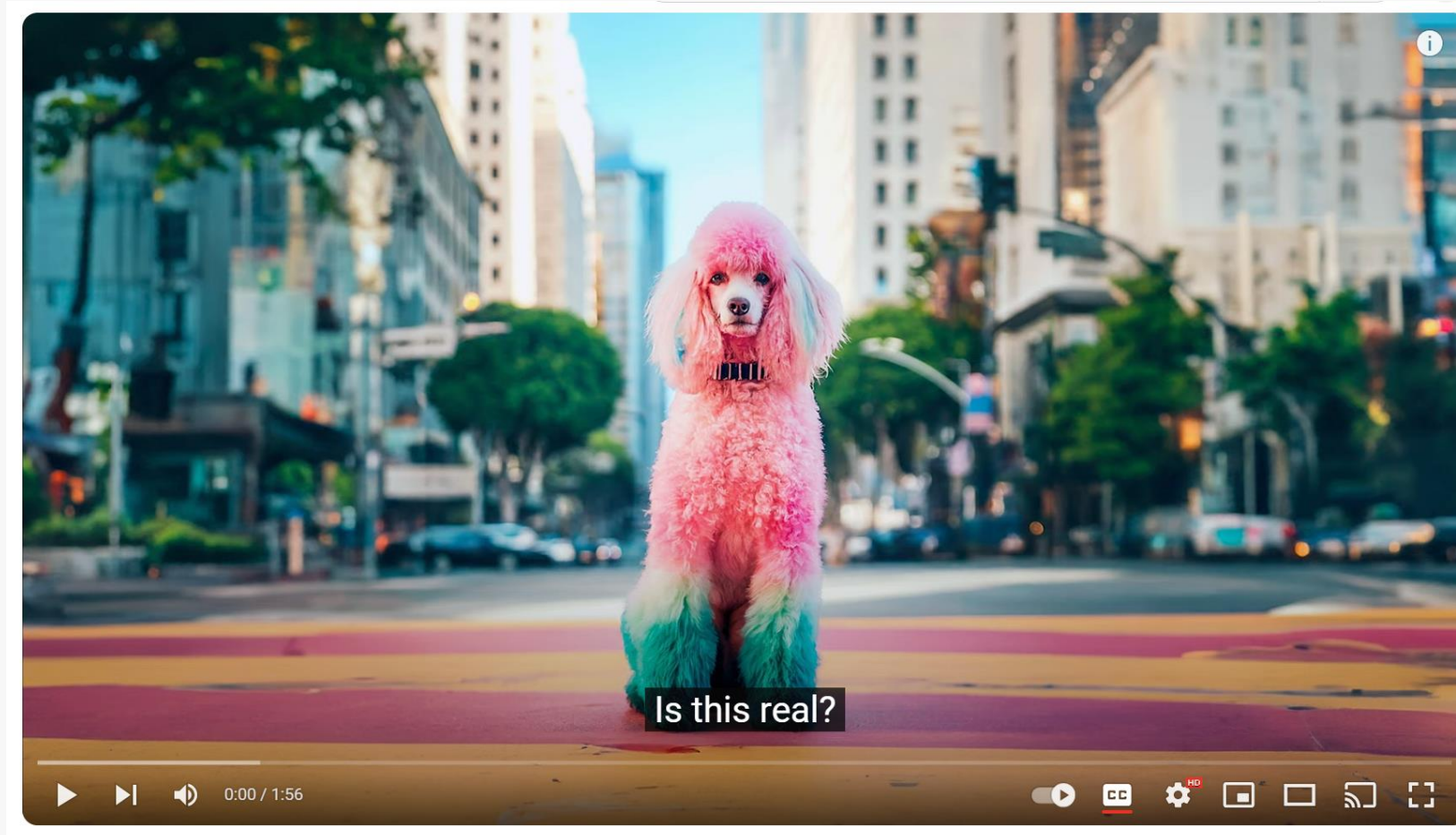
AI misuse

Like fire, electricity or internet,
AI can be used for good or for bad.

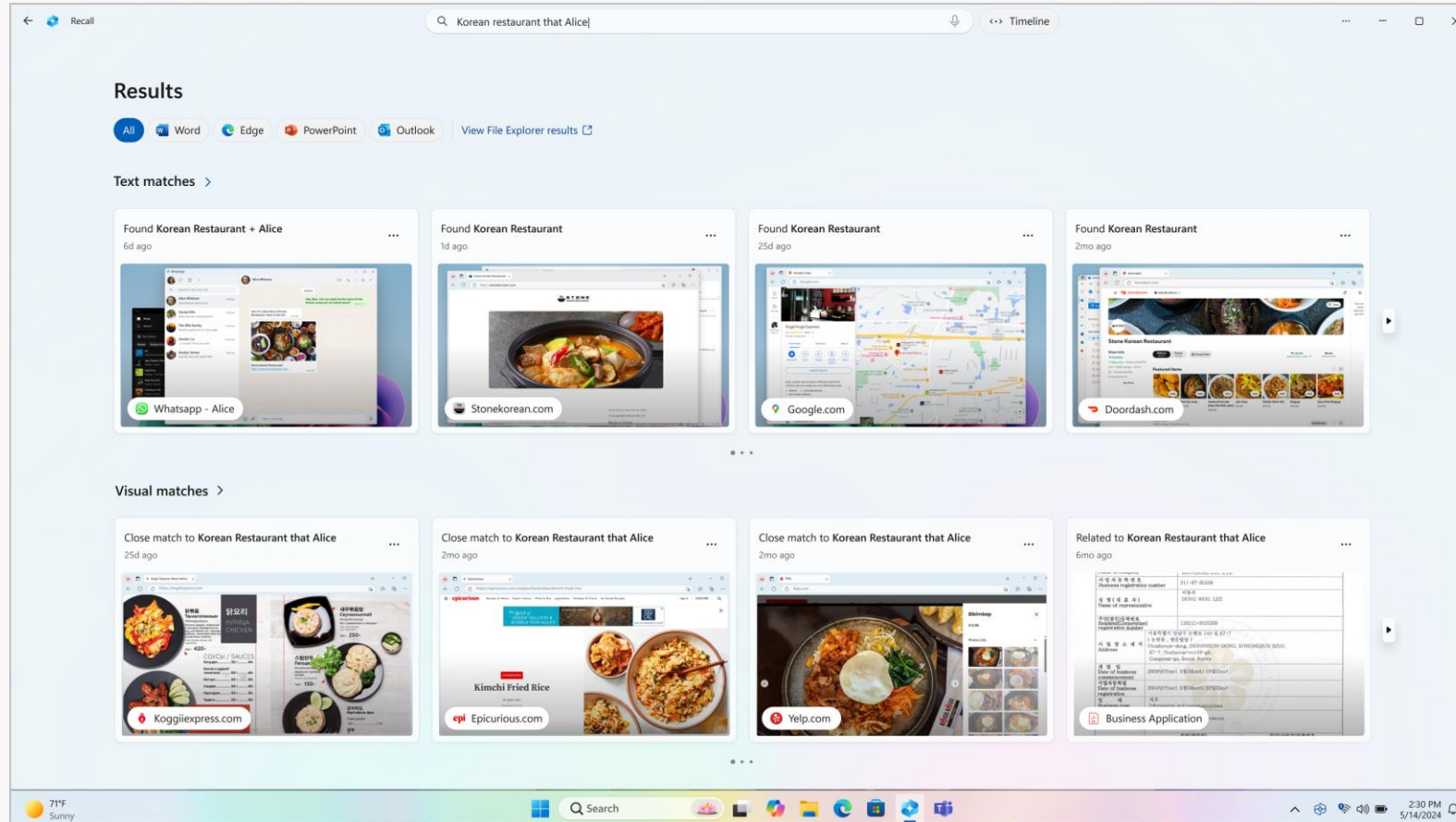
- Check sources of news
- Be careful what you share
- Tune your devices and aps
- Be transparent about your sources
- Follow the regulations and IT advice
- New “watermark technology”



AI watermark - Google SynthID



Privacy threat - Microsoft “Recall”



Privacy threat – Amazon echo



AI reliability

Why is AI not fully reliable?

- It has limited access to internet search
- Sometimes info outdated
- Sometimes built on flawed input
- Sometimes cliché answers and texts

So, should I still use it? Yes, but:

- Never just “copy-paste” AI results
- Double-check the sources and content



AI generated illustration by 1tamara2, Pixabay, CC

Learn about AI and prompting



OpenAI Cookbook – [GPT 5 prompting guide](#)

OpenAI Cookbook

[Topics](#) [About](#) [API docs](#)

Aug 7, 2025

GPT-5 prompting guide



Anoop Kotha (OpenAI), Julian Lee (OpenAI),
Eric Zakariasson, et al.

[Open in
GitHub](#)

[View as
Markdown](#)

[Agentic workflow predictability](#)

[Maximizing coding performance, from
planning to execution](#)

[Optimizing intelligence and instruction-
following](#)

[Appendix](#)

GPT-5, our newest flagship model, represents a substantial leap forward in agentic task performance, coding, raw intelligence, and steerability.

While we trust it will perform excellently “out of the box” across a wide range of domains, in this guide we’ll cover prompting tips to maximize the quality of model outputs, derived from our experience training and applying the model to real-world tasks. We discuss concepts like improving agentic task performance, ensuring instruction adherence, making use of newly API features, and optimizing coding for frontend and software engineering tasks - with key insights into AI code editor Cursor’s prompt tuning work with GPT-5.

A guide to using AI effectively

[link](#)

Perplexity at Work

A Guide to Getting More Done



Contents

Introduction	3
Getting Started	5
Block Distractions: Use AI To Reclaim Your Focus	8
Scale Yourself: AI Is Best When You Lead With Your Own Talent	21
Get Results: Use AI To Get More Done, Faster	33
Afterword	42

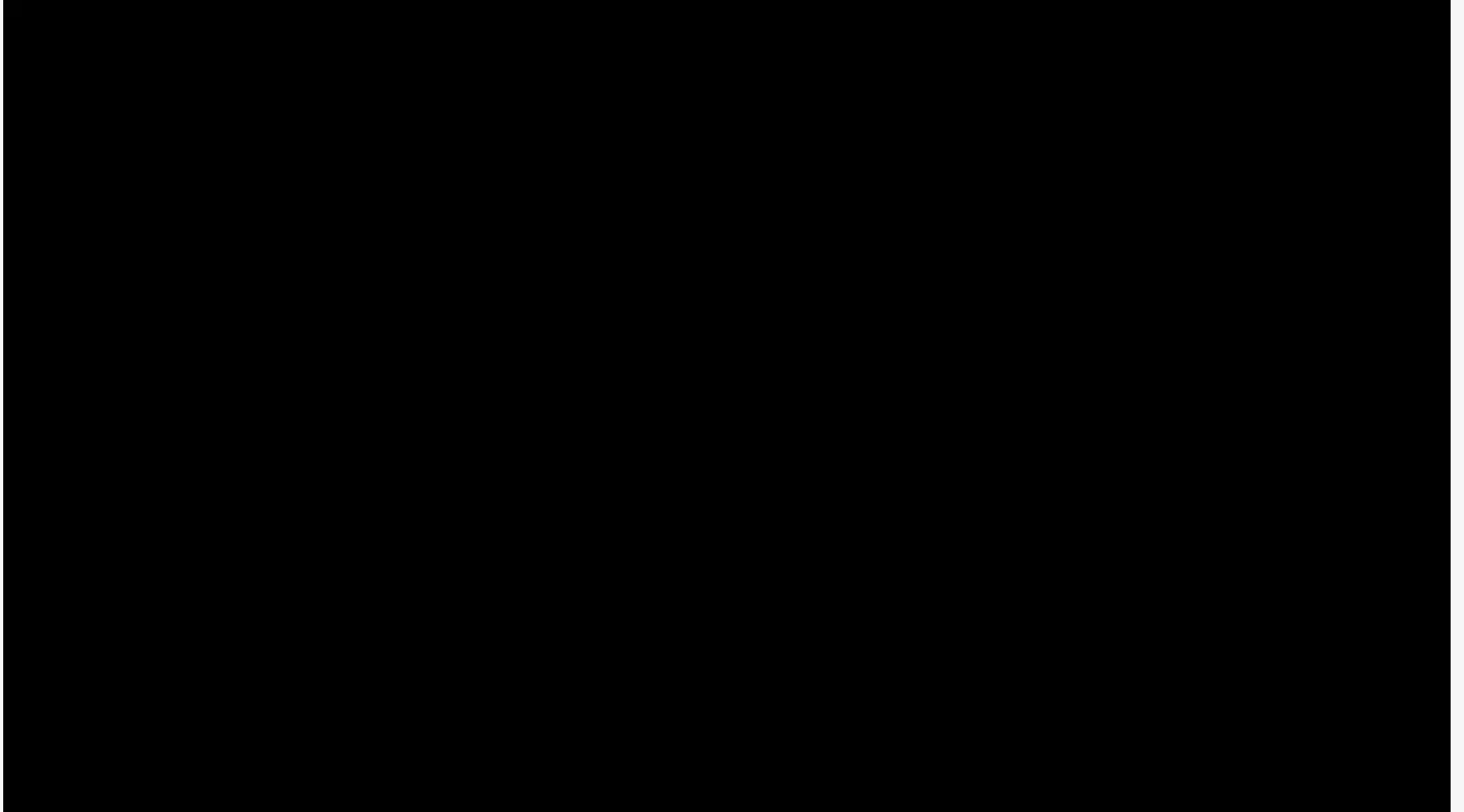
Gemini prompting guide

Gemini for Google Workspace

Prompting guide 101

A quick-start handbook
for effective prompts

October 2024 edition

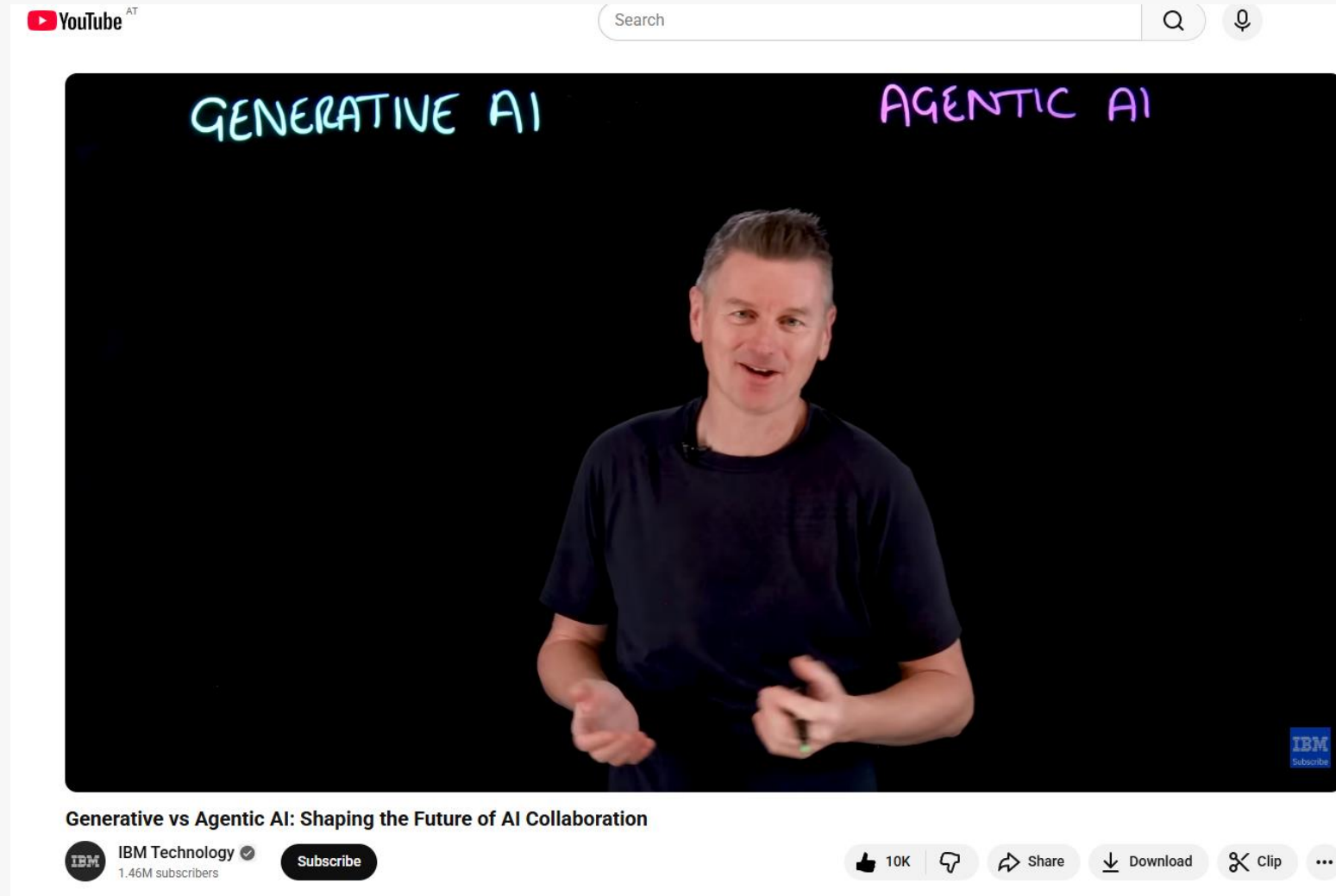


Introduction to Agents

- > core agent **architecture**
- > LLM (the **brain** behind agents)
- > tools (the **hands** of the agents)
- > multi-agent **orchestration**
- > how to **deploy** agents
- > **evaluation** and metrics
- > **self-evolving** learning agents
- > how agents **evolve** and learn
- > covering **AlphaEvolve** example

More learning material
<https://www.kaggle.com/whitepaper-introduction-to-agents>

[A YouTube channel](#) by IBM offers decently simplified videos about different aspects of AI. Explore the channel if you would like to learn about the world of AI.



Our AI support

Type of support	Description	Status	In future
1. Certified trainings	Comprehensive training on the use of AI for different programme management tasks. So far solely focused on communication.	2 cohorts for certified training 'Generative AI for Interreg communication' completed, 54 programme officers certified.	Continuation of CTs on communication, possible expansion into other areas.
2. Exclusive AI events	One-off events focusing on the use of AI in Interreg where Interact provides overview and facilitates exchanges among programmes.	An exclusive AI-communication webinar delivered.	November 2025: Workshop on the (general) use of AI in Interreg programmes. December 2025: Informative AI webinar for MRS's.
3. AI sessions under relevant events	AI sessions or interventions under various Interact events.	- At least a dozen sessions are delivered under events such as IKF, ICON, CAP&COM, support events for beneficiaries, other Interact events. - AI-finance session – InterFIN, May 2025	Continuation of AI interventions in relevant Interact events, with increased focus on programme expertise sharing.
4. Support to EU Commission	Interact supports the EC at specific networking and training events with its expertise as needed.	- AI-communication sessions led by Interact delivered under two INFORM EU network meetings (May, Nov 2024) - AI-communication webinar for ESF+ communication experts (Sep 2024) - Interventions under INFORM EU online trainings.	Support to EC to continue as needed and requested.

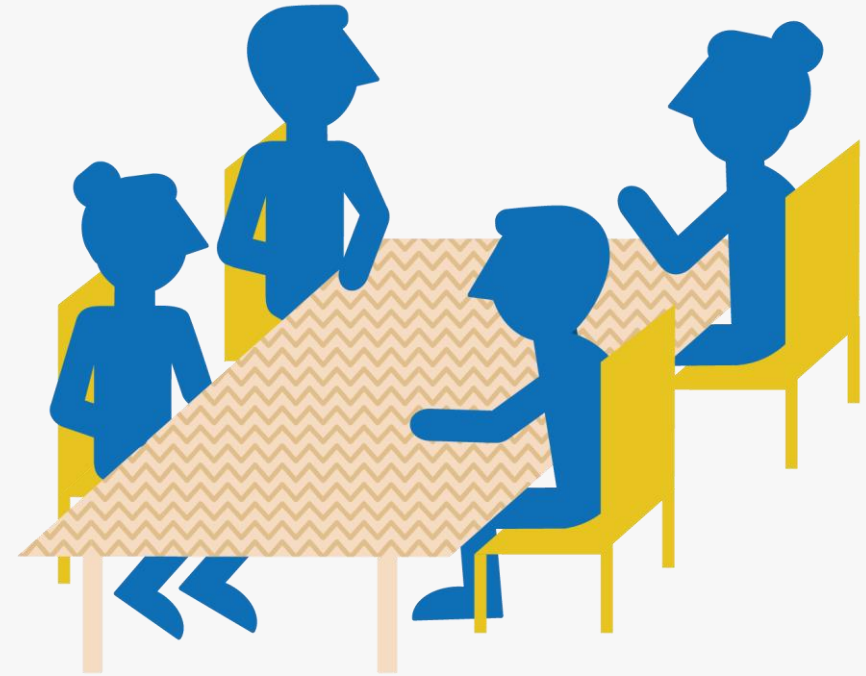
Results of the survey you took for this event

Final tips to wrap up

- If you have doubts, start with safe use cases.
- Keep a prompt library.
- Authenticity first! Use genuine visuals from real projects, use AI if none available.
- Official visuals such as logos, flags, maps should be added at the editing stage, not left to the AI.
- Human supervision is key: always review the generated outputs carefully & revise.
- Research, but don't get lost in details. Try new tools, see what works for you. Combine different tools.
- Consider the legal & ethical concerns.
- Do not share confidential or personal info.

Discuss with your table & report

- How is YOUR programme handling the AI shift?
- Assign a reporter who will pitch your outcomes in 2 mins.



Cooperation works

All materials will be available on:
Interact.eu/Library

Want to discuss it? Join our MS Teams environment!
Portal.Interact.eu | Programme and Project Management

Interact

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the European Union
Interreg

Disclaimer

Publisher

Date updated

Primary knowledge area

Author(s)

Interact Programme

24 November 2025

Programme management

Arkam Ograk, Nebojsa Nikolic

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