Open Access Journal of Computer Science and Engineering
Volume 2, Issue 1, 2025, PP: 34-43
www.aytinpublications.com

Research Article

Uses and Abuses of AI

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Abstract

Artificial Intelligence (AI) is redefining the boundaries of what is possible. It has used cases in diverse sectors such as healthcare, finance, education, entertainment, etc., that can be transformed. It aids and augments human ability and optimizes particular processes for better efficiency and innovation in the 21st century. But with that rise come serious challenges and ethical dilemmas. If used improperly, AI could violate privacy, enact biases and discrimination, take jobs away, and even undermine security. The duality of AI — that which is exceedingly beneficial and that which is still potentially harmful — does require significant research so society can maneuver its complexities responsibly. Through this research, we intend to investigate how AI is being used and abused, its impact on society, and some guidelines for the ethical practice of its development and deployment. This study, by evaluating the promises and perils of AI, aims to contribute to the strike of a balanced and just technological future.

The study was quantitative with an online survey of 10 uses of AI and 10 abuses of AI. The survey was sent to a diversified random sample of 50 Myanmar citizens, which can include ethnic Myanmar, Chinese, Indian, and others. Both males and females between 15 and 40 years, including high schoolers, college-goers, and postgraduate scholars, were all respondents. [Note: Data collection for this demographic group lasted 2-3 months, which further provided insight into the attitude of different sections of society.] The objective of this study is to research these insights in order to comprehensively understand the different ways AI affects various communities, to guide the advancement of ethical and effective AI policies. The results reveal a consensus among respondents, with over three-quarters of respondents recognizing that AI makes everyday tasks more efficient, improves decision-making capabilities, personalizes customer experiences, enhances quality of life, and cuts businesses' operational costs. However, nearly 60% of those polled voiced concerns about the proper use of AI, pointing to risks such as potential privacy violations, loss of jobs, unemployment, replication of bias, and the generation of fake news. There was also wide support for tighter regulation to prevent the abuse of AI.

This paper makes the case for the two-edged sword of AI: Its transformative power for our society and its systemic risks. It calls for a prudent stance in the advancement and application of AI, stressing the necessity of ethical reflections and effective regulatory mechanisms. Such measures are critical to ensure that the capabilities of AI are deployed in a responsible and ethical manner.

Aricle Information

Recieved: 30 September 2025

Accepted: 15 October 2025

Published: 20 October 2025

Cite this article as:

Dr. Soe Thane. Uses and Abuses of AI. Open Access Journal of Computer Science and Engineering, 2025;2(1); 34-43

https://doi.org/10.71123/oajcse.v2.i1.25004

Key Words: Uses[1], Abuses[2], AI[3], Risk[4], Threat[5].

Background

AI is quickly permeating all aspects of our lives, with both wondrous benefits and glaring detriments. My research article analyzes the merits and demerits of AI implementation, rooted in academic studies and subject-matter experts, and broadly examines its historical inception, popular attitudinal frameworks, and my own recommendations and critiques.

Everything is changing—and it's all thanks to AI: the way we work and the way we communicate, the way we can diagnose diseases and get entertained. Intelligent assistants are becoming the crux of our daily lives. AI is an extremely powerful tool, and by understanding both the pros and cons, we can better use its benefits while minimizing potential risks.

The most significant benefit of AI is its capacity to increase efficiency and productivity. In sectors like healthcare, finance, and manufacturing, data processing and analysis are performed at a much faster rate compared to humans, resulting in significant improvements in efficiency (Brynjolfsson & McAfee, 2014). AI-powered diagnostic tools can outperform traditional diagnostic methods, leading to improved patient outcomes for conditions such as cancer (Esteva et al., 2017).

Besides efficiency, AI provides customized user experiences. Recommendation systems driven by AI algorithms provide users with content on sites such as Netflix and Amazon that is in tune with their interests (Gillespie, 2014). For example, the assistants Siri and Alexa have raised the user's comfort level by managing their schedules, controlling smart home devices, and retrieving information (Hoy, 2018).

1 Used to apply something like a tool, skill, or building to a specific purpose.

2 Improper treatment or usages, or the act of using something in the incorrect way.

3 Artificial intelligence (AI) is a set of technologies that enable computers to perform a variety of advanced functions, including the ability to see, understand, and translate spoken and written language, analyze data, and make recommendations, among others.

4 A situation in which there is danger

5 A statement of intent to inflict pain, injury, damage, or other hostile action on someone in retaliation for something done or not done

But these advantages come with significant drawbacks. A major concern is job displacement. With each passing day, AI and automation technologies continue to develop, with the potential to threaten jobs, particularly in industries that are heavily reliant on routine tasks such as manufacturing and customer service (Ford, 2015). This transformation requires substantial investment in retraining and upskilling initiatives to equip the workforce with the skills needed for new positions in an AI economy (Acemoglu & Restrepo, 2018).

In addition, AI poses serious issues related to privacy. The data mining needed for AI systems to operate effectively can lend itself to misuse and insufficient safeguarding of personal data (Zuboff, 2019). High-profile data breaches and AI-driven surveillance actions have fueled a growing debate about the need for stricter data protection regulations to protect individuals' privacy rights (Barocas & Nissenbaum, 2014).

Although AI helps us work efficiently and provides tailored experiences, problems like job displacement and privacy invasion arise. Comprehending these pros and cons is essential for creating policies and strategies that both maximize AI's benefits and mitigate its potential risks.

Research Questions (Hypothesis)

How do citizens of Myanmar perceive AI in their daily tasks' efficiency? How far do the people of Myanmar perceive AI to be a danger to their privacy and the security of their personal data? That would help you prevent misuses of AI like making misinformation and other bad stuff. Do people think there is a need for much stricter regulations?

Research Overview

AI has quickly become one of the most important and impactful technological advances of the 21st century. It has found usage ranging from common consumer applications like virtual assistants and recommendation systems to more advanced use cases in fields like healthcare, finance, and transportation. By rapidly analyzing vast amounts of information, deriving insights, and making informed decisions, AI boosts efficiency, productivity, and innovation in multiple fields.

But new AI has practical challenges and ethical concerns. Hotly debated issues include privacy violations, algorithmic bias, job displacement, and the potential abuse of AI in spreading misleading content, such as deepfakes. Such challenges warrant a policy assessment of both the benefits and risks of AI to society.

This paper investigates the two sides of AI; its advantages and disadvantages. A quantitative survey was performed among a representative sample of Myanmar citizens to

explore public perceptions and experiences with AI. The results of this survey will contribute to the creation of guidelines and policies regarding the use of AI technology with principles of accountability and ethics.

Literature Reviews

We've seen great progress and changes in all fields with the help of AI. AI can be a great aid in helping us carry out our daily tasks faster and more efficiently. From healthcare to finance, the use of AI in organizations can help them process massive amounts of information in record time, resulting in better decision-making in areas such as healthcare, finance, and manufacturing (Brynjolfsson & McAfee, 2014). In factories, the rise of AI-powered automation has been reducing production time and costs (Chui, Manyika, & Miremadi, 2016).

Besides increased productivity, AI is having a profound effect on healthcare. AI boosts disease diagnosis with higher accuracy and rapidity, which positively impacts patients (Topol, 2019). AI systems have even surpassed ordinary methods in identifying skin cancer (Esteva et al., 2017), highlighting its capacity to transform medical diagnosis as we know it.

AI also provides a huge advantage when it comes to personalized user experiences. AI-based platforms such as Netflix and Amazon provide users with personalized recommendations, leading to higher satisfaction and engagement levels (Gillespie, 2014). On the other hand, digital assistants such as Siri and Alexa assist in our day-to-day responsibilities, adding a layer of convenience and efficiency to commonplace tasks (Hoy, 2018).

AI can also greatly increase quality of life by lowering operational costs for businesses. Companies can save time and resources by streamlining processes through automation and improving their operations, resulting in higher performance, service quality, and better results.

That said, we also have to remain cognizant of the possible abuses of AI. One major downside is the loss of jobs. AI-driven automation poses significant risks to jobs, especially in sectors heavily dependent on routine tasks such as manufacturing and customer service, often resulting in unemployment and income disparity (Ford, 2015). This change highlights the importance of retraining and upskilling programs to assist workers transitioning to new jobs in an AI-driven economy (Acemoglu & Restrepo, 2018).

Moreover, AI presents serious privacy issues. This is because AI systems rely on the collection and analysis of personal data, which leads to critical privacy concerns (Zuboff, 2019). Data breaches, AI-driven surveillance abuse, etc., make the case for strict validators of the purpose of processing data and the rights of individuals against the background of data protection laws (Barocas & Nissenbaum, 2014).

Another important consideration is ethical and bias issues. If the training data is biased, then the AI will amplify these biases (Bolukbasi et al., 2016). There are concerns about the ethics of AI decisions in important domains such as criminal justice and hiring, where AI can fundamentally affect the lives of humans (O'Neil, 2016).

AI also has a role in manipulation and misinformation. By manipulating public opinion or undermining democratic processes, AI technologies could be weaponized to spread misinformation. Deepfake technology uses AI to produce realistic but fake videos that mislead people into believing someone said or did something that they didn't actually say or do (Chesney & Citron, 2019). This can have grave consequences for political stability and public trust (Tucker et al., 2018).

The ethical and security implications of developing and deploying AI-powered autonomous weapons are enormous. These weapons could make life-or-death decisions without human intervention, resulting in unintended casualties to civilians or escalation of armed conflict (Scharre, 2018). The use of AI in warfare also leads to concerns regarding accountability and the ethics of turning lethal force over to machines (Asaro, 2012).

Finally, AI can take advantage of economic systems. For instance, high-frequency trading algorithms can rig stock markets, establishing unfair advantages and bringing danger to the stability of financial markets (Johnson et al., 2013). Moreover, the use of AI systems may give way to monopolistic actions by tech companies, thus limiting competition and harming consumers (Taplin, 2017).

People are of mixed minds about AI. Some are touting its benefits, while others are warning of its potential risks. While many respond positively to the rise of AI, with surveys showing that people appreciate the convenience and efficiency AI offers, many express high anxiety about potential AI-driven job displacement and invasion of privacy (Smith & Anderson, 2017).

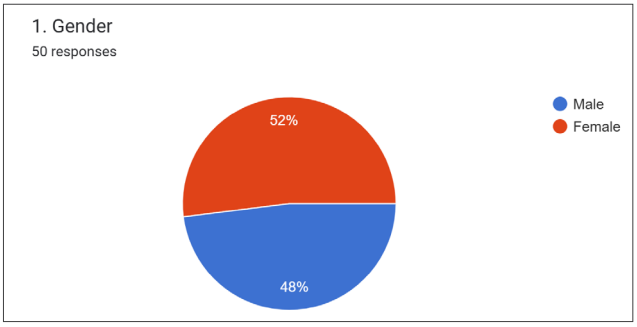
AI has considerable benefits by delivering efficiency, productivity, and user experience advancements across multiple industries. But it also raises significant dangers: workers being replaced, privacy breaches, ethical and anti-discriminatory challenges, and the potential for it to be weaponized in surveillance, misinformation, and economic exploitation. The only way to reap the rewards from AI and minimize the downsides is through mindful regulation, transparency, and ethics.

Uses and Abuses of AI

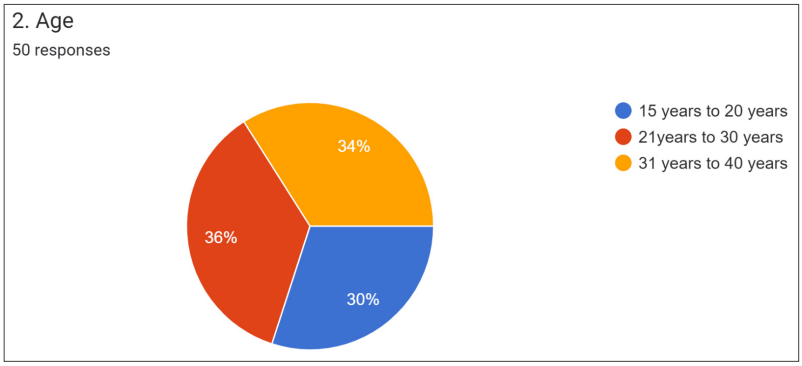
PART (I)

Please answer all of the questions by circling the appropriate ones.

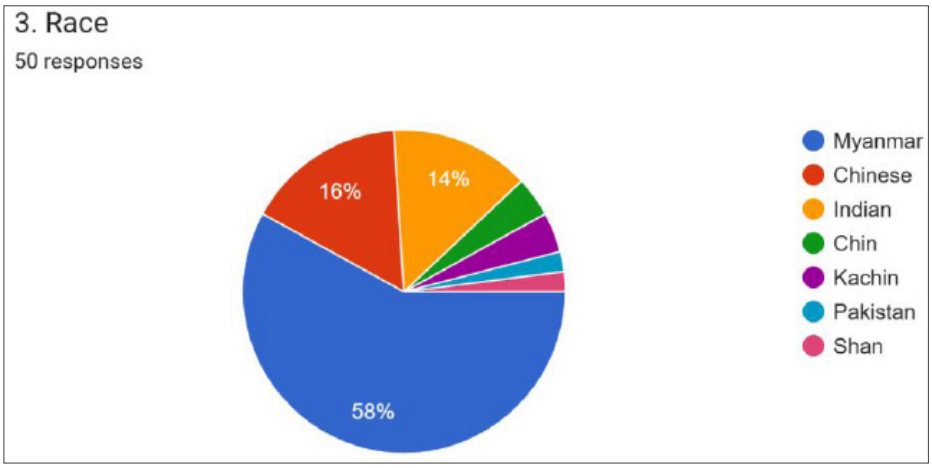
Please select only one option that best describes you.



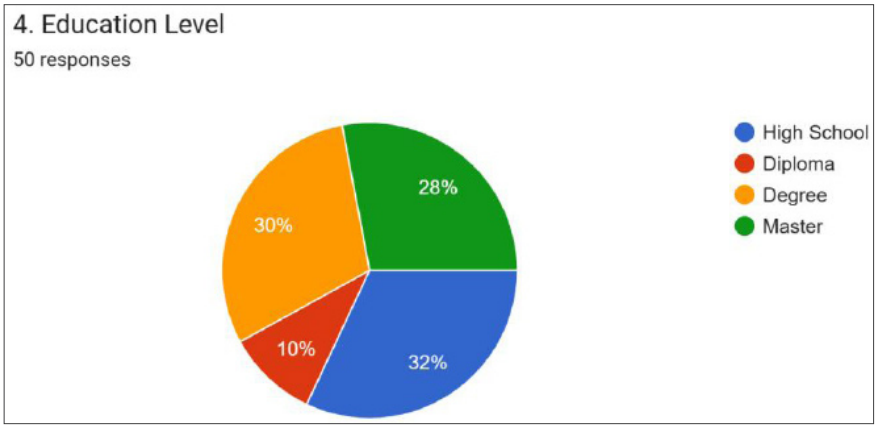
Respondents Gender Identity



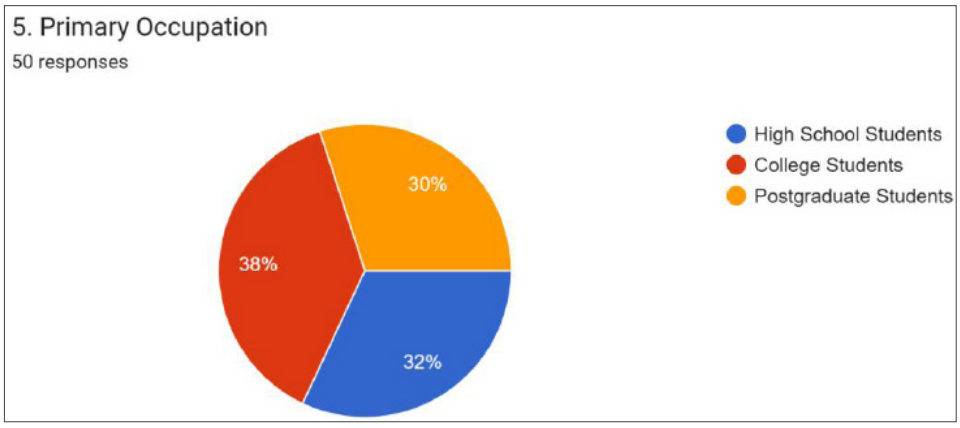
Respondents Age Distribution



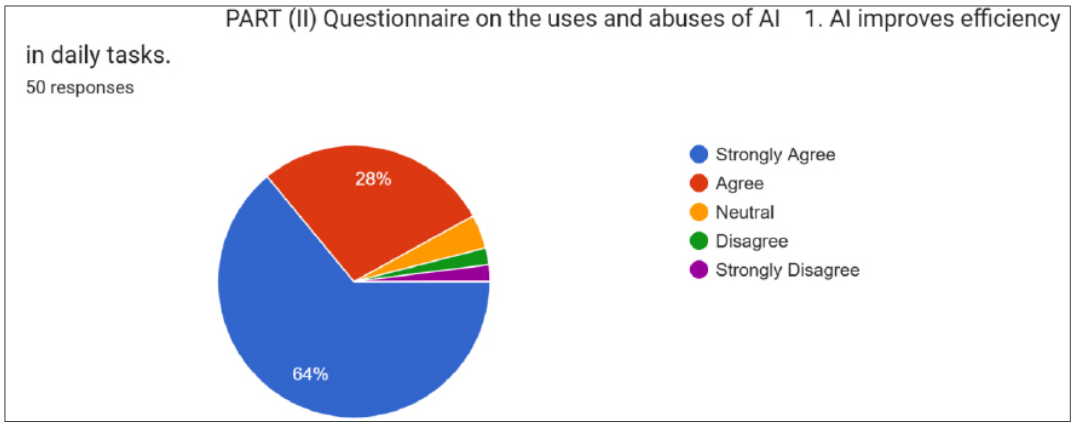
Respondents Ethnicity



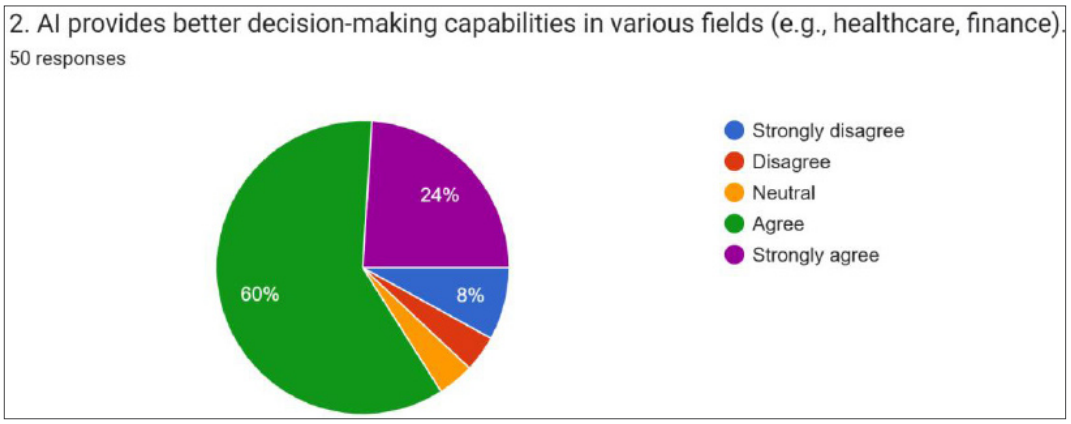
Respondents Qualification



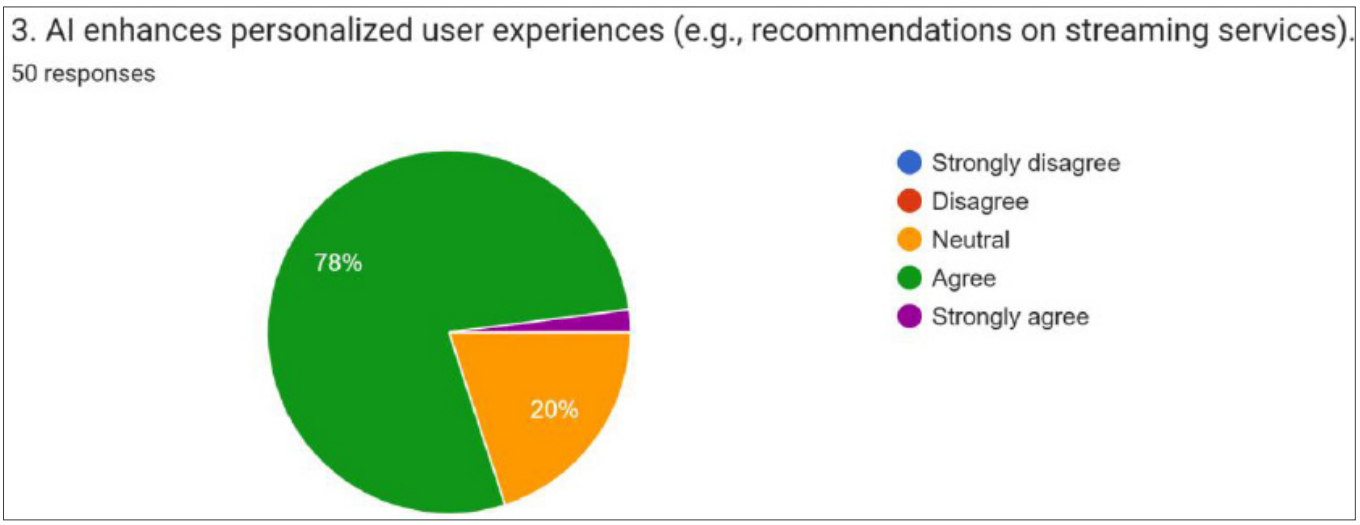
Respondents Profession



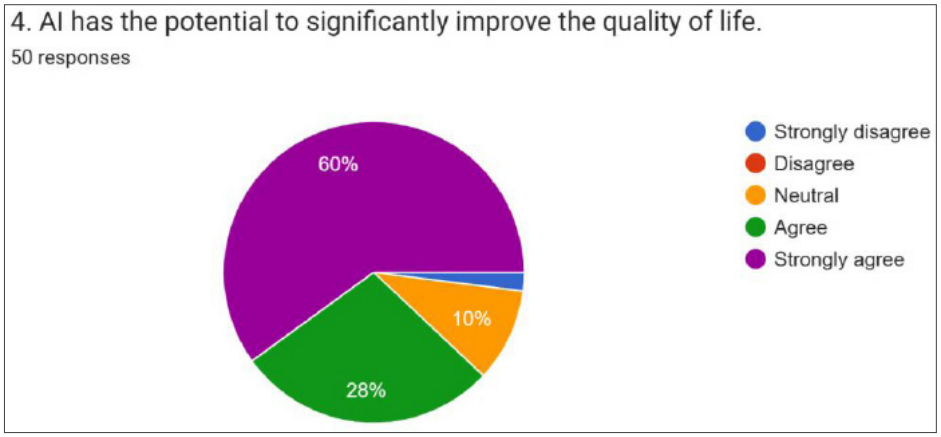
Efficiency in Daily Tasks



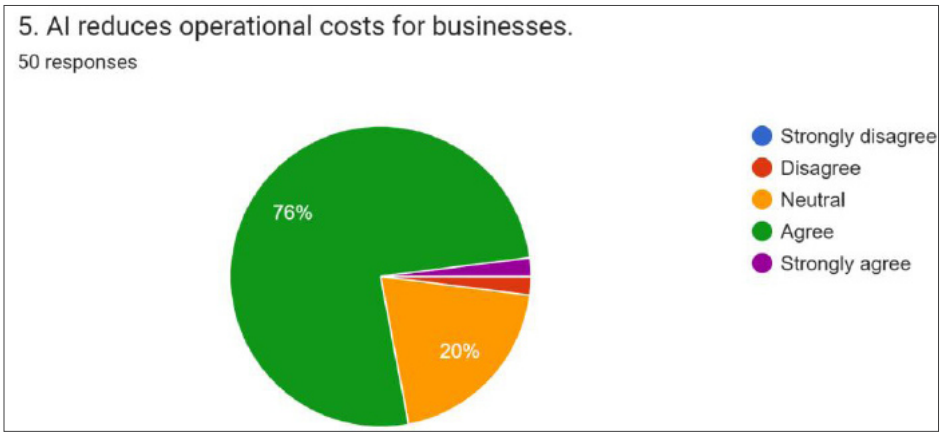
Decision-Making Capabilities



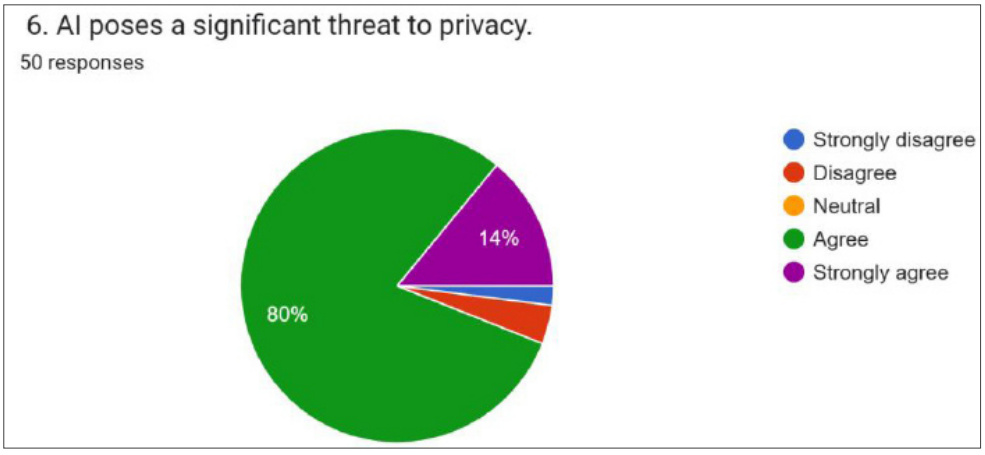
Personalized User Experiences



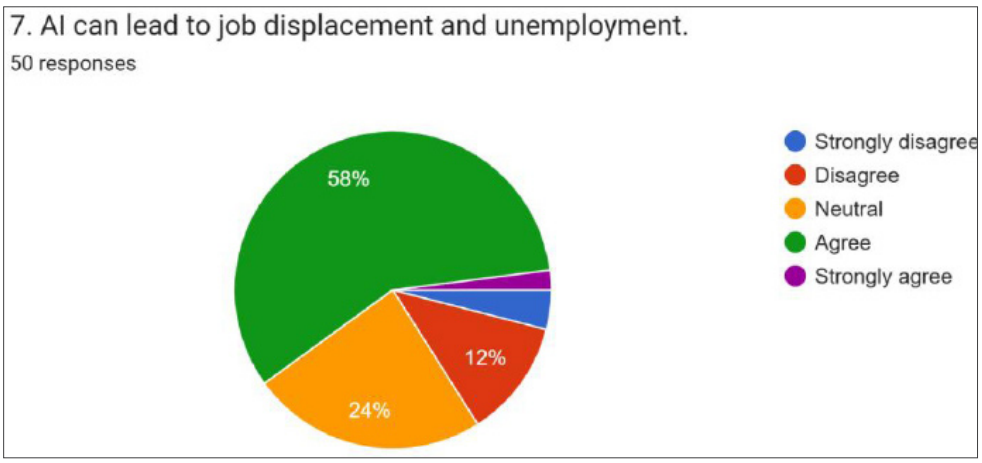
Quality of Life



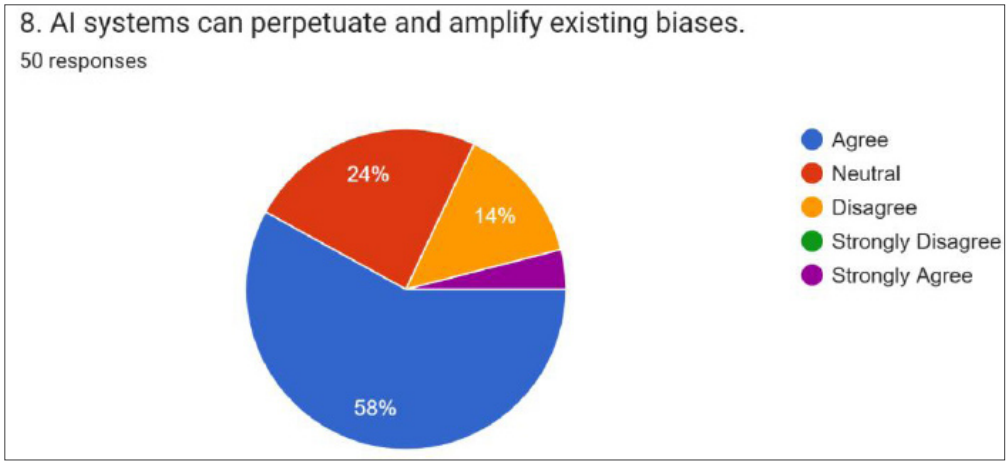
Operational Costs for Businesses



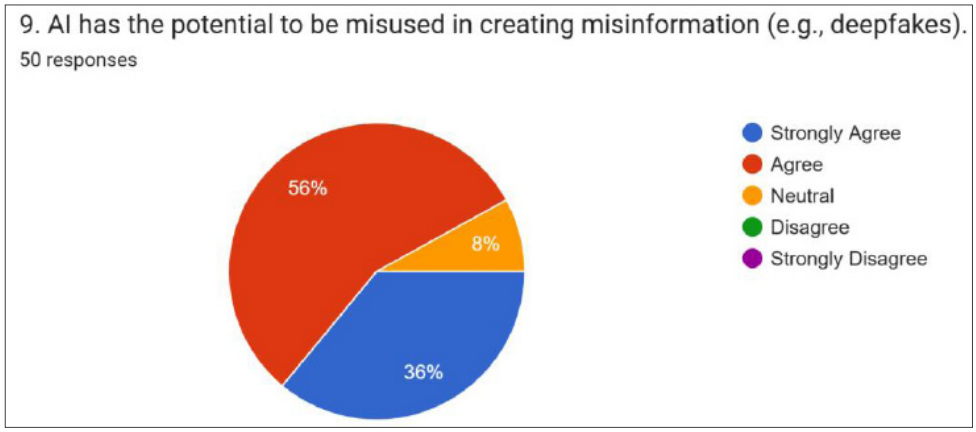
Threat to Privacy



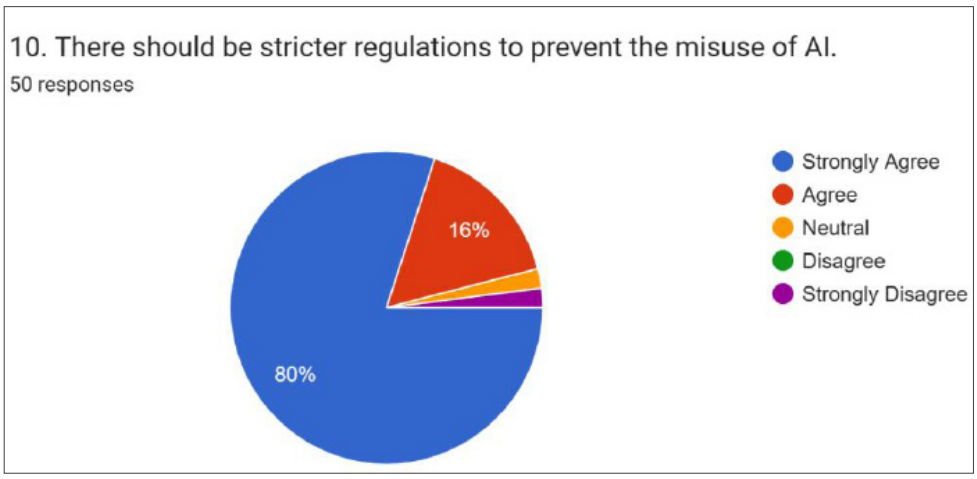
Job Displacement



Biases in AI System



Misinformation



Stricter Regualtion

Application of Quantitative Research Method

I used the quantitative research method in this research that provides opportunities to precisely measure and analyze the data and find relationships and patterns between variables. This data was gathered online from a random sample of 50 participants to ensure that the findings are representative and statistically valid. The participants were male and female Myanmar students of different ethnicities, including Chinese, Indian, and others, ranging from 15 to 40 years old. Educational backgrounds varied from high school to master's level education.

Findings

1. Efficiency in Daily Tasks: 92% of individuals share that AI makes day-to-day tasks quicker.

2. Decision-Making Capabilities: 94% of participants believe that making decisions with AI in different industries (like healthcare, finance, etc.) makes more sense.

3. Personalized User Experiences: Approximately 80% of the participants agree that AI improves personalized user experience, such as recommendations on streaming services.

4. Quality of Life: 88% of people believe that AI can

significantly improve the quality of life.

5. Operational Costs for Businesses: Almost 78% of the participants are in favor of AI reducing operational costs for businesses.

6. Privacy Threat: 94% of participants agreed that AI has created a severe threat to privacy.

7. Job Displacement: 60% of the participants were of the opinion that AI would create job losses and unemployment.

8. Bias in AI Systems: Around 85% of the respondents agreed that AI systems can be biased and can amplify existing biases.

9. Misinformation: 92% of participants affirm that AI can be used to create misinformation, like deepfakes.

10. Stricter Regulations: 96% of participants feel that strict regulations should be implemented to prevent the misuse of AI.

Results

According to the survey results, the majority found that AI has mixed results, both positive and negative. As a tool, AI is recognized for freeing up time, enabling better decisions based on data, and fostering a higher quality of life, but significant concerns have arisen regarding privacy, job loss, bias, and disinformation. Perhaps most significantly, there is broad agreement that tighter restrictions are needed on how AI is used.

Graphical Representation

The question numbers 1-10 and the data percentages are shown below.

(1) Efficiency in Daily Tasks: 92%

(2) Decision-Making Capabilities: 94%

(3) Personalized User Experiences: 80%

(4) Quality of Life: 88%

(5) Operational Costs for Businesses: 78%

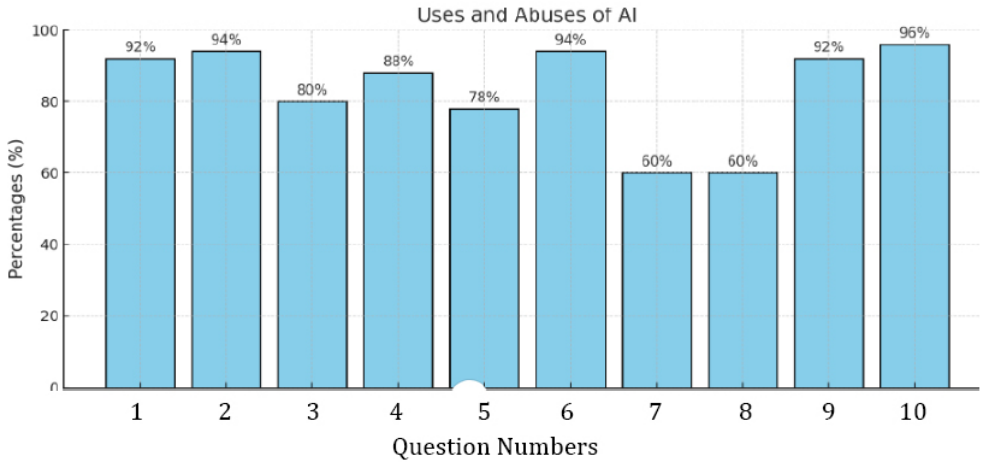
(6) Privacy Threat: 94%

(7) Job Displacement: 60%

(8) Bias in AI Systems: 60%

(9) Misinformation: 92%

(10) Stricter Regulations: 96%



Conclusion on Uses and Abuses of AI

According to the research, AI is best appreciated when used to simplify daily tasks and improve user experiences by aiding decisions. It is considered a positive attribute in most areas of life. For about 92% of respondents, the benefits are recognized, such as the increased efficiency introduced by AI, and 94% of participants endorse AI's ability to make decisions. Moreover, 88% agree AI has the potential to greatly enhance the quality of life, demonstrating a widespread belief that AI will have a net positive effect on society.

However, the results also reflect significant concern about the negative effects of AI. A whopping 94% say AI threatens privacy, while roughly 60% are concerned about job replacement and AI systems amplifying biases. Moreover, 92% are worried that AI could be misused to generate misinformation, and 96% think more regulations are needed to prevent such abuses. These results suggest a high level of awareness related to the ethical and social challenges introduced by AI technologies.

Although these insights are very useful, the research has limitations due to the small sample size (50 respondents) and homogeneity (all respondents were students from Myanmar). As such, this subgroup may not accurately reflect the broader opinions and experiences in the population at large. However, additional research involving a broader and more diverse sample of participants, both in Myanmar and internationally, might provide key insights into the nuanced impacts that AI will have in practice. A

more expansive study might underscore a wider variety of benefits and risks, and come to richer and more actionable conclusions about the uses and abuses of AI.

My Opinion on the Uses and Misuses of AI

AI Uses: I actually think that AI has a lot of useful applications in our everyday life. It stands to improve productivity in many fields such as healthcare, finance, and transport. A good example of that would be an AI-based diagnostic system that can assist doctors in early-stage disease detection for better patient outcomes. Virtual assistants like Siri and Alexa make life easier for us by helping our daily routines. Outside functional applications, AI is embedded into the entertainment industry as well—generating personalized movie and song recommendations to enrich our leisure experience.

AI Misuse: While these are great benefits, there are many huge concerns regarding AI misuse. Privacy is another issue since AI-based surveillance can infringe on individual rights. AI can also carry bias, if trained on biased data, creating unfair treatment in hiring or law enforcement. There are generative models capable of producing deepfakes and similar AI-generated content for the purpose of subverting public opinion and undermining the fabric of society.

Recommendations: In order to maximize the benefits of AI while minimizing its risks, I make the following recommendations:

1. **Regulation**: Enact safe policies to extend the ethics of AI to the industry and protect sensitive user data.
2. **Transparency**: Expanding AI algorithms' transparency to minimize biases as well as enhance public trust.
3. **Education**: Invest in education and training programs to ensure that the workforce is equipped with the skills necessary in an AI-driven world.
4. **Ethics**: Ethics is a big area, especially in sensitive sectors like healthcare and law enforcement.

Thoughts on the Future: I do believe that in the future, AI will be even more incorporated into our lives. At the very least, there are good arguments for responsible AI, given the various effects it can have on human society. This will demand coordination at all levels—of government, technology companies, and academia—to define the best way forward to an AI-enabled future that best serves, and not imperils, the public. By concentrating on responsible AI development and deployment, we can achieve the fullest potential of AI for livelihoods and, more generally, addressing global challenges. Now, let's make sure AI is for humanity, not against it.

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