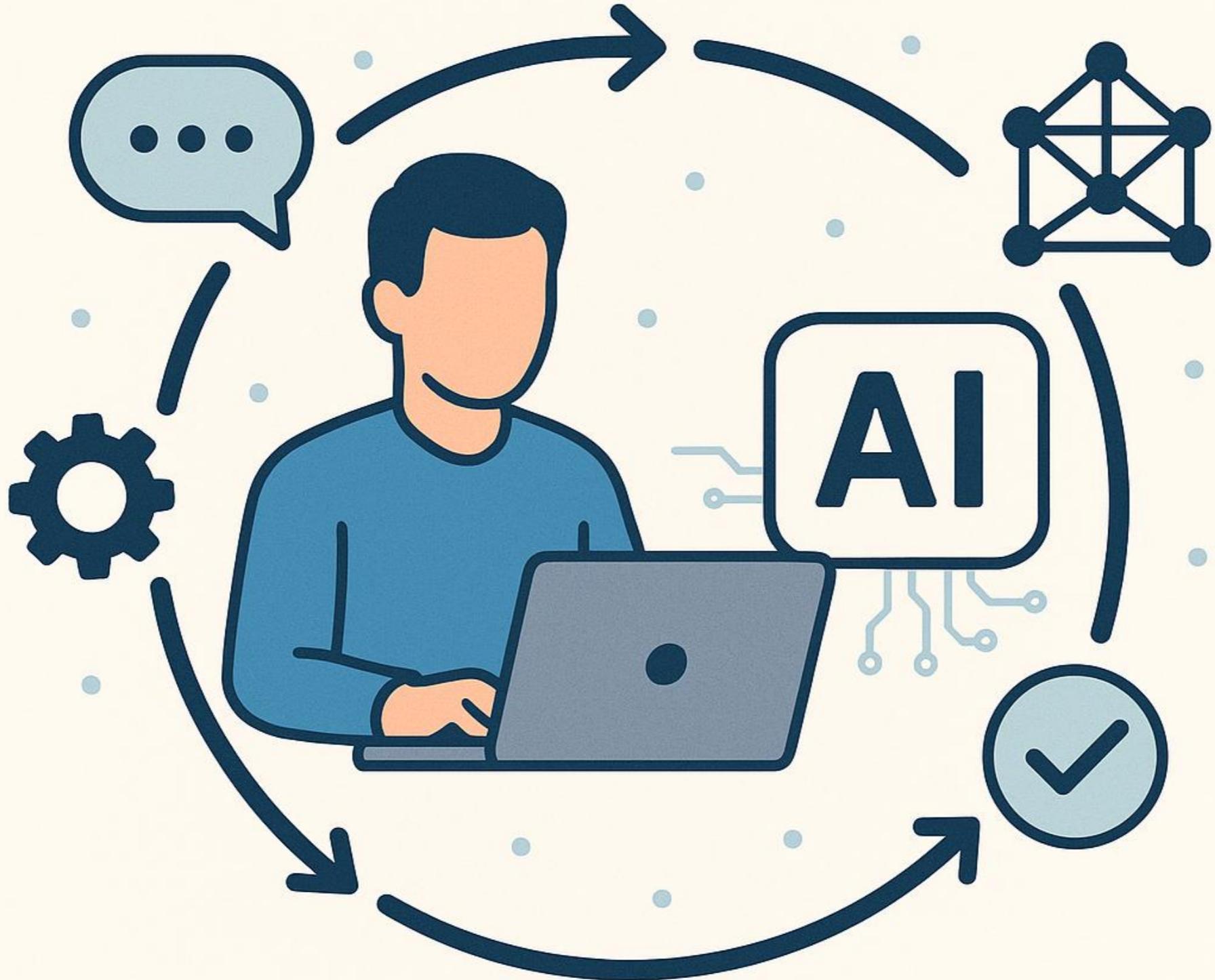


# GenAI VOOR BACHELOR- EN MASTERPROEVEN: DATAVISUALISATIE

Jasper Degraeuwe – 12 november 2025

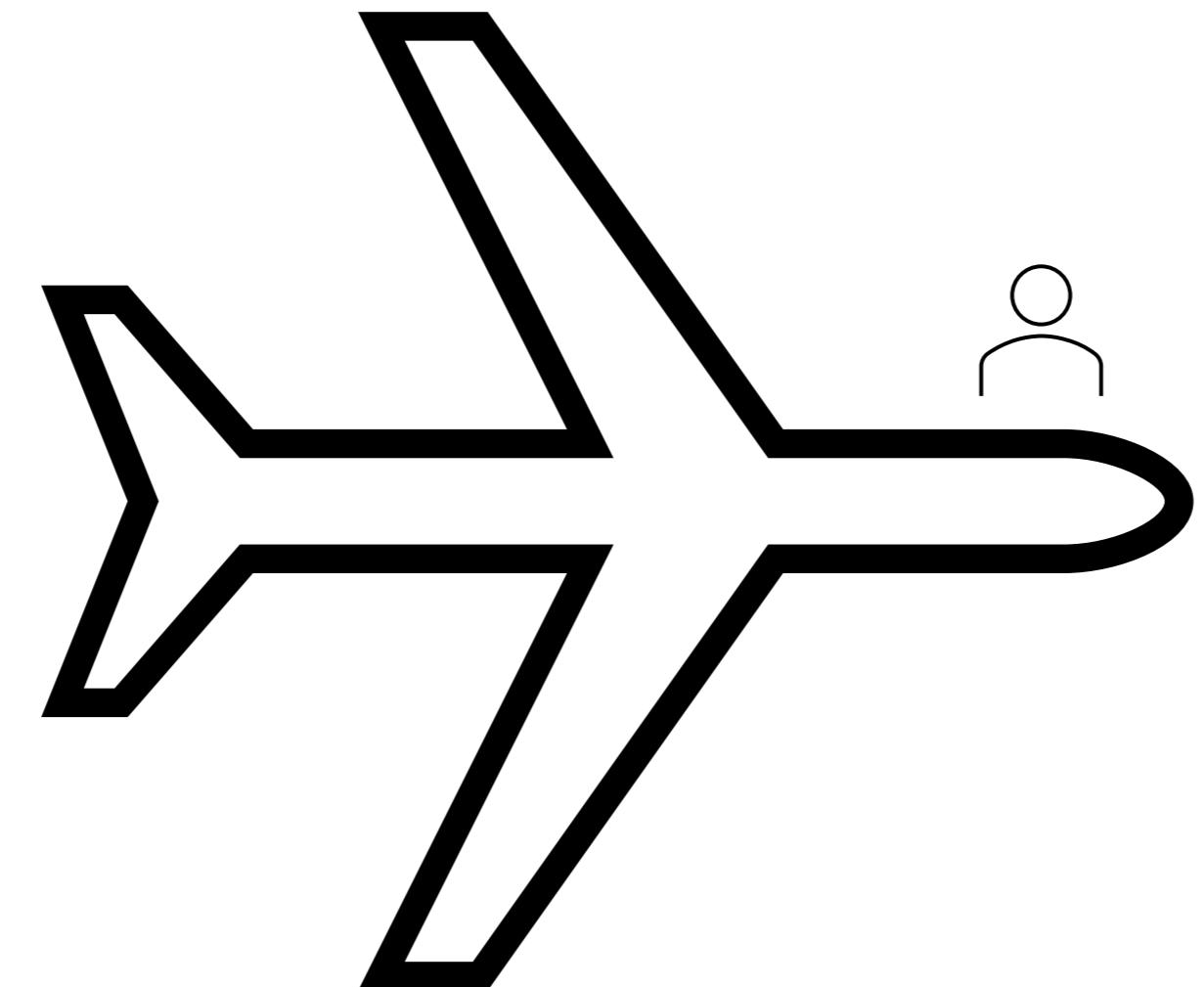
Ondersteuningsaanbod GenAI voor lesgevers en studenten LW – AJ25-26, 1ste semester

# 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.

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

29 August 2025

Share  Save 

**Shiona McCallum** Senior Tech Reporter



Getty Images

# Meta investigated over AI having 'sensual' chats with children

18 August 2025

Share  Save 

**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
- Creating simple graphic in Excel versus creating simple graphic with AI-driven tool
- Talking to supervisor versus talking to general-purpose chatbot

# GUIDELINES ON GENERATIVE AI

# GHENT UNIVERSITY

- 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 onderwijsstips (more *ad hoc*)
- Other workshops/courses (e.g., on UTOP)

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 verstaaan 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

# AI BROWSERS

- Examples: Perplexity's [Comet](#) and [ChatGPT Atlas](#)
- AI agent “reads” everything you do in the browser
- Real danger: if security settings not adjusted properly, system can be hacked very easily (e.g., *prompt injection* by websites to open local files on your device, fill in forms, take over your device, ...)

# OVERVIEW

# OVERVIEW

1. GenAI for spreadsheet data
2. GenAI for infographics
3. GenAI for slideshows

# 1. GenAI FOR SPREADSHEET DATA

# WHEN OVERKILL?

- Straightforward, easily interpretable spreadsheet data
- Basic pie / bar / ... charts that you can easily create yourself

# SIMPLE SPREADSHEET DATA: DEMO

- MS Excel (Google Spreadsheets not recommended / supported by UGent!)

# SIMPLE SPREADSHEET DATA: CONCLUSION

1. Try it yourself in MS Excel
  2. Look up information in MS support documentation
  3. Use “Recommended Charts” functionality in MS Excel
  4. Ask GenAI model **how to** create graph in MS Excel
- 
-  Ask GenAI model to create the graph for you

# WHEN POTENTIALLY USEFUL?

- Complex spreadsheet data from which many different insights can be drawn
- Ask GenAI model to gain inspiration into which insights are most relevant

# COMPLEX SPREADSHEET DATA: DEMOS

1. “Pre-demo”: plotting data by means of simple programming script
2. Plotting data by means of GenAI model (Julius AI)

# COMPLEX SPREADSHEET DATA: CONCLUSION

- Ask GenAI model for inspiration
- If you decide to use generated graph: **always** manually check values of some (preferably all) elements in graph
- Behind the scenes = programming scripts being written

# (NON-EXHAUSTIVE) OVERVIEW OF TOOLS

## SPREADSHEET DATA

- All-purpose AI assistants (Copilot, Perplexity, Le Chat, Claude, ChatGPT, ...)
- [Julius AI](#)
- [ChartGPT](#)
- [Tableau](#) (mainly for businesses)

# ONE STEP FURTHER: FEW-SHOT PROMPTING

- If available: add examples of charts to your prompt
- GenAI models are particularly good at recognising and mimicking patterns

# A WORD ON PROMPTING

- Zero-shot prompting (= ask question without giving any additional context)
- **Few-shot prompting** (= add series of examples to question)

# PROMPTING: ZERO-SHOT



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.



# PROMPTING: FEW-SHOT

JA

## 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."



# TWO STEPS FURTHER

- If you have some programming knowledge
- Create single graphics or even complete notebooks
- Start from your own code and ask GenAI model (e.g., Claude) to refine it or change it for other type of graph
- Ask GenAI model to write code from scratch based on detailed prompt
- **Not necessary to share actual dataset!**

## 2. GenAI FOR INFOGRAPHICS

# WHEN OVERKILL?

- When you can tell your story with existing icons and/or images

# WHEN POTENTIALLY USEFUL?

- Make content of dense paragraph / subsection / ... more understandable by converting it into visual representation
- Disseminate research to non-expert audience

# LIVE DEMOS

- Copilot & ChatGPT
- Canva AI

# (NON-EXHAUSTIVE) OVERVIEW OF TOOLS

## INFOGRAPHICS

- All-purpose AI assistants
- [Canva AI](#)
- [NotebookLM](#) (also known for creating podcasts)
- [Piktochart](#) (also for [educators](#))
- [Venngage](#)

# GenAI FOR INFOGRAPHICS: CONCLUSION

- Can be useful starting point
- Large differences between GenAI tools
- Good looks do not necessarily go hand in hand with good content → be aware of **hallucinations**
- Be aware of **bias**

# 3. GenAI FOR SLIDESHOWS

# WHEN POTENTIALLY USEFUL?

- Assistant while making slideshow presentation
  - Get some ideas to start from
  - Fine-tune existing presentation

## LIVE DEMO

- Create slideshow based on Word document as input
- Fine-tune existing presentation (e.g., by asking for suggestions)
- (Try to) apply given style to slideshow (e.g., UGent house style) → spoiler: **LIMITED SUCCESS RATE**
- Create interactive HTML (Claude)

# GenAI FOR SLIDESHows: CONCLUSION

- Great as starting point for informal meetings
- Return on AI investment can be very low (e.g., trying model to convert to given style versus adding content to file yourself)
- Summaries can be very superficial (the larger the document, the higher the risk)
- Behind the scenes = programming scripts being written

# WRAPPING UP

# RELEVANT SOURCES

- UGent page on GenAI
- Ufora info sites and “leerpaden”
- Website on AI-driven tools and resources for (language) education: <https://vakgroep-vtc-universiteit-gent.github.io/>

# INTERESTED IN SUPPORT?

- Send email to [vtc.aisupport@ugent.be](mailto:vtc.aisupport@ugent.be)
- Include
  - Topic of bachelor paper / master's thesis
  - Short description of envisaged research
  - In what part of research planning to use GenAI and what type of support needed?

# JOUW STEM IS BELANGRIJK

- Wat vond je van deze workshop?
- Getuigenissen en concrete ervaringen gezocht om anoniem te delen ([Jasper.Degraeuwe@UGent.be](mailto:Jasper.Degraeuwe@UGent.be))



**Joanna Maciejewska**

@AuthorJMac

...

You know what the biggest problem with pushing all-things-AI is? Wrong direction.

I want AI to do my laundry and dishes so that I can do art and writing, not for AI to do my art and writing so that I can do my laundry and dishes.

12:50 PM · Mar 29, 2024 · 3.2M Views

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