

In The Realm of Technology, Can AI Tools Be Useful for People When Used Responsibly?

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ABSTRACT

This paper takes a look at the role of AI tools in society and advocates for their sensible application. As the age of artificial intelligence settles amongst people, there are advantages as well as difficulties which are encountered in education, business and governance. The study assesses the implications of intelligence systems on directional changes, both from international relations and domestic angles such as job loss, information security, and data privacy. Although the use of artificial intelligence improves the output's effectiveness and makes it more tailored, there are negative aspects of its application that may come about – lowered disposition or motivation, ethics problems, and biases in society. To address these issues, a number of case studies and coordinates are employed to achieve a top-down perspective regarding AI challenges while fostering peace and social responsibility about the use of AI with a glimpse of a better tomorrow.

Introduction

Artificial Intelligence (AI) has rapidly gone from a future idea to an essential part of life in modern society, affecting them at different levels. The presence of AI is spreading all over the world and is increasingly becoming an important issue, especially in the areas of education, government and even daily routine tasks. Since the introduction of ChatGPT in November 2022 the interest related to AI tools, especially auto generated text, has truly skyrocketed. This paper investigates and explores the several impacts of AI while looking at its advantages and disadvantages through the lens of students, teachers, businesses as well as nations at large. From diverse global and national perspectives, I hope to show whether the current integration of AI into contemporary living is bettering human minds or not. It is important to find proposed solutions on the drawbacks and also find out how we can navigate through such a future that relies heavily on AI.

In What Ways Does AI Influence the Development and Dynamics of Nations?

Many countries are experiencing several negative effects as a result of the development of artificial intelligence. Despite being a leader in AI development, China¹ is facing many AI related challenges, so they face a complex problem. Researchers expect China to replace 278 million workers, which is a whopping 35.8% of all currently employed, with AI by 2049. The large ageing population in China may find itself unemployed soon, since AI is performing the job more efficiently.²

¹<https://hbr.org/2021/02/is-china-emerging-as-the-global-leader-in-ai>

²https://www.researchgate.net/publication/337053537_The_effect_of_artificial_intelligence_on_China's_labor_market#:~:text=Researchers%20expect%20China%20to%20replace,become%20very%20acute.%20...

OpenAI, a San Francisco company, invented ChatGPT which is a chatbot that has caused excitement, raised some concerns and really surprised the world at large. However, in China, this U.S. based bot and the artificial intelligence behind it are seen as a threat to the country's political system and global ambitions. This is because chatbots like ChatGPT feed off information, which is something China is against. For instance, the Communist Party of China maintains its power through censoring information more so under its domineering leader Xi Jinping who has sought for greater ideological conformity. Censoring chatbots can be difficult. They may blurt out any information including unexpected surprises when authorities want to control what Chinese know about anything. However, this political necessity is in conflict with the country's urgent and crucial demand for originality while focusing on AI and chatbots. China's economic miracle could be hindered, thus preventing Xi from achieving his goal of becoming the number one global superpower, if it does not continue to develop technologically, especially after banning auto generated text (ChatGPT).³

Factors Driving People Worldwide to Utilise AI Tools

Various individuals across the world are using AI avidly in their daily lives', mainly auto generated text (ChatGPT). Whether it is planning workouts, diets, writing emails, or even something as important as a wedding speech, people are turning to ChatGPT to perform these jobs.⁴

One of the most frequent users of ChatGPT are students, using it to execute several jobs. A recent study showed 25.2% use AI-based tools very frequently, while 47.8% use AI-based tools occasionally.⁵ It assists students in comprehending challenging topics, and highlights weak points. With individualised suggestions and materials, ChatGPT helps learners become smarter and faster, if used optimally. It can also be used as a study tool, and can solve questions, in any subject, that one may not know, and can explain it in a way one can understand.⁶ Others however, use AI as an easy and efficient way to perform their assignments or homework. This way, they would not put in nearly as much time and effort into their work. Thus, having an easy way out.⁷

There are many ways in which teachers can benefit from AI. In a survey conducted by Forbes Advisor, 55% of teachers believed that AI tools have had a positive effect on the learning and teaching process.⁸ AI can take many of the time-consuming tasks such as record keeping and grading that are currently expected from educators. Moreover, it helps in streamlining the planning process which then gives a teacher room to engage in creative acts necessary for taking learning to the next level.⁹

³<https://www.theatlantic.com/international/archive/2023/04/chatbot-ai-problem-china/673754/#>

⁴<https://www.nytimes.com/interactive/2023/04/14/upshot/up-ai-uses.html>

⁵<https://www.nature.com/articles/s41599-023-02304-7#:~:text=A%20detailed%20analysis%20of%20the,AI%2Dbased%20tools%20at%20all.>

⁶<https://www.berlinsbi.com/blog/how-chatgpt-can-be-a-useful-tool-for-students#>

⁷<https://www.sciencedirect.com/science/article/pii/S2666920X24000092#:~:text=In%20summary%2C%20prior%20studies%20have,%2C%20cognitive%20efficiency%2C%20and%20accessibility.>

⁸<https://www.forbes.com/advisor/education/it-and-tech/artificial-intelligence-in-school/#:~:text=AI%2Dpowered%20educational%20technology%20encompasses,programs%20cater%20to%20education%20professionals.>

⁹<https://virtualspeech.com/blog/benefits-ai-education>

Next, on top of tracking assignment submission and performance on specific tasks among others that may help expose gaps in learning or show some problematic behaviours; this makes it easy for any teacher to come up with suitable interventions at an appropriate time. Lastly, In today's fast paced world driven by technology students require fun and exciting ways to learn, which AI provides a path towards.

Businesses use AI tools for several reasons. The main goal that AI achieves for businesses is personalisation for consumers. By studying what they like and how they act, AI helps businesses cater for personal experiences to customers as well as employees. There are many ways in which this can be achieved, namely customised adverts, product suggestions and customer services that suit individual needs. When you shop online, you may have noticed that there is often a "you might also like" section. This is one of the best examples of how products can be marketed specifically at consumers based on their shopping behaviours. According to Amazon, upselling and cross selling contribute about 35% of its total sales.¹⁰

Excluding customer service, business owners are using AI for several other parts of their activity. According to a survey carried out by Forbes Advisor, customer service (as already mentioned) is the most popular application area with 56% of those polled taking advantage of AI for this purpose, while 51% of businesses are using it in matters relating to cybersecurity and fraud management.¹¹ AI has several uses and applications in cybersecurity, such as enhanced threat detection, improved response time, improved defence against hackers, simplification of complexity in the code as well as data and also reduced workload for the security team.

Global Challenges Arising from AI Tools

Most of the jobs worldwide will probably be replaced with AI by 2030, which could affect approximately 800 million people in their current jobs. That is not to say that there will not be a need for retraining soon. As many as 120 million employees are on the brink of retraining as companies gear up to meet new demands through artificial intelligence. The bulk of enterprises project that certain human tasks will be performed by computers in fifty years' time.¹²

AI tools are also affecting human psychology, for those who use it as an easy way out of performing their work. Human laziness can arise as AI becomes the go-to tool for most activities, right from menial tasks to complicated judgments. Consequently, when AI takes on more roles people may be less motivated to develop their abilities and acquire knowledge by relying heavily on technology.¹³ AI is especially making students lazy. For example, nearly 69% of students that use AI in Chinese and Pakistani societies have experienced increased laziness to perform cognitive tasks. They use AI for automation of tasks, answering questions quickly and making learning accessible at all times, thus negating the need for active engagement in class and critical thinking from students' minds.¹⁴

¹⁰<https://business.fiu.edu/academics/graduate/insights/posts/competitive-advantage-of-using-ai-in-business.html#:~:text=Personalization%3A%20AI%20enables%20businesses%20to,recommendations%2C%20and%20tailored%20customer%20service.>

¹¹<https://www.forbes.com/advisor/business/software/ai-in-business/>

¹²<https://seo.ai/blog/ai-replacing-jobs-statistics>

¹³Advantages and Disadvantages of Artificial Intelligence [AI]Simplilearn.com<https://www.simplilearn.com/advantages-and-disadva...>

¹⁴<https://typeset.io/questions/how-ai-causes-laziness-to-students-2sibkelklz#>

Cyber criminals nowadays exploit AI algorithms and tools in order to create malware, automate attacks, generate phishing emails, and avoid detection amongst others. Also most of the hackers are using the weaknesses of AI-based security systems to achieve illegal access and make a security breach.¹⁵

Several ethical concerns rise from Artificial Intelligence. Biases can be passed down to artificial intelligence systems, depending on their training data, thus producing discriminatory or unfair results. This may lead to ethical considerations about fairness, responsibility and the possibility of further entrenching societal biases within decision making.¹⁶ AI systems usually rely on an extensive quantity of data for its decision-making. But, this data can contain sensitive personal information, such as health records, financial transactions, important business information and biometric data. Improper handling or unauthorised access to this data can cause privacy breaches and violations of people's rights to privacy. Therefore, if not censored in the right way AI can be dangerous.¹⁷

My Personal Reflection

Writing this essay has been an enlightening experience, revealing the complexities of AI's role in society. Initially, I viewed AI tools with excitement, appreciating their potential to perform tasks. However, my research has led me to a more nuanced, detailed understanding.

AI offers significant benefits, such as personalised learning for students Improved customer experiences for businesses, and enhanced cybersecurity. I knew of these benefits. The change in my understanding and perspective came about when I researched the risks. While having its advantages, it also poses drawbacks, such as job displacement, reduced motivation and critical thinking, and ethical concerns like biases and privacy breaches.

Globally, AI's impact is profound, influencing students, businesses, the healthcare sector, and more. This shows the need for a balanced approach, promoting responsible AI use through ethical guidelines, education about the use of AI, and international cooperation.

Nationally (in China), the negative effects are similar to the effects faced globally. Here I learned that the problem is not localised, and that it involves international collaboration.

As a student, I think that one should use AI as a useful tool not as an easy way to complete your work. This is because, if you allow AI to do all your work, AI is controlling you rather than you controlling AI which is the intended function. This way you can optimally use AI since the bottom line is that AI can be useful when used as a tool to aid learning and creativity.

Overall, I believe I have written the report using credible sources. Therefore, the various statistics and other data used in the report are reliable, which increases the solidity of the points I have made as well as the general strength and value of the report and my research.

This individual report has transformed my perspective, highlighting the importance of fostering a culture of responsibility and critical engagement with AI. It has inspired me to advocate for responsible AI use, ensuring its benefits are equitably distributed while safeguarding societal values and rights.

¹⁵The Steps to Take to Prevent AI from Being Used Against YouOXEN Technology<https://oxen.tech> > Blog

¹⁶<https://creately.com/guides/advantages-and-disadvantages-of-artificial-intelligence/>

¹⁷<https://www.trigyn.com/insights/ai-and-privacy-risks-challenges-and-solutions>

Conclusion

The most important step is for us and the government is to mitigate the negative effects associated with AI tools. When it comes to AI's negative influence on employment, one way of reducing its impact is by ensuring ethical standards are followed during its development. This is done by promoting an open AI system that does not replace but supplements human labour, advocating for just employment policies among others and seeing to it that the gains made from AI are spread equally within society. This period can be moved across through proactive strategies, educational reforms and ethical development of artificial intelligence. In this way, a country and its workers should prepare themselves to face the challenges and opportunities brought about by AI and make use of its potential so as to create a better future which is good for all.¹⁸

In order to prevent AI affecting your cognitive ability, motivation and engagement, balancing cognition and convenience is essential. Go out of your way to set intellectual challenges for yourself. Spend time working on puzzles, reading books that are difficult or learning new things that require a lot of mental work. This is particularly important in preventing memory diseases like dementia. Secondly, one must not just depend on AI to provide the answers but let it help you with your thinking. When a question arises, first try to think about it independently before engaging AI. On the other hand, if you happen to consult AI before anything else, challenge what it provides through a critical review. Lastly, make learning a lifelong habit. Seek education whether formal or informal which will help keep your mind engaged. Take risks and do something different occasionally by going outside one's comfort zone and pushing critical thinking beyond limits.¹⁹ This will maintain one's creativity and prevent laziness for performing cognitively demanding tasks.

I think this is the most important solution since I experience, as a student, the increasing laziness in performing challenging tasks in my daily life since access to AI tools are readily available. Also, the quality of work, if just produced by AI, is low since it tends to be emotionless and clearly written by AI to the teachers, hindering students' grades. Moreover, this solution is very easy to apply and comes from within, as individuals. Rather than a solution that requires operation on a large scale, the above methods need little effort and can just be applied in our lives independently.

To protect AI from being used against you, it is a must to put in place these superior security controls including multi-factor authentication (MFA), Role-Based Access Control (RBAC), biometrics, data encryption and more.²⁰ Hence, this will protect a business' or an individual's private data.

Make privacy an integral part of AI systems design and development. Embrace the concept called "privacy-by-design" into AI lifecycle such that this approach recognises the importance of privacy and data protection during all stages such as data collection and processing, model training, deployment. Detecting biases in AI algorithms can be done through techniques like bias detection, fairness testing, and algorithmic auditing. This requires ensuring diversity and representativeness in training data sets as well as putting in place algorithmic fairness measures to promote equitable outcomes while protecting privacy rights. Only the personal information necessary for achieving specific AI objectives should be minimally collected and retained. To enable utility of data for AI applications while still preserving individual privacy, implement anonymisation and pseudonymisation methods. In addition, collaborative data

¹⁸<https://www.geeksforgeeks.org/artificial-intelligence-and-unemployment/>

¹⁹<https://www.linkedin.com/pulse/impact-ai-human-motivation-automation-making-us-lazy-1%C3%A4hteenm%C3%A4ki>

²⁰<https://oxen.tech/blog/the-steps-to-take-to-prevent-ai-from-being-used-against-you-omaha-ne/#:~:text=If%20you%20want%20to%20prevent,data%20encryption%2C%20and%20many%20more.>

analysis without compromising privacy could be achieved through application of privacy-preserving technologies like federated learning or differential privacy.²¹

In conclusion, the responsible use of AI tools can significantly enhance various aspects of modern life, from education to business operations. While AI offers tremendous benefits such as personalised learning, improved customer experiences, and advanced cybersecurity, it also poses serious challenges. These include job displacement, reduced motivation and critical thinking, and ethical concerns like biases and privacy breaches. These negative effects must be solved or diminished using the above proposed solutions and more. This approach will help us progress toward an optimal and favourable future for AI tools globally.

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²¹<https://www.trigyn.com/insights/ai-and-privacy-risks-challenges-and-solutions#:~:text=Implement%20data%20anonymization%20and%20pseudonymization,data%20analysis%20witho%20ut%20compromising%20privacy.>

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