How modern algorithms sh

During Donald Trump's heated meeting with Volodymyr Zelensky in February 2025, when the American president attempted to make his Ukrainian counterpart understand that he was in a weak negotiating position, he used the English idiom: *you don't have the cards*. Zelensky then stood up and took a deck of cards out of his sleeve, which he threw at Trump, who then cowered under the incoming flood of cards. There is also another version in which the Ukrainian president delivers a neat right hook to the unsuspecting Trump and knocks him out. Did you really not see that?

Photo: Freepik AI

hape the flow of information

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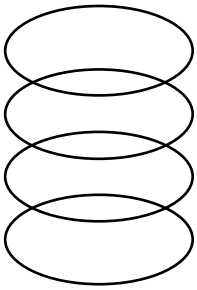
The aforementioned visit to the White House went down in diplomatic history due to Trump's scandalous behaviour, but neither the card fountain nor the boxing match actually happened. Nevertheless, they were posted as a response to a high-profile political controversy, which always inspires numerous memes and parodies. In recent years, the creation of viral memes has been made even easier and quite a lot faster by various tools based on generative artificial intelligence. However, this humorous side of artificial intelligence should not distract from situations where its use is much more subtle, and therefore much more dangerous.



Will AI be our downfall?

We are somewhat afraid of AI, and a little intrigued by it. We are excited by the prospect of using it in medicine to improve diagnostics, in boring office work to automate tedious and tiring processes, or in laboratories for more effective analysis of collected data. We are also often concerned about the possibility of mass redundancies and job losses it could bring, because artificial intelligence does everything faster and is cheaper than some John Doe employee who sometimes takes a couple of days off or goes on sick leave.

Artificial intelligence, which has been ubiquitous in recent times and is widely discussed in all contexts, is often just an empty slogan. On the one hand, its significance is downplayed, and on the other, it is attributed with consciousness and almost divine powers. It is easy to forget that it is not some High Priest of Information, but artificial intelligence, i.e. a programme based on mechanisms that have been known for decades. However, due to the rapid pace of technological development, we have recently begun to discover the true potential of AI, which some experts may have already suspected in the 1950s, but no one could have anticipated the scale and speed of the changes that have taken place.

Today, AI-based tools are used virtually everywhere, but attitudes towards them vary and their applications differ. Tomasz Wesołowski, PhD Eng., an IT specialist from the Faculty of Science and Technology of the University of Silesia, cites the results of a study published in 2024 in JAMA Network Open, which aimed to measure doctors' confidence in diagnosing diseases with the use of AI. The effectiveness of expert and AI diagnoses was tested separately, followed by a comparison of how humans and artificial intelligence perform when working together. It turned out that the accuracy of doctors reached 74%, AI achieved a whooping 95%, and when they joined forces, it fell back down to... 76%.

'Doctors did not trust the algorithms at all and rejected their suggestions. And we know why. Because we cannot fully understand how AI works. We know the rules, but no one can say with certainty why it arrived at one conclusion and not another. This does not change the fact that artificial intelligence can produce some great results', explains the computer scientist from the University of Silesia.

Uncertainty about how AI thinks can reduce trust in it. At the same time, its usefulness cannot be denied. After all, it can analyse in a blink of an eye an amount of data so vast that no single human being could comprehend in their entire lifetime. This is why science and new technologies believe in it. It allows people to be relieved of difficult and time-consuming processes, allowing them to use their energy in areas where human creativity and imagination can be much more useful.

However, the above conclusion might be considered wishful thinking and misplaced optimism, as we are already experiencing many negative effects of AI use. After all, artificial intelligence was supposed to be a tool to help us search for information more efficiently, process data, and access knowledge more easily. And even if this has indeed been the case in some situations, we have also been presented with a host of new problems: a flood of misinformation, new methods of manipulation, and secondary illiteracy combined with intellectual laziness.

Zelensky's heated meeting with Trump inspired many humorous AI-generated memes | image generated by Freepik

Homo algorithmicus

If you thought that you could never fall for any fake news and would spot manipulation at first glance, then perhaps you are indeed more resilient and aware. However, it is not worth putting yourself to the test and risking embarrassment – which is why you need to check even the most trusted sources. Even your lecturer!

'I conducted an experiment a few years ago. I asked my students to convert a logical address to a physical address in an 8086 microprocessor. During class, I provided students with information on how to do it. At the same time, for the purposes of the experiment, I entered a false, incorrect method of solving this task on Wikipedia, and also attached an example from my exercises. Nearly 80% of the students used the false method. They copied it without thinking at all. Because they had not paid attention in class, they were forced to look for a solution to the task themselves and uncritically used the one they managed to find', says Tomasz Wesołowski.

The students did not expect to fall into such a trap, especially set by the researcher who was their teacher and who ended up clearly demonstrating to them the role that trust plays in manipulation. The computer scientist from the University of Silesia emphasises that clever scammers know the value of trust very well. They can use it in many ingenious ways. Thanks to AI, it has become even easier. We do not even realise how willingly and freely we share sensitive information about our lives. The name of our cat, our daughter's birthday, our mother's maiden name – all those pieces of information can be used to steal our identity.

Artificial intelligence-based tools have further developed existing methods of manipulation and added new ones as well. You don't have to eavesdrop on someone or follow them around – all you have to do is look through their social media. If they post a lot of photos or videos, you will probably be able to generate an image of them that perfectly imitates their style of speech and gestures. Even the way we type can be used to recognise a user, as analysed by Tomasz Wesołowski in his research. We are a society that leaves a lot of digital footprints behind, so it is important that we do so consciously. If our online activities result in appropriately profiled advertisements or suggestions for films to watch, it won't really become an issue for us. The situation takes a turn for the worse when we encounter scammers or fall victim to misinformation.

The way we acquire knowledge has changed dramatically under the influence of AI. When we need to check something, we automatically turn to the internet and are usually satisfied with the first result that shows up in the browser. Younger users are not the only ones who do this. Older people, who are becoming increasingly familiar with new technologies, also turn to the ol' trusty Google. Both groups tend to be uncritical in their consumption of content that they usually do not wish to verify or simply do not have the time to verify.

For the vast majority, the fighting presidents of Ukraine and the US will be a rather obvious form of AI use, but many other cases remain far less obvious and more difficult to identify. Footage of riots, accompanied by a suggestive description, often triggers our emotions rather than our reason, and since their purpose is to cause confusion rather than entertainment, this can lead to many dangerous consequences.

The rapid development of generative artificial intelligence, and in particular the explosion in recent years of various LLMs (large language models such as ChatGPT) and text-based film or music generators (e.g. Midjourney, Sora), has almost completely changed the way we generate and process content on the web. The scale of these changes is still overwhelming, which is why it is all the more necessary to learn how to navigate this space in a responsible, conscious, and sensible manner.

'I believe that we are able to maintain control despite the presence of AI. The key is to verify sources before we start sharing information, because spreading false content can cause great harm. The most important thing is simply to use common sense', concludes Tomasz Wesołowski.