SCIENCE
PASSION
TECHNOLOGY

AI in Learning and Living: Are We Ready for a Post-Generative World?

Dr. Benedikt **Brünner**

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Bydgoszcz Science Festival 2026 | Grupa Moderator Arena, Bydgoszcz, Poland

postgenerative.at

Hands up!

- Who has already used ChatGPT or another AI tool?

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- Who has used AI for school?

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- Who has already used ChatGPT or another AI tool?
- Who has used AI for school?
- Who has created an image, a song or an app with AI?

What do we use AI for?

- Homework & learning
- Writing texts
- Answering questions
- Translating
- Creating images
- Programming
- Developing ideas
- . . . and you?

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- . . . and you?

Not only you

32.7 % of people in the EU (16–74) used generative AI in 2025.
More than 70 % of analysed ChatGPT messages were *not* about work.

Eurostat (2025); Chatterji et al. (2025)

But how does generative AI actually work?

Words as numbers

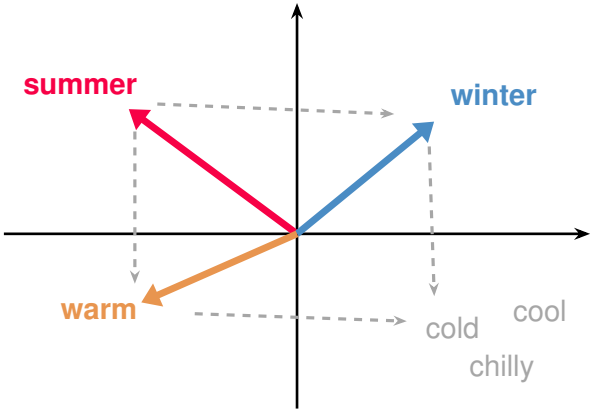


Figure after Brünner and Leitner (2024) (CC BY 4.0, ed-tech.app); cf. Brünner et al. (2025), Fig. 4.

What is the next word?

In summer it is warm,
in winter it is _____.

What is the next word?

In summer it is warm,
in winter it is _____.

✔ **cold**

In workshops, 92 % of participants (N = 185) answered “cold” – just like ChatGPT (Brünner et al., 2025).

What is the next word?

In the city, in front of the house,
there is a _____.

What is the next word?

In the city, in front of the house,
there is a _____.

car? bus stop? street? building?

What is the next word?

In the village, in front of the house, there is a _____.

What is the next word?

In the village, in front of the house, there is a _____.

garden? tree? tractor? dog?

What is the next word?

In the village, in front of the house, there is a _____.

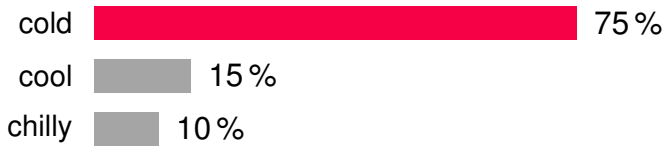
garden? tree? tractor? dog?

One word changed → **the context changed** → different expectations

City vs. village: humans mostly answered “car”, ChatGPT “building”; for the village, “garden” was most frequent (Brünner et al., 2025).

Behind the scenes: probabilities

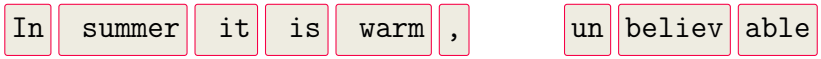
In summer it is warm, in winter it is . . .



Illustrative values, example adapted from Brünner et al. (2025).

Actually: tokens, not words

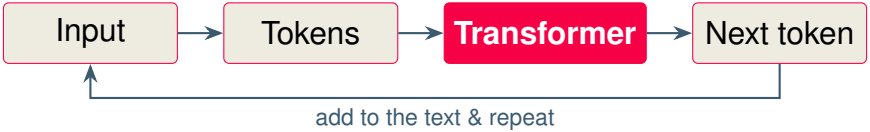
Language models do not read words, they read **tokens** – pieces of text.



Example split – every model splits text in its own way.

- Trained on **huge amounts of text**
- Learns **statistical patterns** between tokens
- Generates by predicting the **next token**, again and again

Step by step



In winter it `is`

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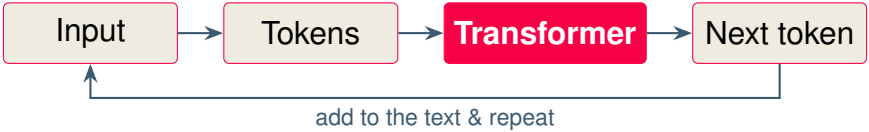

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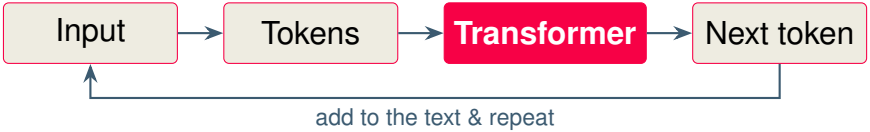
In winter it is `cold`

Step by step



In winter it `is`

In winter it is `cold`

AI writes one token at a time. It does not look up “the truth”.

What is the next word?

My eye colour is _____.

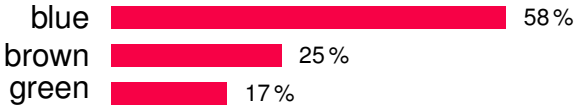
What is the next word?

My eye colour is _____.

brown? blue? green?

What is the next word?

My eye colour is _____.



ChatGPT answers in workshops (Brünner et al., 2025, Fig. 15).

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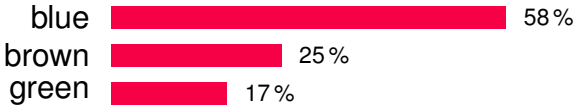
My eye colour is _____.



A likely answer is not necessarily a true answer.

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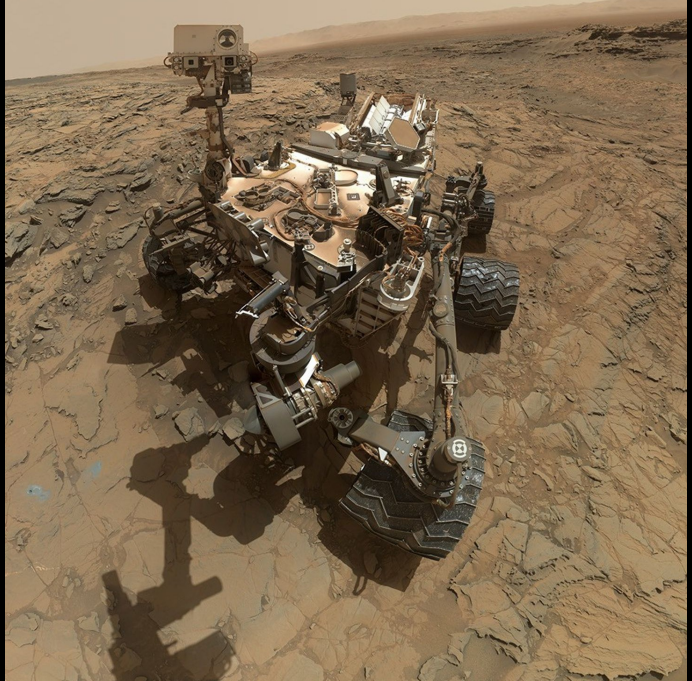
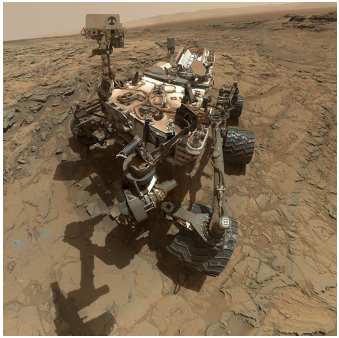
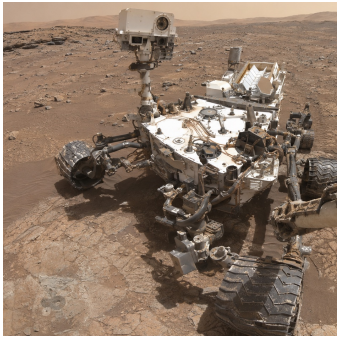




Which one is AI-generated?

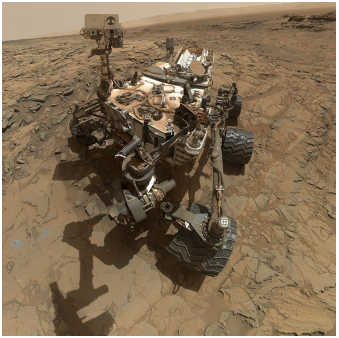


A



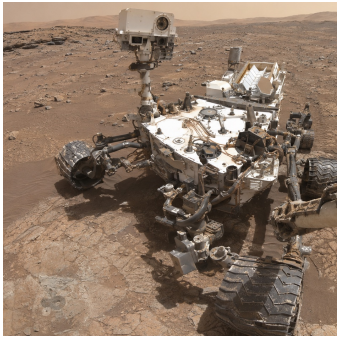
B

Which one is AI-generated? – The answer



A: real

NASA/JPL-Caltech/MSSS, 2015

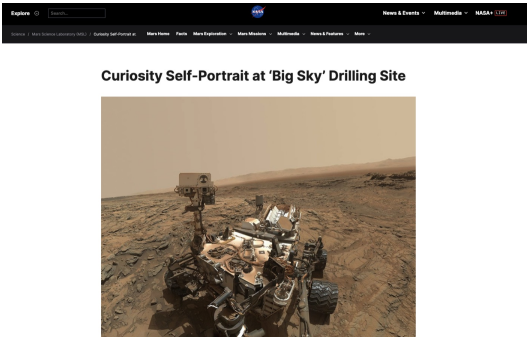


B: AI-generated

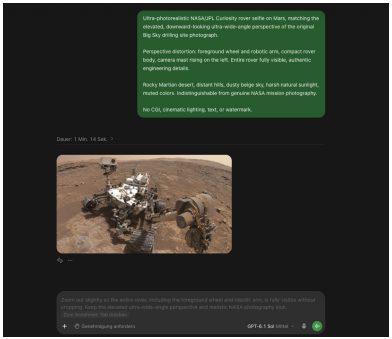
ChatGPT, 1 prompt, 12 Nov 2026

A: NASA/JPL-Caltech/MSSS (2015).

Which one is AI-generated? – How it was made



A: original on science.nasa.gov



B: one prompt in ChatGPT

NASA/JPL-Caltech/MSSS (2015); screenshot ChatGPT (OpenAI), 12 Nov 2026.

Does looking real mean being real?

- AI images can look **extremely realistic**

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Does looking real mean being real?

- AI images can look **extremely realistic**
- Not every realistic image is **authentic**
- The image alone often **cannot prove** where it comes from
- What helps: **source and context** – who published it, where, when, why?

What happens when AI-generated content becomes part of everything around us?

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Adjective

post-gen·er·a·tive

Everyday life permeated by generative AI.

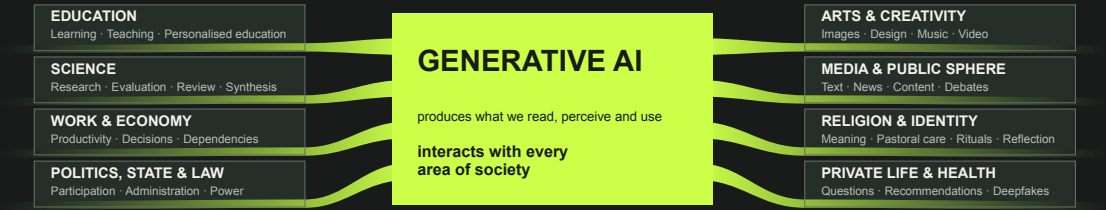
Brünner, Ebner, Schön, Hoffmann, Ortner & Leitner (2026)

“Post-generative describes a **societal condition** in which generative artificial intelligence **permeates everyday life**. It shapes how people work, learn, communicate, design and produce knowledge. Its outputs enter the information, tools and environments we encounter every day, **affecting even those who do not consciously use it**.”

Poster: doi.org/10.3217/5yw6c-40a39

GENERATIVE AI PERMEATES SOCIETY

Human and machine contributions become intertwined.



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Indications for a post-generative time

Findings from education, science, the economy, politics, the arts, media, religion and private life.

→ postgenerative.at/contribute

Student life changes

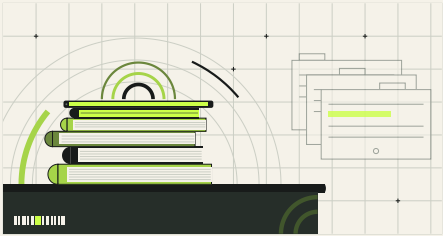
DOCUMENTED

TU Graz long-term study: **15,000+** first-year students (2007/08 to 2025/26): more **AI** and **tablets**, less **Wikipedia** and **open source**.

Only **25 %** of surveyed MIT students (USA) feel well prepared for AI.

INTERPRETATION

Digital self-determination becomes a challenge.



Nagler et al. (2026); Schön et al. (2026); Ebner (2026); MIT (2026).

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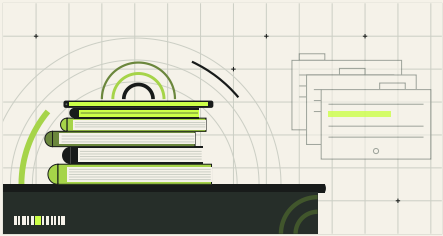

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Hands up!

Who feels well prepared for AI?

No AI, no search either

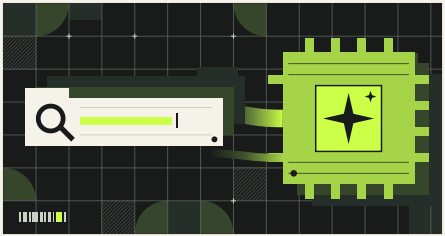
DOCUMENTED

Media reports: schools that switch off Google's **AI features** also lose classic **Google Search** for their students.

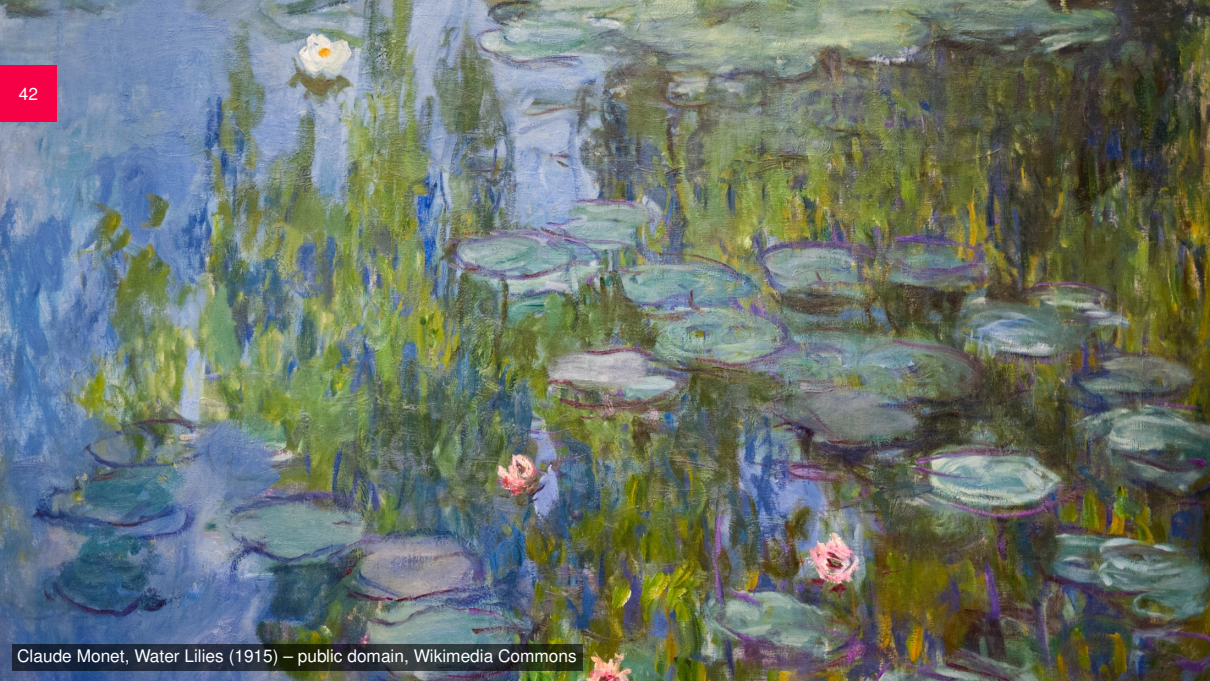
INTERPRETATION

AI is no longer an add-on you can simply switch off.

Can we still opt out?



Brünner (2026), postgenerative.at, based on heise online, DER SPIEGEL and The New York Times (Nov 2026).



Claude Monet, Water Lilies (1915) – public domain, Wikimedia Commons

A real Monet suspected of being AI

DOCUMENTED

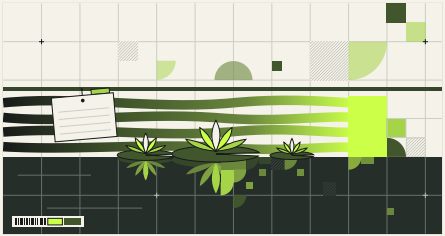
A real Monet posted as an “AI image” – and promptly criticised: **composition, colours, brushstrokes**.

STUDY

Label “AI” → **lower ratings** (N = 2,965).

INTERPRETATION

People judge the **assumed origin**.



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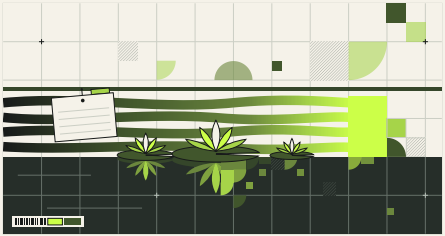

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Hands up!

Who would have found flaws in the Monet, too?

Evidence of learning changes

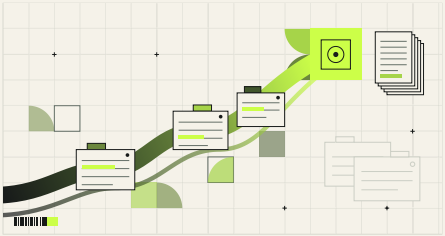
If AI can write your homework, how can we show what you have actually learned?

DOCUMENTED

FHWien: master's theses built on **process**, **decisions** and verifiable artefacts.

INTERPRETATION

Text alone is no longer proof of understanding.



FHWien der WKW (2026): Mehr Prozess, weniger Seiten – Masterarbeiten im KI-Zeitalter neu gestalten.

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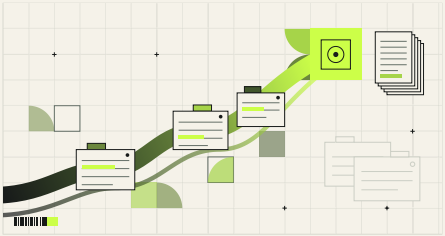

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Discuss with your neighbour

1 minute

When parents use AI to regrade

DOCUMENTED

Practice report: parents have ChatGPT **regrade** their children's school tests.

STUDY

AI grades match official grades only **moderately** – and are lower.

INTERPRETATION

A new actor – assessment needs **transparent criteria**.



Ebner (2026), postgenerative.at, based on Spohn (2026); Zhang et al. (2024), npj Sci. Learn.; Karjus et al. (2026), arXiv.

Critical thinking becomes a qualification

If AI takes over thinking tasks, what do we still need to be good at?

DOCUMENTED

PwC (US) plans to train and **certify 85,000+** professionals in **critical thinking and human judgment**.

INTERPRETATION

What people used to learn on the job is now trained on purpose.



Brünner (2026), postgenerative.at, based on PwC US (2026); Business Insider; Bloomberg Tax.

Apps need only an idea

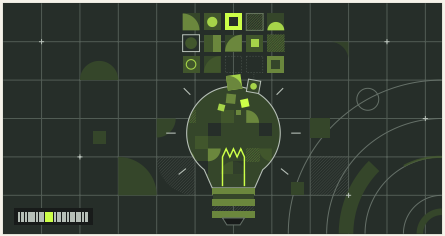
DOCUMENTED CASE

A research web app from **4 prompts**, reportedly in under 10 minutes.

DOCUMENTED CASE

A hospital inventory app in about **13 hours** and **115 prompts**.

Single cases – no guarantee that every idea just works.



Meyer (2025), arXiv:2510.09804; Wang et al. (2026), J. Appl. Clin. Med. Phys.

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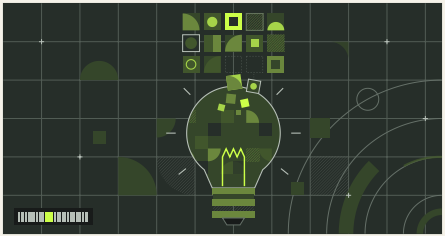

Meyer (2025), arXiv:2510.09804; Wang et al. (2026), J. Appl. Clin. Med. Phys.

Your turn

What would *you* build if you could create your own app?

My messages are not read by me

DOCUMENTED

If someone gives an AI agent access to their inbox, the agent also reads **other people's** messages.

You can be affected by AI without using it yourself.

Whether your messages are analysed by AI depends on decisions *others* make.



Ebner (2026), postgenerative.at, based on Miscione (2026): AI privacy is getting weird. LinkedIn post.

How can you use AI to learn and create?

AI as a learning partner

AI can . . .

- explain things in simple words
- give examples
- give you feedback
- create quiz questions
- offer new perspectives

AI as a learning partner

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But: AI does not do the **thinking** for you.

Learning happens in *your* head – when you explain, practise and make mistakes.

Try: “Quiz me on photosynthesis. Don’t tell me the answers until I tried.”

AI as a creative partner

AI can help you . . .

- brainstorm ideas
- develop stories
- sketch images
- write code & build apps
- realise your own projects

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Your idea + AI

= something you could not build alone (yet).

From chatbots to AI agents

1 Chatbot

You ask a question.
AI gives an answer.

“Explain how volcanoes work.”

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2 Chatbot + tools

AI can search, calculate or create a file.

“Find three sources on volcanoes and make a quiz.”

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3 AI agent

You give a **goal**. AI plans and does **several steps** with tools.

"Plan our class trip: compare trains, make a schedule, draft a letter to parents."

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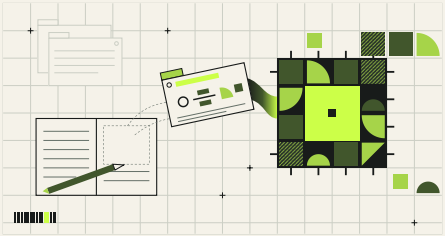
But agents need **permissions** · make **mistakes** · need **humans who check**

I wanna discover things too

Mathematician Steven Strogatz on AI doing maths research – a student says:

“I wanna discover things too.”

If AI can do something better than you, does that mean you should stop trying?



Brünner (2026), based on The New York Times: Strogatz in conversation with R. Abrams, “The Daily”.

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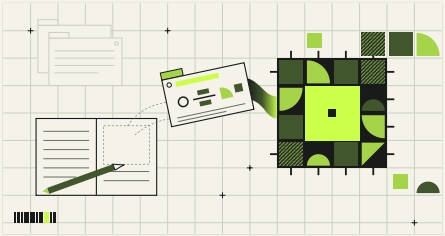


Brünner (2026), based on The New York Times: Strogatz in conversation with R. Abrams, “The Daily”.

No.

Curiosity, understanding, creativity and growing as a person matter – not only the result.

Your future with AI

Understand it.

Your future with AI

Understand it.

Question it.

Your future with AI

Understand it.

Question it.

Create with it.

Your future with AI

Understand it.

Question it.

Create with it.

Don’t just use AI. **Shape what comes next.**

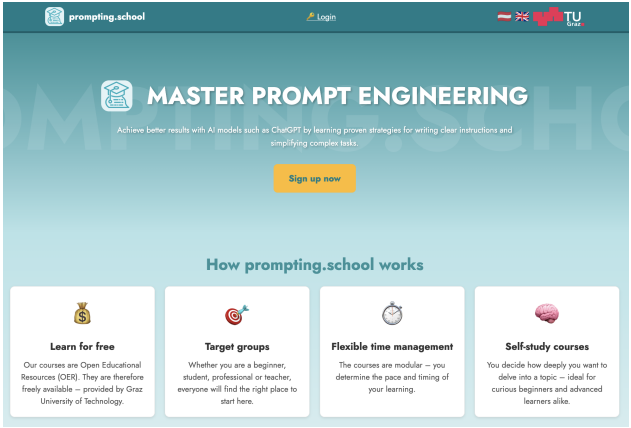
“From users to creators” (Brünner, 2025); “AI technologies concern all of us” (Ebner, 2026a).

What would you like to create with AI?

Want to learn more? prompting.school

- Free course on **working with generative AI**
- In **English** (and German)
- Self-study, with quizzes and a **digital badge**
- Graz University of Technology, CC BY 4.0

prompting.school/en

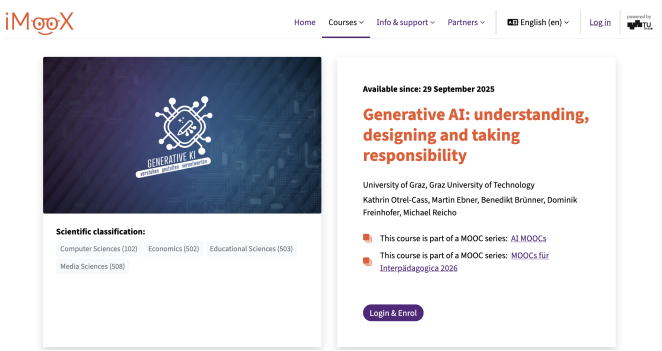


Educational Technology, Graz University of Technology (2026); screenshot prompting.school, 26 Nov 2026.

Want to learn more? iMooX

- **Generative AI**: understanding, designing and taking responsibility
- Free online course (MOOC), **in German**
- University of Graz & TU Graz, CC BY 4.0

imoox.at/course/genKI



Otrel-Cass et al. (2025); screenshot iMooX.at, 26 Nov 2026.

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Where does the post-generative present show itself?

Send us a finding – with a source.

→ postgenerative.at/contribute

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AI in Learning and Living: Are We Ready for a Post-Generative World?

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