

# Possibilities of deterioration of artificial intelligence

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**Abstract.** The following article covers the modern technology that changed the known world for the humans dramatically. Its influence is only increasing and its adaption rate by industries is moving parallel. This technology might provide some solid results and transformation in one field and might have negative influence on the other parts. Therefore, this article will be aimed to illustrate what is AI technology and its common application and therefore its impact on them. This article also covers future perspectives of the technology.

## 1 Introduction

From the very start, humanity always moved forward. At the beginning its pace was slow, but with the development of some tools the progress was unstoppable. For sure, some events such as natural disasters and great wars could stop it or otherwise accelerate to the new echelon. Sometimes progress permeates our live unnoticeable and its integration can be noted only when studying it deep. But there are cases when the new technology is introduced to the world in its pure state. This leads to many talks and repulsion. Again, as time passes the new technology is well embedded into the system, and it is unimaginable to live normal life without it.

The new technology and the promising one in the present is Artificial intelligence. The technology is loaded with the capabilities that could change the world we are living dramatically. This technology is well embedded into the different fields, and it's proven its advantages over old methods. Usage of the technology automates any repetitive and simple task that were mostly done by the work force. As the technology progresses, its ability to handle harder tasks increases. Different industries rely on it so heavily that it decreased the work force to the minimum. Is there any chance that this technology could lead to the path that have no positive outcome? Therefore, the following article will look into the possible issue of deterioration of the technology or damage it could have to the implemented field [1, 2].

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## **2 AI**

AI is a powerful tool (technology) used in modern time to accelerate some parts of the system (industrial processes, calculating abilities and so on) in which it is embedded. This technology's adaption rate by other technologies is tremendous and only going to increase. Almost any industry uses the technology to elevate their overall capabilities by also reducing unwanted parts of the system. This technology, in simple words, is numbers, letters and symbols combined with some electronics that tries to imitate human's brain. In some cases, it does a better job than humans, in other parts it fails dramatically. However, scientist think that in the future AI will be so powerful that it will exceed the capabilities of human brain. But right now, we are at the stage where it can perform repetitive tasks and in a second devour and classify a large chunk of chaotic data with the desired outcome. There are many stages of AI development, but can be cut to the main two. First one is weak AI. in this stage or the one we have now technology can perform some task better than human and some as it was mentioned above bit worse, but in overall the technology is still far away reaching to the capabilities of our brain. And there is a second one, which called strong AI. In this stage, which is not reachable at the moment, AI is believed to perform beyond the human's reach. This stage cases disability in the masses and in the circle of scientist. Some people believe that the technology will have negative influence on the people and to the planet in general. This question is still in the air and there will be no clear answer to this as it is yet to be discovered. Right now, there are some debates that the technology in some cases shows decrease in intelligence and in other parameters as well [3, 4].

## **3 Positive Influence of the Technology**

This technology might be invisible for the human eye, but the positive impact it has on some parts of the humanity is dramatic. In this section the aim will be it positive influence and how the world we live is changing in a fast pace.

### **3.1 Environment**

Percent give us a lot of challenges that needs to be faced immediately. Chase for the bright future is resulting in a most unpredictable way. Technologies and good that were introduced to humanity for the comfort are striking back. Due to the life ease, the population rate is going higher than ever, which in fact introduces other events of challenges. The most common one and in deed the main one is global warming, which is now shifted to global boiling. Global warming introduces issues that are unsolved right now, and hence the novel approaches are introduced. These novelties are the future for the humanities if, of course, used properly. And how AI can be used to fight these uncertainties? The answer is simple. AI, for example, in agricultural practices can minimize waste, increase the productivity and quality as it monitors every possible threat and predicts what needs to be done in favor of crops, reduces human errors and in general has positive impact. The use of algorithms that can optimize some shapes of devises or parts can lead to less material usage and better performance. In wider scope AI can analyze massive pack of data from satellites, drones and other sources to monitor and most importantly predict natural disasters (deforestation, wildlife, water quality and so on) that would have huge impact on the nature [5].

### **3.2 Production and manufacturing**

This technology uses less effort if compared to traditional methods and gives grater outcome. Due to the overpopulation's issue, the need for the increase of food and good are in favor. As it was noted earlier in this work that AI usage have the great influence on production and quality. Due to the lesser involvement of people (work force) and ability of the technology to work without rest might result in higher production rate with less human errors. The other side is that the technology is capable of acceleration the overall processes through different mechatronic (sensors, mechanisms, and data analysis). As it was mentioned earlier, the technology can be applied to modify the products structure (if describing goods) in a way that it uses less material (through optimization of the structure through different software) and the waste is also lowered. There are a lot of parts in the industry that uses this technology not just in manufacture but also for package, transportation and many more [5, 6].

### **3.3 Education**

Among the benefits, personalized learning stands out, particularly with the emergence of tools like ChatGPT and similar ones. These resources prove highly beneficial for individuals struggling to grasp and comprehend the educational content provided in schools and other learning institutions. It appears that students are quicker to embrace new technologies than their educational institutions, and they can derive more advantages from these modern tools compared to traditional approaches. However, in light of regulatory concerns regarding AI tools, it is strongly recommended that measures such as parental control or oversight be implemented [7].

### **3.4 Entertainment**

This sector utilizes AI more than any other sector. People knowingly or not uses AI day in different apps and devises. A lot of new tools occur daily, which are powered by AI. This technology allowed many developers of software or apps to elevate the potential of the finished product. It has a great influence on the users as well. If before some steps were done manually, the technology will do it now for the users. for example, if one needed to delete background in the picture or in the video, many steps were required, and time consumption also was high. But due to the artificial intelligence the process can be done in a second, just need to download the file and describe what is required by the prompts.

Tools with AI are so popular that many peoples shifted towards new one as old approach are time-consuming and require manual involvement. The most popular and the one that attracted the mass audience to the AI IS ChatGPT. This tool can answer any question in prompts. It gives new ways to search information. The information provided is more precise and well-structured. But most importantly, its abilities to recall the conversation and understand the prompt in the contacts of dialogue. There are many tools that are similar to this one and their capabilities are rising daily [8].

## **4 Negative Side of AI**

At first, it is important to outline that the technology not just getting worse in some cases, but humans are influenced as well. Technology as it was mentioned earlier improves one's life by making it easier for them to perform certain task in a more convenient way. However, it is also impact on their live-in terms of laziness, motivations, decision-making abilities. As technology degrades or loses grasp to reality, it will similarly drag into other people, which will believe anything provided after provision of prompts.

The greater questions for ones to ask is "does AI capable of deteriorating over the time. It is well known that this technology can mislead or provide information that is no accurate or outdated. However, some tools that are powered by AI are capable of deteriorating over the time. Scientist did some research on this topic and found out that some AI technologies are getting worse at what they were promising. The study was done on two tools from the same company (Open AI). The found out that one of the tools has changed over the period as its outcomes were more and more incorrect. The similar cases were noted in different tools, where preciseness and ethics were degrading. However, this is does not mean that the technology will degrade over the time and at the end we will have nothing. The problem is more related to technical aspects. To ensure that AI systems continue to perform well over time, organizations often implement strategies for model maintenance, data curation, and periodic retraining to adapt to evolving conditions. Regular monitoring and evaluation are essential to address performance issues and potential biases that may emerge as models interact with real-world data and users.

AI models themselves do not inherently deteriorate over time in the way that humans might experience physical or cognitive decline with age. However, the performance and relevance of AI models can be influenced by several factors. One significant factor is Data Drift: If the data used to train an AI model becomes outdated or no longer represents the current state of the world, the model's performance may degrade. For example, if a language model is trained on text from a specific time period and new slang or terminology emerges, it may struggle to understand or generate text using the latest language trends.

Additionally, the Size and Complexity of AI models play a role. Some AI models, particularly large deep learning models, may require significant computational resources for training and inference. Over time, it may become more challenging to maintain or improve their performance due to the computational costs and infrastructure required. Furthermore, Algorithmic Advances are important considerations. As AI research progresses, newer and more effective algorithms may be developed, potentially making models built with older techniques less competitive in terms of performance. Changes in Hardware and Software Environments can also impact AI model performance, as these models are often deployed on specific configurations that can change over time.

To ensure that AI systems continue to perform well over time, organizations often implement strategies for model maintenance, data curation, and periodic retraining to adapt to evolving conditions. Regular monitoring and evaluation are essential to address performance issues and potential biases that may emerge as models interact with real-world data and users [9, 10].

## **5 Future Perspectives**

It is clear that this technology will be the one that drives other technologies and industries in the near future. Even at the moment as it was mentioned many times in this work this technology has a dramatic influence on these systems that it was introduced. There could be another revolution in the technological world and AI will be left aside or be as similar as modern tools are similar to it. but if looking through the path of tendency of technology, one can assume that technology will only improve and provide better performance. The issues it has right now will be solved and yet new ones will emerge and similarly will be solved too. The problem lays not on the technology itself but to those who uses it and the way it is utilized. Therefore, with the issues it has right now, the technology won't be cancelled or slowed down anyway near.

## 6 Conclusion

To conclude, the following article was done to outline the importance of understanding that the technological progress can sometimes be stagnant and even going in the opposite way. The use of AI and its tendency was covered in this work. The main aspects of AI technology were outlined. Its positive and negative influence on different fields were also covered. The main focus was devoted to the side of technology which is working not as intended and introducing some uncertainties. At the end, the article provided some future perspectives of the technology.

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