GEVORDERDE GenAI-GELETTERDHEID VOOR LESGEVERS
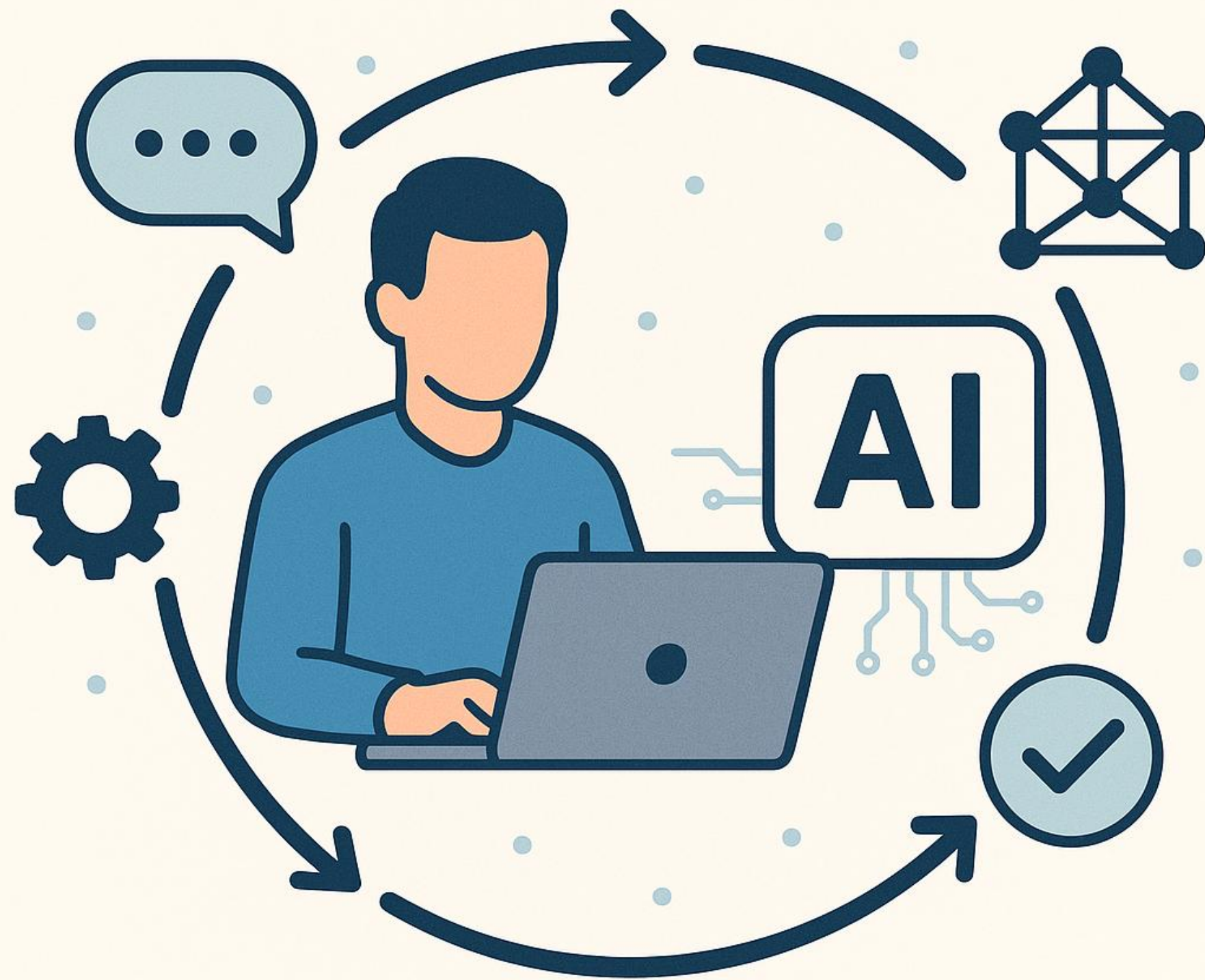
Jasper Degraeuwe – 19 november 2025

Ondersteuningsaanbod GenAI voor lesgevers LW – AJ25-26, 1ste semester

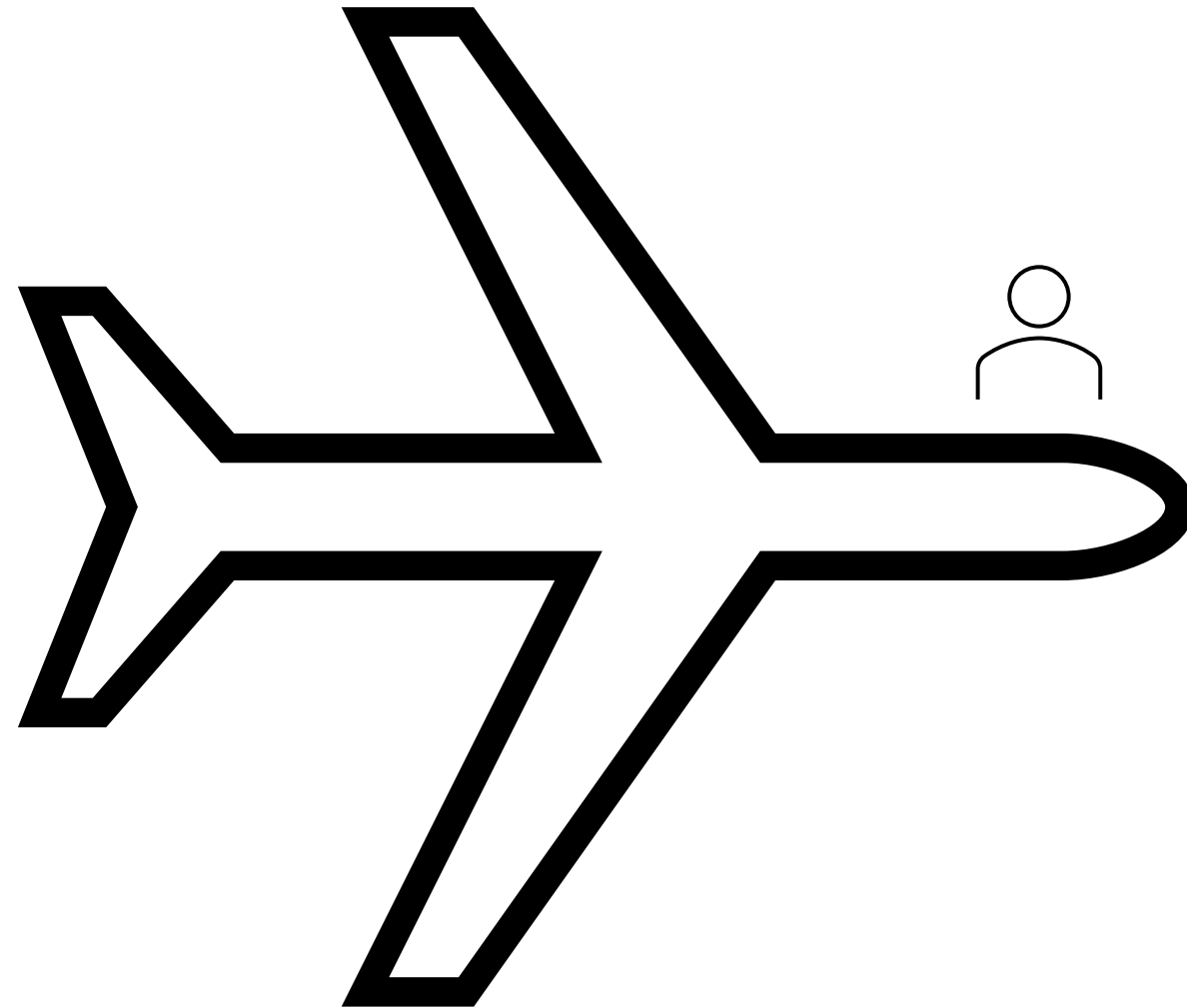GHENT UNIVERSITY

ABOUT ME

- Department of Translation, Interpreting and Communication

- PhD on **Intelligent Computer-Assisted Language Learning** (ICALL)

  ICALL ≈ CALL + AI and NLP

- Postdoctoral researcher on **educational technologies and AI for language learning**

DISCLAIMER

HUMAN IN THE LOOP

HUMAN IN THE COCKPIT

COGNITIVE COST OF BLIND AI USE

As the educational impact of LLM use only begins to settle with the general population, in this preliminary study we demonstrate the pressing matter to explore further any potential changes in learning skills based on the results of our study. The use of LLM had a measurable impact on our participants, and while the benefits were initially apparent, as we demonstrated over the course of 4 sessions, which took place over 4 months, the LLM group's participants performed worse than their counterparts in the Brain-only group at all levels: neural, linguistic, scoring.

https://www.media.mit.edu/projects/your-brain-on-chatgpt/overview/
https://www.brainonllm.com/

Taco Bell rethinks AI drive-through after man orders 18,000 waters

29 August 2025

Shiona McCallum Senior Tech Reporter

Getty Images

Meta investigated over AI having 'sensual' chats with children

18 August 2025

Charlotte Edwards Technology reporter, BBC News

Getty Images

ADDED VALUE OF AI "AUTOPILOT"?

- Starting point: is use of AI necessary / beneficial?

- "Don't ask ChatGPT how much 2+2 is" mindset

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CORE PRINCIPLES

1. Human in the loop / cockpit

2. Healthy critical attitude

    a. Towards your students

    b. Towards your assignments

    c. Towards your own use

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GUIDELINES ON GENERATIVE AI

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— Overarching guidelines → "responsible" use is allowed

  — University: https://www.ugent.be/genai

  — Faculty: Ufora "INFOSITE Faculteit Letteren en Wijsbegeerte"

— *Leerpad* **for teachers and for students (updated!)**

— Onderzoeks- en onderwijstips (more *ad hoc*)

— Other workshops/courses (e.g., on UTOP)

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Een **verantwoord gebruik** van generatieve AI is **altijd toegelaten tenzij** een lesgever het gebruik bij (een deel van) een taak expliciet verbiedt, waardoor die taak in een gecontroleerde setting moet plaatsvinden.

Generatieve AI aan de UGent

De UGent kiest voor een verantwoord gebruik van generatieve AI. Onder verantwoord gebruik verstaan we de volgende kernwaarden:

- **Verantwoordelijkheid en onafhankelijk handelen** – je bent en blijft verantwoordelijk voor wat je doet met de tools,
- **Eerlijkheid en kritische houding** – je checkt de betrouwbaarheid en de bron van de output van de tools, in het kader van auteursrechten, en je bent, waar nodig, eerlijk over het gebruik van de tools,
- **Respectvol gebruik** – je bent je bewust van mogelijke vooroordelen en bias in de output van de tools,
- **Zorgvuldig en duurzaam gebruik** – je zet mogelijke efficiëntie door AI-gebruik af tegenover het energieverbruik.
- **Veilig en vertrouwelijk omgaan met informatie** – je uploadt geen confidentiële en vertrouwelijke data,
- **Voorbeeldgedrag** – je leeft bovenstaande kernwaarden na en wordt zo een voorbeeld voor anderen.

Meer informatie over verantwoord gebruik vind je in het Universiteitsbrede richtkader voor het verantwoord gebruik van AI aan de UGent.

FACULTY L&W

– Mandatory report for writing tasks

– Template and guidelines available on Ufora info site
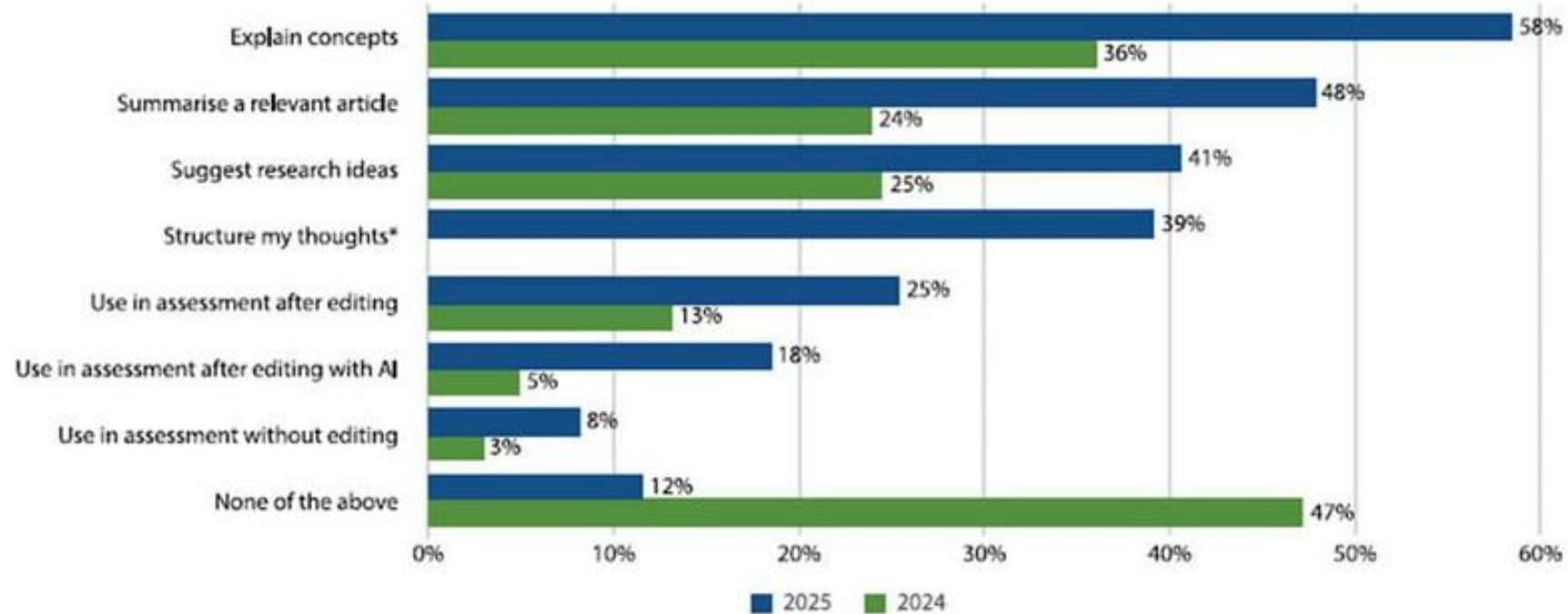
OVERVIEW

OVERVIEW

1. Possibilities advanced tools

2. Prompting techniques

3. Retrieval-augmented generation (RAG)

4. Alternatives for ChatGPT

→ **Hands-on and interactive!**

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1. POSSIBILITIES ADVANCED TOOLS

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- **The proportion of students using generative AI tools such as ChatGPT for assessments has jumped from 53% last year to 88% this year.** The most common uses are for generative AI to explain concepts, summarise articles and suggest research ideas. The proportion who have not used generative AI for their assessment in these ways has plummeted from 47% last year to just 12% this year.

Figure 2 How have you used generative AI for assessments?

	2025	2024
Explain concepts	58%	36%
Summarise a relevant article	48%	24%
Suggest research ideas	41%	25%
Structure my thoughts*	39%	
Use in assessment after editing	25%	13%
Use in assessment after editing with AI	18%	5%
Use in assessment without editing	8%	3%
None of the above	12%	47%

'When thinking about using generative AI to prepare assessed work, which of the following have you ever done? Please select all that apply.'
* indicates the option is new in 2025. Those putting 'I don't know' (1% of responses in 2025) are excluded

- **The proportion of students reporting using any AI tool has jumped from 66% last year to 92% this year.** 'Generating text' is the most popular reason for using AI, ahead of editing work (e.g. with Grammarly) and accessing university textbooks (e.g. with Kortext).

https://www.hepi.ac.uk/reports/student-generative-ai-survey-2025/

20

De snelle doorbraak van genAI

Net als in imec.digimeter 2023 zien we dat **generatieve AI**-toepassingen ook bij jongeren zijn binnengekomen met een **zelden geziene snelheid**. 66% van de tieners en jongeren in het gewoon onderwijs en 48% van de tieners en jongeren in het buitengewoon onderwijs heeft al eens gebruik gemaakt van AI-toepassingen (respectievelijk 13% en 18% weet het niet heel zeker).

ChatGPT heeft de visibiliteit van AI vergroot bij een breed publiek, waardoor het gebruik enorm is toegenomen. Wanneer tieners en jongeren genAI gebruiken, doen ze dat:

- om een **antwoord** te krijgen op **vragen** die ze hebben (73%)
- om **dingen uit te proberen** (dus wel grote nieuwsgierigheid bij jongeren) (55%)
- als **hulp** bij **huiswerk** (45%)
- om **nieuwe ideeën** of inspiratie op te doen (37%)

https://www.mediawijs.be/nl/apenstaartjaren2024

DEMOS

— Essay writing (based on written or multimodal instructions)

— Research papers (e.g., *masterproef*)

— "Study mode" in ChatGPT, "Learning mode" in Claude

— Fine-tuning course materials

— Generating slides (+ accompanying notes)

— API (= access LLM via programming script)

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CONCLUSION

– Being aware of possibilities = being able to anticipate

– Adequate evaluation methods are essential

– Useful for preparing classes / coursebook materials?
  → Estimate "return on investment" for your specific class / course

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2. PROMPTING TECHNIQUES

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PROMPTING TECHNIQUES

– Zero-shot prompting (= ask question without giving any additional context)

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PROMPTING TECHNIQUES

– Zero-shot prompting (= ask question without giving any additional context)

– **Few-shot prompting (= add series of examples to question)**

EXAMPLES

JA   **You**
Give me three example sentences of no longer than 20 words that clarify the meaning and usage of the word "ubiquitous".

ChatGPT
1. Smartphones are now ubiquitous, found everywhere from bustling cities to remote villages.

2. The internet has made information ubiquitous, accessible to anyone with a connection.

3. Coffee shops are ubiquitous in urban areas, appearing on nearly every street corner.

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EXAMPLES

You

ubiquitous → Sentence 1: "Smartphones are now ubiquitous, found everywhere from bustling cities to remote villages." | Sentence 2: "The internet has made information ubiquitous, accessible to anyone with a connection." | Sentence 3: "Coffee shops are ubiquitous in urban areas, appearing on nearly every street corner."

nonplussed →

ChatGPT

Sentence 1: "Despite her best efforts, Jane was nonplussed by the unexpected turn of events, unsure of how to react." | Sentence 2: "The politician remained nonplussed by the reporter's probing questions, maintaining a calm demeanor throughout the interview." | Sentence 3: "His nonplussed expression betrayed his confusion at the complex instructions given by his boss."
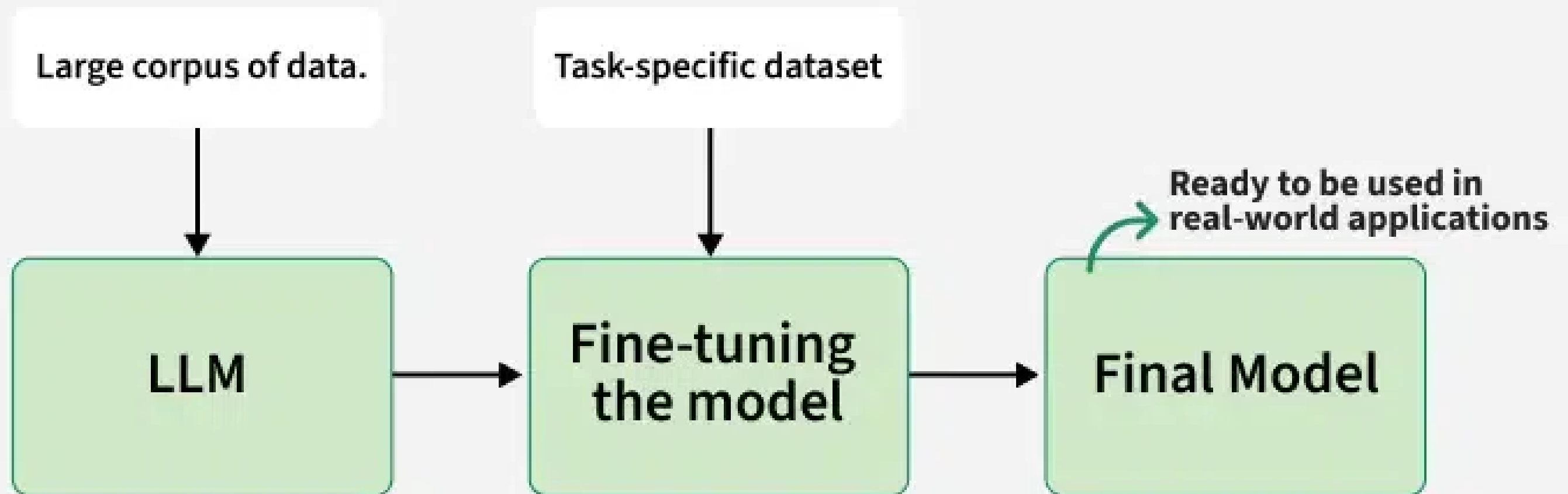
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BEYOND PROMPTING TECHNIQUES

– Fine-tuning (= tailor pretrained model to your specific use case based on small labelled dataset)

VISUALISATION

Fine Tuning Large Language Models

Large corpus of data.

Task-specific dataset

Ready to be used in
real-world applications

LLM

Fine-tuning
the model

Final Model

3. RETRIEVAL-AUGMENTED GENERATION

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RAG IN A NUTSHELL

– Input

  – Knowledge base

  – Prompt

– Output

  – Text / image / audio / … that is generated using the knowledge base as the primary source

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RAG IN A NUTSHELL

– Most basic and straightforward form of RAG: attach document to prompt in chatbot interface

– Most advanced form of RAG: fully customised chatbot

RAG: ADDITIONAL OBSERVATIONS

– Copyright issues

– Real-life use cases

   – Exercise correction

   – Feedback generation

   – …

RAG: LIVE DEMO

CONCLUSION

– Useful if human in the loop

– Be aware that students can easily create custom chatbot too

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4. GenAI BEYOND ChatGPT

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ALTERNATIVES CHATGPT

– Copilot = go-to tool at UGent

– Claude ("Constitutional AI")

– Le Chat (Mistral; European; adheres to GDPR)

– Perplexity (AI-driven search engine; "accurate" and "trusted" responses)

– Swiss models: Lumo (non-profit, open source, and fully private) and Apertus (fully open source)

– Elicit and SciSpace (literature review)

OPEN-SOURCE MODELS RUN LOCALLY

– HPC (high performance computing) infrastructure available, but requires (advanced) hardware and programming knowledge

– Whisper (transcription tool) runs on HPC

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OPEN-SOURCE MODELS: LIVE DEMO

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