

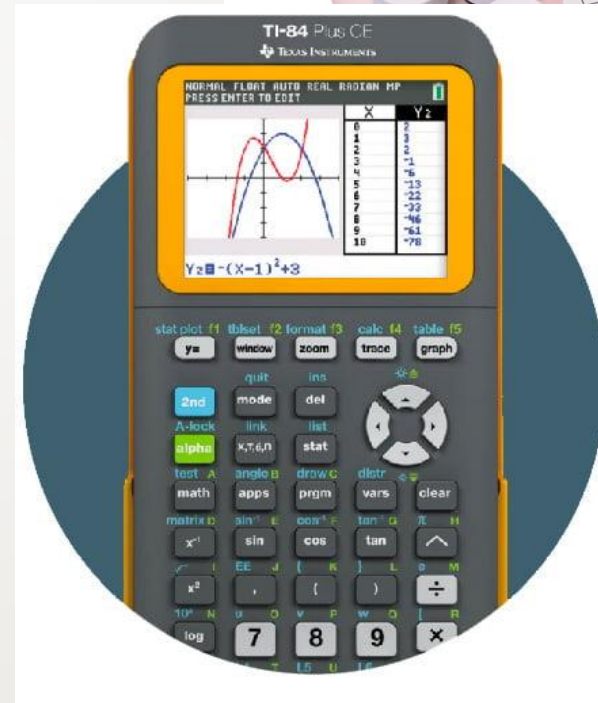
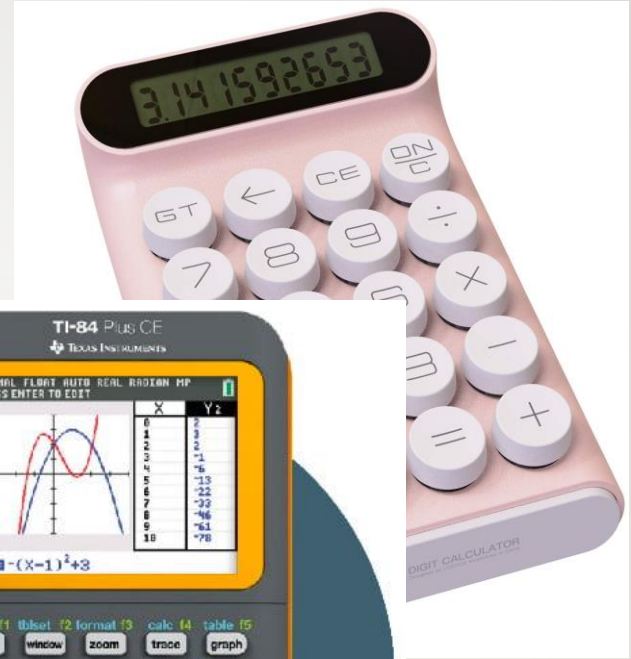


Generative AI – opportunities and challenges

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Story about calculator...

- Ban it!
- Take it away!
- Ignore it!
- Maybe we can use it???



Generative AI – different faces of fear

- Chatbot
 - ChatGPT
 - Bard
- Images from text
 - DALL-E
 - Midjourney
 - Deep Dream Generator
 - Big Sleep (sourceforge)
- CLIP: connecting text and images
- Whisper: multi-lingual voice-to-text
- Music
 - Soundraw
 - Soundful
 - Amper Music
 - Aiva...
- Architecture
 - Fotor
- Mathematics
 - AI:R Math...



Two stories

- Graduate from Poznan University of Art
 - Exhibition
 - Who is the author? Obvious: idea is most important...
- The very hungry algorithm: Bedtime with GPTChat (by Nabiha Syed, The Markup)

The challenge #1 – IP



One more conversation...

- Doctor of medicine: I asked several question, and there were correct answers...
 - ChatGPT: "I'm here to help answer any medical-related questions you might have to the best of my abilities. Please feel free to ask your question, and I'll do my best to assist you."

The challenge #2 – trustworthiness

ChatGPT, you passed the test!

- ChatGPT scored a **58%** on a common study exam used by physicians preparing for a board certification in ophthalmology
- ChatGPT passed three exams associated with the United States Medical Licensing Exam at **60%** accuracy with no prior reinforcement or training
- ChatGPT passed a Stanford (Calif.) Medical School clinical reasoning final exam with a score of **72%** (min to pass is 70)
- ChatGPT passed **law exams in four courses** at the University of Minnesota and one at the University of Pennsylvania's Wharton School of Business (CNN)
- ChatGPT passes **Google coding interview for L3** engineer
- ...



Vacation?

Critical mind

- “What can you tell me about Marcin Paprzycki?”
- *“Marcin Paprzycki is a computer scientist and researcher known for his work in the field of computational intelligence, particularly in the areas of fuzzy systems, evolutionary computation, and multi-agent systems. He has made contributions to the development and application of these technologies in various domains.”*

The challenge #3 – critical thinking

ChatGPT in numbers

- ChatGPT – 1 request costs 1000 times more than 1 Google request
- ChatGPT costs OpenAI \$700 000 per day (<https://www.businessinsider.com>)
- ChatGPT runs on GPT3.5 vs ChatGPT on GPT4 will be 10 times more expensive

Accessibility

- Come back to picture or bedtime story... how many people can do the same?
 - two-thirds of the world's school-aged children don't have Internet at home (2020 UNICEF report)
 - 770 million people (13%) live without access to electricity (IEA, 2021)

The challenge #4 – accessibility

What about ecology?

- ChatGPT water footprint – 0.5l /20 questions conversation
 - Training – 700 000 l freshwater for cooling
- ChatGPT emits 8.4 tons of carbon dioxide per year
 - more than twice the amount that is emitted by an individual, which is 4 tons per year

The challenge #5 – ecology

ChatGPT in education

- Ban it!
- Embrace it!
- Ignore it.....

The challenge #6 –



Use it!

- Conversation with students – How we can use it (Generative AI)?
 - Support in lecture understanding
 - Support in preparation text (I know what to say, but how to say it better/shorter/...)
 - Not good to write text – “boring style”
 - Coding ...Python is quite(?) good...

Conclusions

- Nothing will be the same
- Adapt or accept to be “on vacation”
- Critical Thinking is CRITICAL!
 - Who do you trust? NOBODY!
- Legal foundation will follow: EU AI ACT – is just a beginning