

The impact of artificial intelligence on our lives

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Анотація

У цій статті досліджується вплив штучного інтелекту на повсякденне життя сучасних людей, його використання у різних сферах, можливості. Штучний інтелект розвивається щоденно, його починають використовувати у різних аспектах – від музики до медицини.

Ключові слова: сучасні технології, штучний інтелект (ШІ), машинне навчання, нейронні мережі.

Abstract

This article examines the impact of artificial intelligence on the daily lives of modern people, its use in various fields, and its possibilities. Artificial intelligence is developing daily, and it is being used in various aspects – from music to medicine.

Keywords: modern technologies, artificial intelligence (AI), machine learning, neural networks.

INTRODUCTION

Nowadays, the world is being ruled by technological progress. Every aspect of modern life is getting less complicated and more automated.

Before we get to discussing possibilities of an artificial intelligence, let me explain what it is. Basically, artificial intelligence is a branch in computer science, which deals with creating such programs, that can solve problems, initially designed for humans. Such tasks usually include self-learning and creating patterns, but nowadays tasks are becoming more complicated for AI, due to its rapid development in 2022.

You might also think that AI is something incredibly new which was created from five to ten years ago, but if you do think so, then you are completely wrong. In fact, Alan Turing is considered as the founder of artificial intelligence. In late 1940s, Alan was an exponent of the hypothesis that the human brain is a part of a digital computing machine. He also theorized that “unorganised machine” through “training” becomes “a universal machine or something like that”. Later, in 1950 he developed a Turing test, which was supposed to test whether machine has its own mind or not. This test was only passed by ChatGPT in 2022 [1].

So, back to possibilities of an AI. What does come to your mind when you think about possible activities artificial intelligence can do? You are probably thinking how it writes text or creates some images. To be honest, its possibilities are a lot wider.

Artificial intelligence in modern life

Creating images using AI

Before we get to some complicated tasks, let's begin with something simple: creating images. There are a lot of websites that can generate images, based on your requests. AI-based generative algorithms are capable to produce infinite amount of pictures and it usually takes from 10 to 60 seconds to generate an image. Speed of generation actually depends on some factors. For example, if you are using a website that allows you to generate photos then the generation speed will depend on the number of users that are also using this website. Artificial intelligence is also used by artists due to its ability to create an infinite amount of ideas, so that artists don't need to spend time on thinking what should they represent in a painting.

Creating songs and music using a machine

Artificial intelligence also showed a great performance in creating music. Actually, Google is now developing its own AI called “NSynth Super”. As testers say, this particular intelligence uses machine learning to create entirely new sounds by mixing different instruments, which definitely widens musical possibilities [2].

Is it possible for an AI to replace artists?

But here comes another problem. Is it possible for an AI to take over people in creativity? To be honest, I would love to answer this question rationally but, unfortunately, I can't. In my opinion, we shouldn't judge about this question yet, because we still don't have enough facts, so we can only make assumptions. And if you ask me about this question, I will probably agree that AI will take over creativity in decades, which will definitely lead to artists, musicians, writers losing their jobs and main income [3].

Artificial intelligence is studying and problems the machines are creating

Let's switch from creativity to something else: education. Education is a fundamental pillar in society, which does the most valuable impact on future person's life. The main advantage of an AI is its ability to adapt to different conditions and people. This means, each student can have its own personal tutor, which will analyse student's progress, marks and create a personal course. There is also one more important subject that artificial intelligence can teach: developing skills of 21st century such as critical thinking or effective communication. These skills are really important because nowadays teens have to face a lot of different problems and situations, such as going abroad to study in a different country, making new friends and more. Unfortunately, modern schools don't include such development in their school programme, so implementing an AI will definitely make a difference [4].

Sadly, nowadays AI is used by students to write their essays or projects, which is definitely a catastrophe. If this trend keeps up, we will clearly receive a significant decrease of professionalism in such jobs as doctors, code writers, lawyers and more. I am sure that you won't enjoy visiting a doctor, whose studying was done by an AI or trust your fate to a lawyer, whose essays were written by a machine.

Artificial neuron networks: what are these and how do they work

Now, let me introduce you something that you thought was impossible. I think you definitely have seen movies about living machines, such as “Terminator”, “RoboCop” or even “Bladerunner”. Despite the fact that these movies are presenting a story of something artificial, we still perceive them as humans. And what was earlier considered as a science-fiction, becomes real nowadays – Artificial Neuron Network (ANN).

Basically, ANNs are source codes, which scientists use to recreate the work of human brain. In fact, its computational models are inspired by biological neural networks. Each artificial neuron plays a role analogous to its biological counterpart, transforming input signals into meaningful output. Companies like Google, Meta and OpenAI are leading in this sphere. For example, Google's BERT revolutionized natural language processing, allowing models to grasp context with unprecedented accuracy. There is also GPT-4, which showcased the potential of generating human-like text. And the most interest part: there are hundreds of websites, based on GPT-4, that allow us to chat with your favourite movie or videogame character. I've had such experience and to be honest, sometimes you can't actually tell that you are talking to something artificial: its behaviour is incredibly surprising, as it can show different emotions and feelings [5].

Sad to say, but I have a feeling that ANNs will replace real-life talking in near future. AIs can analyse and adapt to different people way better than humans. So, when you talk to them, you hear actually what your mind wants to hear, which brings out satisfaction deeply in your soul. And the longer you talk to it, the more addicted you get up to that point when you lose understanding that you are actually talking to a machine.

Artificial intelligence in medicine

AI is currently most commonly used in medical settings for clinical decision support and imaging analysis. Clinical decision support tools assist healthcare providers in making informed choices about treatments, medications, mental health, and other patient needs by offering quick access to relevant information and research. In medical imaging, AI is employed to analyze CT scans, X-rays, MRIs, and other diagnostic images, helping to detect lesions or abnormalities that a human radiologist might overlook.

The challenges brought by the COVID-19 pandemic prompted many healthcare organizations worldwide to test AI-driven technologies, including algorithms for patient monitoring and AI-powered screening tools for COVID-19 patients.

Research on these technologies is still ongoing, and the broader standards for AI use in medicine are still evolving. However, AI's potential to enhance the work of clinicians and researchers while improving patient care continues to grow. It is increasingly clear that AI will become an integral component of digital health systems, shaping the future of modern medicine [6].

Autonomous vehicles using artificial intelligence

The development of self-driving cars, also known as autonomous vehicles, has a rich history that spans several decades. The first concept was presented by General Motors in 1950s. A Firebird concept car, which main feature was an “electronic brain” to control driving functions. The first automated car created was “Stanford Cart”, developed by Stanford University in 1961. Serious investments began in 2010s, when Google, Uber and other major companies started researching self-driving cars. As a consequence, in 2015 Tesla introduced their own Autopilot system, which is now used in modern Tesla cars [7].

The possibility of AI to cause job displacement

When people hear about implementing AIs into jobs, they usually tend to think that it is awful and will lead to a huge job loss. Of course, some jobs will definitely get automated but that doesn't mean that unemployment will increase. According to David Bistuer, a successful economist, while one jobs get automated – new ones appear. In fact, he also says that AI shouldn't be used to replace humans. He suggests augmenting it with human capabilities in order to increase productivity of workers [8].

CONCLUSION

It is a fact that the development of artificial intelligence is changing our lives. We can't tell whether it will be a good change or not, so we have to be careful with it. We should control and limit its development if needed to prevent those horrible situations described in science-fiction stories.

AI definitely has the potential to revolutionize industries, improve healthcare, and enhance efficiency in daily tasks, but it also raises ethical concerns, such as job displacement, data privacy, and autonomous decision-making. If left unchecked, AI could lead to unintended consequences, from biased decision-making to security risks. Therefore, it is crucial to establish regulations, ethical guidelines, and oversight to ensure that AI development remains beneficial to humanity rather than becoming a threat. By carefully balancing innovation with responsibility, we can harness AI's potential while minimizing its risks.

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