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I AM IN THE TECH INDUSTRY. WILL AI REPLACE ME?

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Summary:
The topic of artificial intelligence and its impact on society was considered. The benefits and potential risks associated with the advancement of AI were explored, as well as some of the ethical considerations that must be taken into account.
Keywords: AI, technology, developers, automation, programming, ChatGPT, ANI, AGI, job loss, displacement of jobs.

When I heard some time ago that AI would replace junior developers, I was scared as both a tech student and a trainee developer at a Ukrainian IT company. I was concerned because I had spent a lot of time and effort learning how to program, and now it seemed so easy to replace me with a cheaper, faster, and more accurate alternative.

As I started learning more about AI, however, I realized that developers like me do not yet have to fear job loss as a result of this new technology. But even with this knowledge, it still blew my mind when I asked ChatGPT, an AI chatbot developed by an American AI research laboratory, OpenAI, to check my programming function in TypeScript and optimize it to increase execution speed. While I have struggled to do that, the chatbot immediately started rewriting the function and explained how it works in a matter of seconds. ChatGPT can not only write programming functions but also create web pages, applications, and even basic games in many programming languages. But despite all of these abilities, ChatGPT can only develop fairly straightforward programs. If you ask the program to do something too complex, like create a sophisticated game or business application, it will acknowledge its limitations and let you know that the work is currently beyond its abilities. Knowing this, I see this bot as a tool that can simplify programmers' lives and help them to write code more efficiently and quickly, rather than technology to fear. For example, programmers can now use ChatGPT to find more answers to their questions, without using the popular question-and-answer website for developers, StackOverflow.

The problem with the conversation surrounding AI is that people imagine the worst-case scenarios when they think about the technology's capabilities. But it is most likely inspired by pop culture, mainly through mediums such as the science-fiction film industry. Cultural and cognitive factors, such as the portrayal of AI in popular culture and limited understanding of AI, have played a role in shaping people's attitudes towards AI. But to better understand this up-and-coming form of technology, having an understanding of where AI comes from will help us better answer the pressing question: Are these machines going to take our jobs, or even take over the world?

To answer the question, we need to step back in time: the first academic study of Artificial Intelligence was conducted at Dartmouth College, in New Hampshire, USA, in 1956. Millions of dollars were spent on this research but it became apparent that it was too difficult a task. After that, various scientists worked on studying artificial intelligence, but by the end of the decade, investors were disillusioned by the concept again.

There were no successful attempts to develop AI until the 21st century—when computational power was finally sufficient enough to deliver credible and useful results. Since then, AI has revolutionized areas such as supply chain management, image recognition, diagnostics, autonomous driving, and, yes, playing computer games. These are all instances belonging to something experts call Artificial Narrow Intelligence (ANI). ANI is where AI succeeds at tasks that are very specific and defined. In many highly specialized fields, AI can unquestionably perform better than humans. Artificial General Intelligence (AGI), on the other hand, is the type of AI frequently found in science fiction. It is the kind of AI that is capable of understanding and learning any intellectual task that a human being can. But as of right now, Artificial General Intelligence (AGI) does not currently exist because it is a complex and challenging goal to achieve. OpenAI's GPT-3 is the latest attempt to create AGI, but it falls short of true AGI because it is limited to specific domains and lacks a comprehensive understanding of the world. Developing AGI requires breakthroughs in many areas such as natural language processing, computer vision, reasoning, and decision-making, as well as the ability to learn and generalize from diverse experiences. While progress is being made, there is still a long way to go.

Until AGI is properly refined, we only have to address ANI and its very specific skills. And although the human-like qualities of AGI that have grown popular in science fiction dystopia are not present with ANI, we must still take heed of what ANI can do. ANI is now part of our everyday environment, whether we are aware of it or not. AI lurks in the background every time we open our Facebook newsfeed, conduct a Google search, purchase a suggestion from Amazon, ask Siri a question or book a trip online. And these AI-supported features make our lives on the internet much faster and easier. But at the same time, it slowly eliminates the need for certain jobs. For instance, the manufacturing sector is currently where AI has impacted society the most, replacing millions of people with machinery that completes the same tasks considerably more quickly. According to a study by the World Economic Forum, between 2000 and 2015, the manufacturing sector lost 5 million jobs in the United States alone due to automation. We do not need as many cashiers, because many are easily replaced with efficient and pleasurably impersonal self-service cash registers. Soon, we won't need as many designers and artists. Also, customer service roles do not require high levels of social or emotional intelligence to perform the role efficiently, allowing ANI to take on some of these jobs as well. Businesses like Domino's Pizza and Sephora now use AI to respond to customer support queries using chatbots with automated responses to frequently asked questions such as, "Where is my order?".

Technological advancements have revolutionized the way we live and work, and history has shown that these advancements have led to the displacement of jobs in various industries. During the Industrial Revolution, many skilled workers were displaced by the introduction of machinery and new technologies. Similarly, automation in manufacturing during the 20th century led to the displacement of many jobs, particularly in the automotive industry. With the advent of digital technologies and the internet in the 21st century, many jobs have been outsourced to other countries, and tasks have been automated, leading to job losses in areas such as customer service and data entry. While it is true that technological advancements have led to job losses in various industries over time, it is important to note that these advancements have also created new jobs in many other areas. For example, new jobs were created in fields such as cybersecurity, data analysis, and software development. So, we see that technological advancements can both remove and create jobs in different areas of the economy. Modern technologies allow us to free up our time, which we used to spend on hard, mechanized work. Their technical abilities provide an opportunity for humans to concentrate on creative work, the type that requires our human emotions, our ability to think, and our ability to individually approach tasks and invent. For a dignified life in the modern world, one must be able to learn quickly and adapt. AI is just another test of this ability.

Many people outside of the technological industry are genuinely confused and scared of the changes that are coming within the AI industry, but even successful, intelligent business leaders can be concerned with AI. Microsoft co-founder and philanthropist Bill Gates issued a grave warning during an event at Stanford in 2019, comparing advanced artificial intelligence to nuclear weapons. "The world hasn't had that many technologies that are both promising and dangerous," Gates said. But after ChatGPT was launched in November 2022, the Microsoft co-founder said that Artificial intelligence like ChatGPT will change our

world and make it far more efficient, in a podcast conversation with the German-language business paper, Handelsblatt. He asserted that AI technology has meaningful opportunities to improve outcomes and efficiency in the office, in health care, and in education.

Although the idea of job loss and technological replacement sounds intimidating, we should not be worried about the development of AI, because everything in history is cyclical. What is happening to us is not new—we've seen jobs transition as a result of new technology over hundreds of years. But nevertheless, we should be prepared for changes in life and an adaptation to a new reality.

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