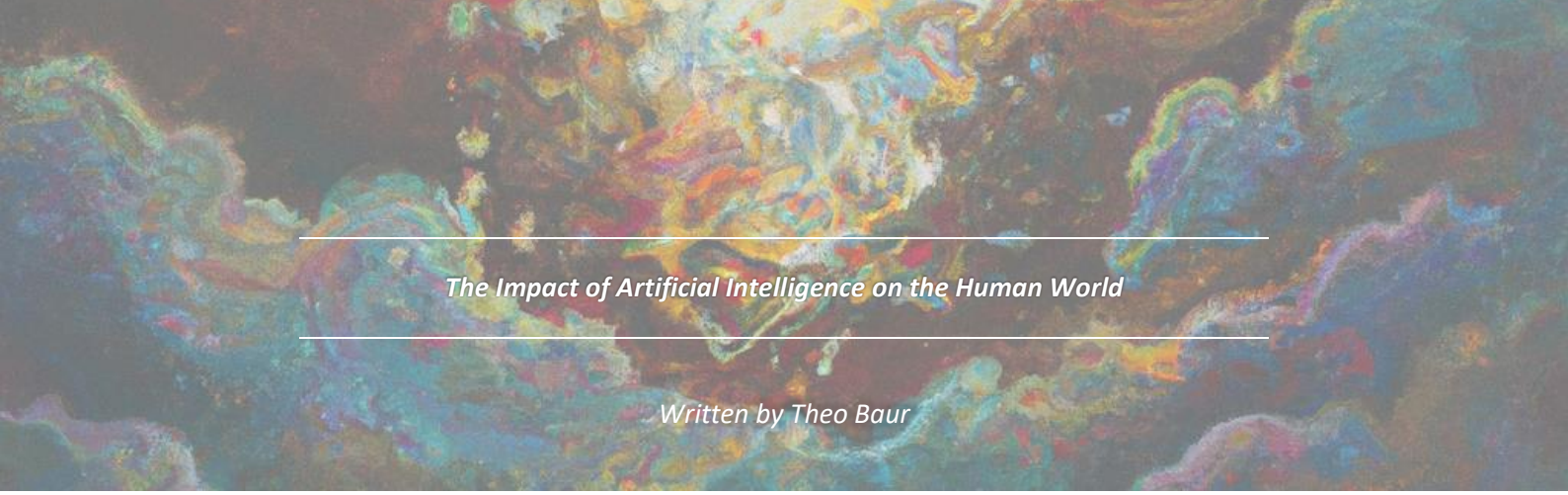

# *The Impact of Artificial Intelligence on the Human World*

*Written by Theo Baur*

*"A computer would deserve to be called intelligent if it could deceive a human into believing that it was human." (Turing)*

A widely held sentiment was that Artificial Intelligence operates squarely in the realm of logic and repetitive tasks. After all, creative arts and knowledge work require skills that are uniquely human, a large enough data set and some machine learning algorithms could never outperform human intelligence in these fields.

The answer to this may not actually be so cut and dry. *Midjourney,* an AI art generator, has won a competition at Colorado State Fair over human competitors *(Roose 2022)* and questions are beginning to arise on whether *GitHub Co-pilot* will decrease the number of human programmers in the near future *(Kakal 2022)*. The reality is that AI technology has become uncomfortably advanced, and we may need to ask ourselves how unique our skillset as humans is and what impacts could this have on our changing world.

*What role do the AI tools have in the changing world?*

AI tools are becoming more and more advanced at a near exponential rate, and it is almost inarguable that certain repetitive roles such as data entry, receptionists and IT support are capable of being automated by AI in the future. The repetitive nature of some roles is perfectly suited for machine learning, instead of training individual workers for weeks it is my belief that AI in the future will be able to trawl through a large data set and become as proficient in some of these roles within a few hours. If it is not the case that these roles will be completely automated, I find it hard to believe that most of these roles will not be partially automated where a human shadows an AI tool to check for behavioural errors, but the majority of the lower-level work will be automated. In this situation an office of IT support workers may go from 10 workers to 1 worker and an AI software. However, can the same be said about the jobs that are "harder" to be automated?

*How will the emergence of AI affect our jobs?*

Can a machine learn the intricacies of writing programs, creating art, performing sales or even being a medical practitioner? The answer isn't certain and even if it was a time scale wouldn't be easy to predict. There are already AI tools in place that have significantly improved the efficiency of programming tasks such as *GitHub Copilot,* a tool that turns natural language prompts into coding suggestions*. GitHub Copilot* could be used to automate routine tasks such as code refactoring and bug fixing, which would allow programmers to focus on more complex and creative tasks. *GitHub Copilot* learns to create code by using data from the ever-increasing number of *GitHub* repositories, meaning its ability to generate solutions will only improve over time.

However, it is important to note that AI tools like *GitHub Copilot* are still in the early stages of development, and it is unlikely that they will be able to completely automate programming soon. Many experts believe that AI tools will augment and assist human programmers rather than replace

them, and that programming will continue to require human skills and expertise for the foreseeable future. *Copilot* will also sometimes produce code that will not work meaning there is an uncertainty factor regarding the quality of the code.

Ultimately it is important to ask if it is positive or negative if AI completely or partially automates certain job sectors and displaces human workers. On one hand, if it is the case that AI automates a sector, we would assume that it would be much more efficient and accurate leading more cost savings and productivity gains, benefitting both customer and businesses. Whilst certain jobs would have no demand for new workers, I would imagine that the market would demand that other jobs such as AI maintenance would need to be filled. If an AI can really program better than a human for less cost, I don't believe that we should be desperately trying to prop up the human programmer in that role as it is unsustainable, instead we should be searching for new roles for the human to fill that an AI can't occupy. On the other hand, it is also important to consider the real cost to people's lives, it could lead to significant job displacement and unemployment. This could have negative consequences for individuals and society, particularly if the benefits of AI are not shared fairly.

*What are the risks?*

*Midjourney* is a similar tool that can create images based on a text prompt. In 2022 a piece of digital art created using *Midjourney* won the Colorado State Fair's annual art competition blue ribbon for digital art *(Roose 2022)* This sparked a discussion on whether or not AI generated art should be used. Some people argue that using *Midjourney* was comparable to any other improvement in art-making technology such as the invention of the camera or digital editing tools and therefore if we are to stop using AI art, then we need to also apply that same logic and stop using all art-making technology, which most people would never agree to. On the other hand, not only does the effort needed to produce art using AI seems laughably little, but the method in which AI uses to create art might be unethical. These tools rely on trawling through millions of images and artwork to find patterns and relationships to create a new piece, meaning that some artists might be unknowingly contributing their work. However, it can also be argued that any normal artist will have to have influence from other works to develop their work and we cannot criticize AI for doing this whilst in the same breath being okay with regular artists doing the same thing to a lesser extent.

*Théâtre D'opéra Spatial - Created by Jason Allen using Midjourney (Allen 2022)*

In a similar vein, AI tools might pose a legal risk by having the potential to infringe on intellectual property rights. Generated content itself may accidently reproduce copyrighted material. For example, with the right prompt a user may be able to generate the script for a Disney movie. This could lead to IP infringement if the AI tool is used to create content that is substantially similar to a copyrighted work without obtaining the necessary permissions or licenses. If copyrighted material is used as training data in order to perform a particular task this could also infringe on IP rights if the correct licenses are not obtained.

Chatbots are a type of AI used to communicate with humans in natural language through text input. Unfortunately, the ability to communicate well with humans, understand and generate language can mean that tools like *ChatGPT,* a chatbot made by *OpenAI,* can be used to for malicious purposes. AI tools that can communicate with humans in a natural language could potentially be used to harass

or bully individuals online. For example, a chatbot might be programmed to send threatening or harassing messages to a particular individual, with the messages being especially well written due to its refined language algorithms. AI tools that can generate content based on text descriptions or prompts could potentially be used to spread misinformation or propaganda *(Marcus 2022)*. For example, a chatbot might be programmed to spread false information or to promote a particular agenda.

One of the pitfalls of using machine learning to train an AI is that they can perpetuate biases and stereotypes. AI systems are only as unbiased as the data that is used to train them, and if the data used to train these systems is biased, the systems themselves will be biased as well. This can lead to harmful consequences, such as the amplification of negative stereotypes or the exclusion of certain groups of people. The program Correctional Offender Management Profiling for Alternative Sanctions (COMPAS), used in the US court for risk assessment, was found to incorrectly label black defendants as likely to reoffend, flagging black people wrongly at almost double the rate compared to white people *(Buranyi 2017)*. As AI automating processes like this become more common, we can expect the amount of influence that these discriminatory tools must be more severe it is important for developers of these systems to be mindful of the data that they are using and to try to use diverse and representative data sets.

*Are there any benefits?*

Artificial intelligence may also be able to perform roles that would normally seem firmly in the realm of human capability. Chatbots may be able to perform therapeutic roles if their language learning algorithms are advanced enough. During the COVID-19 pandemic, quarantine brought about a new level of social isolation to normal peoples lives with many feeling lonely. In April half a million people downloaded *Replika*, a chatbot designed for companionship. Some users even report that this sort of AI is therapeutic and that they have formed genuine relationships with the chatbot *(Metz 2020)*. Chatbots may be used in therapeutic settings in the future as they can be programmed to use cognitive behavioural therapy, they can also provide a safe and confidential space for individuals to discuss their thoughts and feelings. Some argue that these types of technologies should not be normalised as they should not be a substitute for real human contact, and they are just a band aid solution to try and repair our societies growing isolation problems.

*Final thoughts*

*Artificial Intelligence - Created by Theo Baur using DALL-E 2*

The existence of these tools poses the question: Are there any skills that are uniquely human? It seems as if with enough data, the right machine learning algorithm can keep up and at some points exceed skills that were previously thought to be unachievable by anyone other than ourselves. It takes us years to learn skills such as language or coding where an AI can train faster than we can ever hope to. As AI becomes more common, we will discover and filter out more skills that humans are uniquely suited to. I believe that as time goes on our social and work lives will be revolutionised, purely due to AI, and we are just starting to feel the AI-infused change.

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