วารสารราชภัฏเพชรบูรณ์สาร ปีที่ 27 ฉบับที่ 2 กรกฎาคม – ธันวาคม 2568

ข้อเสนอแนะที่เป็นไปได้สำหรับการทดแทนงานโดยปัญญาประดิษฐ์
Potential Solutions for Job Displacement by Artificial Intelligence

เถ็ด ออง ไว[1], ไรอัน ไวลีย์[2] และเกวลิน แท่นทอง[1*]
Htet Aung Wai[1], Ryan Wiley[2] and Kewarin Tantong[1*]
[1]คณะบริหารธุรกิจและเทคโนโลยี มหาวิทยาลัยนานาชาติแสตมฟอร์ด
[2]คณะนิเทศศาสตร์และการออกแบบ มหาวิทยาลัยนานาชาติแสตมฟอร์ด
[1]Faculty of Business and Technology, Stamford International University
[2]Faculty of Communication Arts and Design, Stamford International University
*Corresponding author E-mail: kewarin.tantong@stamford.edu
Received: April 29, 2025; **Revised:** December 24, 2025; **Accepted:** December 29, 2025

บทคัดย่อ

การเกิดขึ้นและการนำปัญญาประดิษฐ์มาใช้ในหลากหลายอุตสาหกรรมได้ก่อให้เกิดความกังวลเกี่ยวกับการถูกแทนที่และบทบาทในอนาคตของมนุษย์ในตลาดแรงงาน บทความนี้ได้ศึกษาโดยการทบทวนวรรณกรรมเชิงบรรยายเกี่ยวกับมาตรการหรือแนวทางเชิงนโยบายที่เป็นไปได้ที่จะสามารถลดปัญหาการทดแทนงานที่เกิดจากปัญญาประดิษฐ์ ได้แก่ การแทรกแซงของรัฐบาล การปรับตัวของแรงงาน และการต่อต้านของสาธารณชนต่อปัญญาประดิษฐ์ จากการทบทวนวรรณกรรมพบว่ารัฐบาลสามารถจัดการกับการทดแทนงานที่เกิดจากปัญญาประดิษฐ์ได้โดยการใช้นโยบายการจัดเก็บภาษีปัญญาประดิษฐ์ การพัฒนาเครือข่ายความปลอดภัยทางสังคมสำหรับแรงงานที่ถูกทดแทน และการปรับปรุงระบบการศึกษา นอกจากนี้ยังพบว่าประชาชนสามารถปรับตัวเข้ากับปัญญาประดิษฐ์ผ่านการเรียนรู้ตลอดชีวิต ด้วยการพัฒนากรอบความคิดแบบเติบโต รวมทั้งการเพิ่มความรู้ความเข้าใจเกี่ยวกับกับปัญญาประดิษฐ์ให้มากขึ้น และการต่อต้านปัญญาประดิษฐ์ของสาธารณชนถือเป็นกลไกสำคัญในการติดตามและตอบสนองต่อบริษัทที่ขาดจริยธรรม ทำให้บริษัทมีความรับผิดชอบมากขึ้นเมื่อใช้ปัญญาประดิษฐ์และช่วยเสริมสร้างนโยบายเพื่อปกป้องพนักงาน จากผลการศึกษานี้ เห็นได้ชัดว่าหน่วยงานภาครัฐควรออกแบบและดำเนินนโยบายเพื่อป้องกันการถูกแทนที่ของกำลังแรงงานอันเกิดจากการนำปัญญาประดิษฐ์มาใช้ นโยบายดังกล่าวควรสนับสนุนให้บริษัทพัฒนาแนวปฏิบัติด้านปัญญาประดิษฐ์อย่างมีจริยธรรมและยั่งยืน พร้อมทั้งจัดหาโอกาสในการฝึกอบรมและพัฒนาทักษะใหม่ให้แก่พนักงาน

คำสำคัญ: ปัญญาประดิษฐ์ การแทรกแซงของรัฐบาล การปรับตัวของแรงงาน การต่อต้านของสาธารณชน แรงงาน

Abstract

The emergence and rapid adoption of artificial intelligence (AI) across industries has raised concerns about workplace displacement and the future role of humans in the workforce. To address these concerns, the efficacy of potential solutions for job displacement caused by AI were examined, focusing on government intervention, workforce adaptation, and public resistance to AI. A narrative review of literature showed that governments could address job displacement caused by AI by implementing an AI taxation policy, by developing social safety nets for displaced workers, and by updating education systems. The literature also showed that workforce members could also be an important part of the solution by purposefully adapting to AI through lifelong learning, by developing a growth mindset, and by becoming more familiar with AI. Finally, public resistance

to AI was found to be a valuable strategy for monitoring and responding to unethical companies, making them more accountable when using AI, and for strengthening policies to protect employees. Based on this evidence, it is clear that government agencies should design and implement policies to prevent workforce displacement caused by AI implementation. Such policies should pressure companies to develop fair and sustainable AI practices and provide opportunities for employee retraining.

Keywords: Artificial Intelligence, Government Intervention, Workforce Adaptation, Public Resistance, Workforce

Introduction

According to a McKinsey Global Institute report, approximately 800 million workers are at risk of being displaced by Artificial Intelligence and automation by 2030 (Faishal et al., 2023). If this statistic becomes a reality, it could lead to a global crisis due to widespread AI induced unemployment (Barrera, 2009)—and this is not just a far-fetched possibility. Instead, it is quite likely to happen because artificial intelligence is improving at astounding rates and can already perform many of the traditional tasks that require human intelligence (Shrivastava et al., 2024).

In fact, business leaders are rapidly recognizing the benefits of AI and increasingly replacing human workers with machine intelligence (De Cremer, 2022), causing further concern about the potential for widespread job displacement and the consequences that will follow it. With millions of jobs at risk, those consequences will include significant economic and social challenges. To combat this breakdown of our economic and social systems, the development and implementation of solutions for AI- driven job displacement is crucial.

Artificial Intelligence (AI) is technology that enables computers to make decisions and solve problems in a way that resembles human intelligence. These AI systems can perform a wide range of tasks, with some of the most significant core competencies being natural language processing, data analysis, machine learning, and deep learning (Shrivastava et al., 2024).

The development of artificial intelligence (AI) is credited to many key figures. The most significant contributor to the foundation of AI, however, is Alan Turing, a British mathematician and logician (Teuscher, 2012). He is also often considered to be the father of modern computer science, and he created the Turing Test, a method to determine whether machines can have intelligence similar to that of humans (Gonçalves, 2023).

As mentioned, many business leaders have recognized AI's potential and are increasingly replacing human workers with machines. This move to a computer and robotic run workforce is not new, however. In fact, one of the earliest and most significant examples of machines taking human jobs took place at General Motors (GM), which began implementing robots in its automotive manufacturing processes in 1961. GM's move to automation enhanced efficiency, reduced costs, and improved precision (Wallén, 2008). Specifically, these robots were employed in welding, painting, and assembly, and they performed these tasks more quickly and accurately than human workers.

While AI and robots have been exceling in the production and manufacturing sectors for quite some time, they are also becoming increasingly prevalent in customer service roles through systems like chatbots and virtual assistants. It's not just these low and mid-range manufacturing and customer service jobs that are at risk, though. High-skill, white-collar professions are also at risk, as AI can now perform complex tasks even in the medical and legal fields. For example, AI is currently being used to provide medical diagnostics, and it has higher accuracy and performance than human doctors when giving treatment recommendations (Siregar, 2023). In law, AI performs well in document reviews and predicting outcomes (Srivastava et al., 2023). In time, it is likely that a wide range of industries that rely on human intelligence or interaction will be affected by AI, automation, and robotics.

The primary purpose of this narrative review was to show how the rapid advancement of AI has the potential to cause job displacement and unemployment and to explore potential solutions that could mitigate these effects. This was achieved by analyzing government intervention strategies, exploring public adaptation measures, and examining the role of public resistance in regulating AI and its impact on employment.

Methodology

This study employed a narrative literature review methodology to explore potential solutions to job displacement caused by artificial intelligence. A narrative approach was selected because it allows for a broad, integrative examination of diverse theoretical perspectives, research findings, and policy discussions related to AI, employment, and potential labor market changes. The refined review focused on a clear and limited scope of key issues and potential solutions to them.

Academic sources were identified through searches of major scholarly databases, including Google Scholar, Scopus, EBSCO, and SciSpace. Keywords used in the search process included artificial intelligence, job displacement, automation, labor markets, government intervention, workforce adaptation, and public resistance. Priority was given to peer-reviewed journal articles and reputable policy reports published within the last ten years, although some earlier works were included where necessary.

The selected literature was analyzed thematically and organized into three main categories: government intervention, public adaptation, and public resistance to AI. Through comparative reading and synthesis, recurring arguments, policy recommendations, and points of consensus or tension were identified. This qualitative synthesis provided the analytical foundation for discussing practical and ethical strategies to mitigate AI-driven job displacement.

Government Intervention

As AI technologies advance and continue to make human workers less valuable, developing strategies to adapt to future job markets will become increasingly important. This macro-economic issue will likely require public policy changes and legal enforcement, which means governments will play a key role in safeguarding job markets.

Robot Taxation Policy

One possible government solution for job displacement caused by AI is the implementation of a robot taxation policy that collects fees from companies that replace humans with robots (Kovavev, 2020). Kovacev (2020), argues that this policy is fair because companies that do so enjoy the financial benefits of reduced labor costs and increased productivity at the cost of worker's rights. As such, revenue from an AI tax should be collected and used to fund retraining programs for workers displaced by automation, as well as social welfare initiatives to support those affected by job losses (Kovacev, 2020). In addition to providing aid to displaced workers, a system that disincentivizes the use of robots may also limit the overabundant use of non-human employees in the first place (Adhikari et al., 2024; Marku, 2024; Saidakhror, 2024; Tiwari, 2023).

By ensuring a balance between human labor and machine efficiency, a government AI taxation policy would aim to preserve jobs whenever feasible, thus fostering a more equitable economy while still advancing technological progress (Adhikari et al., 2024; Ibegbulam et al., 2023; Saidakhror, 2024). On the other hand, over taxation has the potential to slow economic growth, meaning business needs must be taken into consideration when policies are created.

Social Safety Nets

Another potential solution for addressing job displacement caused by artificial intelligence involves strengthening social safety nets provided by governments. Social safety nets for job displacement refer to programs and systems designed to support workers who have lost their jobs due to automation, AI, economic downturns, or corporate restructuring. The primary goal of these safety nets is to offer financial stability and help displaced workers reintegrate into the workforce, which is necessary to safeguard the fragile mental health of people in our communities. For example, individuals aged 45 and older who had lost their jobs experienced notable rises in depressive symptoms, this according to data from the Korean Longitudinal Study of Aging (KLoSA) which was carried out between 2006 and 2012 (Kim et al., 2018). Those individuals with access to unemployment insurance and national pension systems demonstrated smaller increases in depression, indicating that social safety nets can help mitigate the mental health challenges linked to job loss (Kim et al., 2018). In addition to general mental health, more tangible challenges such as financial difficulties can arise, the negative consequences of which may include a sharp increase in bankruptcies and even homelessness. Assistance from social safety nets can soften these financial blows, enabling displaced workers to uphold some degree of financial security while they are unemployed (Bessen, 2018).

As unemployment due to AI continues to pose a significant threat to the global workforce, the consequences of which are not fully understood, it would be prudent for governments and authorities to prepare by strengthening social safety nets, ensuring that displaced workers receive the necessary financial support and resources to navigate this transition and reenter the workforce in a new way.

Updating Education Systems

Another way governments can mitigate the effects of AI on the job market is to update current education systems. Zhao (2023) argued that "a relatively more effective solution to the negative impact of AI on employment is the long-term reframing of education" (p.2). In his analysis,

he explored the jobs most susceptible to replacement by AI, highlighting sectors such as manufacturing and data entry while also noting that roles in creative fields and personal services are less vulnerable to automation. Zhao (2023) emphasized the urgent need for restructuring educational systems to include technical skills, critical thinking, and creativity, which are essential for both current and future job markets (Saidakhror, 2024). This claim is supported in another study by Peoples (2025), which showed that LLMs are limited by brief responses lacking detail, an inability to commit to answers, false confidence, and hallucinations, highlighting the need for critical thinking skills in future lawyers and the potential pitfalls of over-reliance on artificial intelligence. This perspective aligned with McAfee and Brynjolfsson's (2017) assertion that technological advancements necessitate reevaluating educational frameworks and training programs to better prepare workers for an evolving job landscape.

By investing in educational reforms, governments can facilitate a smoother transition for workers, ensuring they acquire the necessary skills for future job opportunities and can adapt effectively to the transformations brought about by AI (Adhikari et al., 2024; Saidakhror, 2024). Furthermore, such initiatives could help individuals secure employment and drive overall economic growth by fostering a more skilled workforce.

Public Adaptation

While governments can help mitigate the effects of AI on the workforce in the short term, society will eventually have to adapt to a world where AI is permanently prevalent in the workforce--and other parts of our lives. This section argues that long-term workforce disruption resulting from AI can be mitigated through public adaptation grounded in continuous learning, mindset transformation, and enhanced AI awareness.

Continuous Learning & Upskilling

The first way the public can adapt to the presence of AI in the workplace is by accepting that continuous, life-long learning is now an essential part of modern life (James et al., 2023; Pedota et al., 2023). This is due to the fact that we are moving into what is called the fourth industrial revolution (4IR) (Rikala et al., 2024). This revolution is characterized by artificial intelligence, big data, cloud computing, and fast moving, rapidly changing technology (Zirar et al., 2023). In order to remain relevant in the workforce during this increasingly AI-driven world, continuous learning and upskilling will be an essential part of professional life (Wang & Lu, 2025). Employees will need to enhance their existing skills and develop new technological competencies that not only save their jobs but unlock further potential (Rikala et al., 2024; Zirar et al., 2023). As technology reshapes industries, individuals who commit to lifelong learning will be better positioned to adapt and remain competitive in a constantly transforming job market (Bănescu et al., 2023). Individuals who do not participate in continuous learning face an increased risk of marginalization within an AI-driven labor market. This view is aligned with Autor (2015), who argued that lifelong learning equips employees with the flexibility to navigate the dynamic changes caused by technological advancements, particularly AI, thereby reducing the risk of job displacement. In other words, rather than viewing technological progress as a threat, employees who continually invest in their education can view AI and other technical advancements as a tool that complements their

expertise, which may not only protect their jobs, but also provide opportunities for career advancement and increased earning potential (Ekuma, 2023; Jaiswal et al., 2023). Hence, committing to ongoing education and lifelong learning is among the most successful approaches to mitigating AI's potential adverse effects on employment, especially in a job market where adaptability and learning agility are highly valued. Of course, such a commitment requires funds, time, and access to the most modern technology. As such, it may disproportionately burden workers with limited finances, time, or equal access to AI programs, highlighting the necessity of having a multi-pronged approached that includes personal responsibility for continuous learning supported by both governments and businesses.

Adopting a Growth Mindset

The second way the public can adapt to the presence of AI in the workplace is by adopting a growth mindset- the belief that personal capacities can expand with effort and learning rather than being fixed limits (Dweck & Yeager, 2019). A growth mindset frames intelligence, success, and skills as qualities that are strengthened through discipline, dedication and hard work, not as attributes bestowed by fate or chance (Dweck & Yeager, 2019; Krskova & Breyer, 2023). Cultivating this outlook helps employees view technological disruption as an opportunity for development, thereby improving their readiness to navigate and rebound from the continual change that Industry 4.0 and artificial intelligence bring to the workplace (Höyng & Lau, 2023; Krskova & Breyer, 2023)
In addition, like lifelong learning and upskilling, a growth mindset will allow individuals to view AI not as a threat, but as a tool for personal and professional growth. Farrow's (2021) research highlighted the critical role that one's perspective, whether fixed or growth-oriented, plays in adapting to disruptions such as job displacement caused by AI. A growth mindset, which encourages individuals to embrace challenges and see failures as opportunities for learning, is essential for developing adaptability and "future literacy" in an AI-driven world (Farrow, 2021). If society can collectively accept and embrace AI, the collaboration between humans and AI should thrive, allowing for smoother transitions and adaptations in the workforce. To foster this type of mindset, the public needs to get informed about the positive ways in which AI can improve our lives. This acceptance and awareness should enable workers to anticipate future changes and allow them to function productively without being afraid of them. Instead, they may welcome them, embracing a probable future where people and technologies will come together to form more sustainable and human-centered forms of work (Böhmer & Schinnenburg, 2023; Capinding & Dumayas, 2024).

Promoting AI Awareness

The final way the public can adapt to the presence of AI in the workplace is by promoting awareness of what it is, how it is being used, and what potential benefits we can get from it. This will involve actively engaging the public in meaningful discussions about AI's societal impact. This can be achieved through community forums, debates, and participatory design processes, where citizens are encouraged to contribute to shaping AI's future (Zidaru et al., 2021). Public engagement in these discussions allows policymakers and businesses to gather valuable insights into AI-related concerns, particularly its effects on employment (Robles & Mallinson, 2025). Communities often hold diverse perspectives on how AI might influence their jobs, which can guide the development of more inclusive and adaptable solutions (Mishra, 2024). Research by Brynjolfsson and McAfee

(2014) further emphasized that public involvement in AI discussions is essential for informing policy and shaping public acceptance of AI technologies. By involving citizens in decision-making processes, policymakers could more effectively address concerns like job displacement and develop strategies such as reskilling and workforce adaptation (Banerjee et al., 2022). This collaborative approach should create a more inclusive economic environment, ensuring that a wide range of solutions and perspectives on AI's integration into the workforce are considered.

Public Resistance to AI

While governments and individuals can and should prepare diligently to thrive in workplaces dominated by AI, sometimes resistance to emerging technologies is necessary. This is not a new phenomenon, as governments, local communities, and individuals have a long history of clashing with industries, such as polluting plastic companies, damaging oil industries, and unfair textile industries.

Public Resistance as a Check on Unethical AI Use

The first way public resistance can address the negative effects of AI in the workplace is by curbing unethical AI use, thereby pressuring organizations to develop and deploy AI responsibly—especially where job displacement is at stake (Höyng & Lau, 2023). This strategy shows promise because when communities push back against harmful or unethical projects, they inherently advocate for practices that protect societal well-being. For example, in Chile, local groups have opposed projects like the Google data center lithium extraction on Indigenous lands, challenging decisions by corporations and governments that threaten community values and environmental sustainability (Kopka & Grashof, 2022). These actions help ensure that AI technologies align with social and ecological needs. O'neil (2017) stressed the importance of public oversight to hold companies accountable when using AI to prevent deepening social inequalities. She called for transparency and public involvement to ensure ethical AI use and to prevent worsening job losses and/or increasing inequalities (O'neil, 2017). It also pressures both businesses and governments to adopt fair practices, like offering retraining programs and protecting workers' rights. When public opposition gains momentum, even governments can be forced to respond to the growing demand for action. In this way, public activism is a key factor in preventing unethical uses of AI, ensuring it's used in ways that protect both workers and communities while promoting sustainable development (Ampofo et al., 2023; Liu, 2024).

Corporate Accountability through Public Pressure

Furthermore, public pressure can be a powerful force in holding companies accountable when they consider replacing human workers with AI. This is because as public opposition grows, companies may feel compelled to reconsider their strategies to better align with social values and expectations (Sahoh & Choksuriwong, 2023). This pressure can push businesses to adopt more socially responsible practices, such as offering reskilling opportunities for employees who might otherwise be displaced by automation. In doing so, companies can demonstrate a commitment to ethical practices, ensuring that workers are not left behind as AI becomes more integrated into operations.

In addition, forced accountability through public pressure may encourage companies to think of AI as a tool to enhance human labor rather than replace it entirely. For example, instead of companies using AI to eliminate jobs, they may use it to support workers by improving productivity and reducing repetitive tasks. This approach would not only preserve jobs, but would also allow employees to focus on the more creative and complex aspects of their roles. Finally, by appropriately responding to publicly forced accountability, businesses may be inclined to prioritize the ethical deployment of AI that balances technological progress with protecting the workforce (Susskind & Susskind, 2022), a position they may be able to use to distinguish themselves from competitors and improve positions in their respective markets, which is their ultimate goal. Speaking with their minds and wallets, it will be the general public who applies pressure that ensures companies' AI strategies align with broader ethical standards and societal expectations (Gao et al., 2020; Yigitcanlar et al., 2024).

Public Pressure to Strengthen AI Deployment Regulations

The final way to address the issue of unemployment caused by AI is to apply pressure on elected officials. When the public believes that AI deployment could lead to job losses or unfair treatment in the workplace, they can call for regulations that protect employment rights and ensure fair employment practices (Kuziemski & Misuraca, 2020). If enough public pressure is applied, policymakers may be forced to act, resulting in regulations that require businesses to consider the broader societal impacts of AI deployment. This perspective is supported by Bessen (2018), who emphasized that public concern and advocacy can drive more stringent regulatory frameworks that address the ethical implications of AI and protect workers' rights. The public's ability to mobilize and advocate for ethical AI practices is crucial in pushing for policies that prevent the negative consequences of automation, such as job displacement or exploitation. While this strategy will be an uphill battle due to the influence large corporations have on politicians, some success can be had, which may result in new favorable policies that lead to more and more favorable policies in the future. Even if efforts are not fruitful in the beginning, persistent job losses and/or unfair treatment should further encourage the public to come together, which can lead to more collaborative efforts to implement stricter regulations for AI deployment (Stahl et al., 2022). Public pressure, therefore, should be a powerful mechanism for strengthening AI deployment regulations.

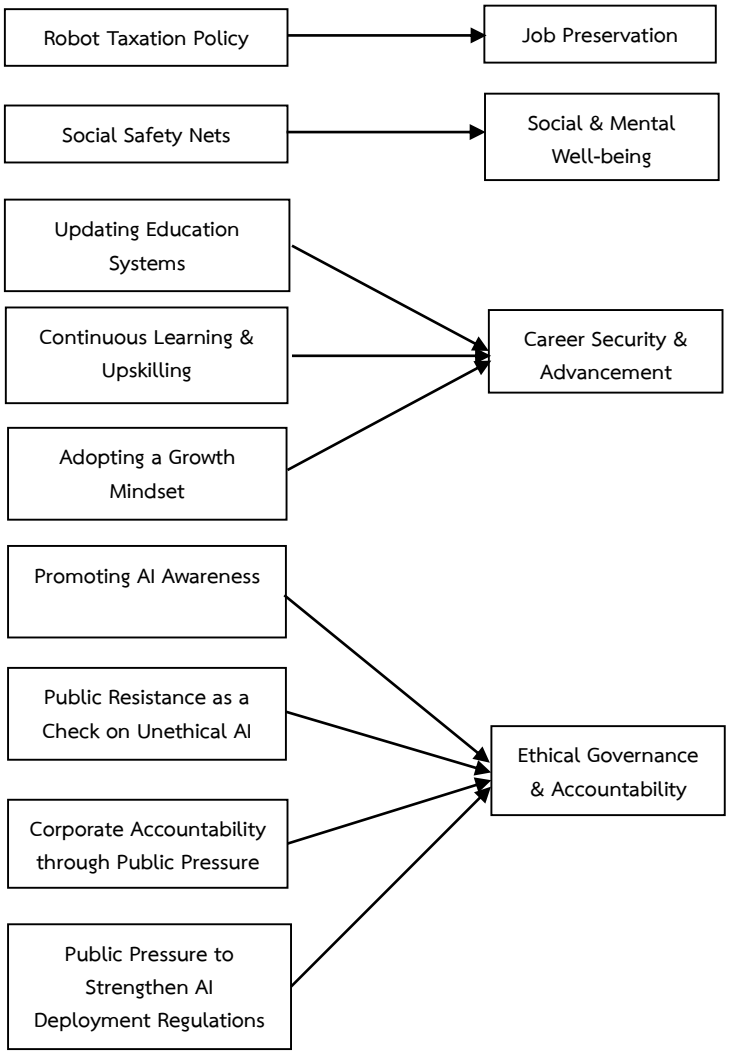

Figure 1 AI Mitigation Strategies and Key Societal Outcomes

In conclusion, figure 1 shows the strategic alignment between the proposed mitigation measures and their intended positive outcomes. On the policy level, it illustrates how robot taxation policies directly support job preservation by balancing labor costs, while social safety nets are linked to maintaining social & mental well-being, specifically addressing the psychological impacts of displacement.

Regarding workforce development, the framework demonstrates that a combination of updating education systems, continuous learning, and adopting a growth mindset converges to foster career security & advancement, ensuring workers remain relevant. Finally, the diagram illustrates how civic engagement, encompassing efforts to promote AI awareness, public resistance, and corporate accountability, collectively drives ethical governance & accountability, ensuring that AI adoption is regulated and socially responsible.

Discussion

Artificial intelligence (AI) is evolving at a rapid pace, bringing both positive and negative impacts. While it can significantly improve daily activities, AI also poses a serious threat to the job market, with many roles at risk of being replaced by machines. This research explored potential solutions to job displacement caused by AI, which are outlined in the chart below.

Table 1 Summary of potential solutions to the job displacement caused by AI

Potential Solutions	Details	Benefits
1. Government Intervention		
1.1 Robot Taxation Policy	Tax companies that replace humans with AI programs and robots.	Preserves jobs. Provides funds for job retraining and transitioning into new fields.
1.2 Social Safety Nets	Create social safety nets (early retirement programs, job training programs, additional unemployment benefits for AI-related job displacement).	Provides financial help for basic needs for those displaced by AI. Reduces social problems stemming from depression, suicides caused by job losses.
1.3 Updating Education Systems	Shift school curricula focusing on technical skills, critical thinking, and creativity.	Prepares the next generation of workers to work with AI in a productive and beneficial way, instead of being displaced by it.
2. Public Adaptation		
2.1 Continuous Learning and Upskilling	Individuals accept and act on the necessity of continuous learning and upskilling.	Enables workers to stay relevant and secure in the workplace. Allows flexibility and reduces AI-related job displacement.
2.2 Adopting a Growth Mindset	Accepting AI and viewing it as a tool for personal and professional growth, as opposed to only viewing it as a threat.	Smoother transition to changes in the workforce. Can take full advantage of the benefits of AI.
2.3 Promote AI Awareness	Take part in meaningful discussions about AI using community forums, debates, participatory design process.	Helps develop AI adoption policies in a collaborative and inclusive way.

Potential Solutions	Details	Benefits
3. Public Resistance		
3.1 Public Resistance as a check on unethical use of AI	Social groups oppose and protest AI use and adoption, such as the production of large data centers and the extraction of natural resources used for AI.	Prevents social inequity, environmental damage, and unethical use of AI. Promotes fair practices.
3.2 Corporate accountability through public pressure	Use public pressure to compel corporate social responsibility.	Large, powerful corporations fund and help responsibility manage the transition to an AI driven workplace.
3.3 Public pressure to strengthen AI deployment Regulations	Use public pressure to force government to more strictly regulate AI's adoption and use.	Ensures that unregulated and socially harmful adoption of AI is avoided.

The first important solution is government intervention. Governments can introduce a robot taxation policy for companies using AI and robotics, which would help redistribute the economic benefits from automating the workforce. While this redistribution of resources would benefit employees, the possibility of stunting economic growth caused by imposing higher taxes cannot be ignored. In order for such a program to be a net benefit to society, a careful and deliberate balance between social advocacy and business growth must be struck. Additionally, authorities could implement robust social safety nets to support individuals affected by unemployment. The more robust these programs are, however, the more risk of employee complacency exists. In other words, the more funds handed out by the government, the less likely people may be to adapt to the changing labor market. Therefore, careful planning must ensure safety and security without encouraging complacency. In the longer term, governments can reform education systems to focus on retraining and equipping people with skills less vulnerable to AI replacement. Doing so should result in less reliance on increased taxation and social safety net programs over time. However, the success of such programs will depend on equitable access to training and technology across all levels of society, as limited availability and accessibility may result in greater economic and social divide. Public adaptation to AI is equally important; embracing continuous learning and upskilling will help workers remain competitive in an AI-dominated job market. However, many in the workforce may not understand or have access to new technologies, nor the resources necessary to study them in a meaningful way. In this light, it is clear that employees, companies and government agencies must work in coordination with each other to reskill and retrain—employees must be open to learning new things, but companies and public offices should guide their learning efforts. Furthermore, the public should serve as a line of defense by holding companies accountable for following AI regulations and pushing for more responsible use of AI through social and legal pressure. These ideas align with Brynjolfsson and McAfee's (2014)

suggestion of robot taxation to address inequality and Acemoglu and Restrepo's (2018) emphasis on educational reforms to retrain workers. The findings underscore the need for proactive policies to prevent large-scale unemployment and economic instability.

Conclusion

In order to mitigate the potentially devastating effects of AI on the job market, people must pay particular attention to policy development, social safety nets, and education reforms to ensure their effectiveness in an increasingly AI-driven world. Strong measures should be implemented to ensure compliance with these policies, and democratic mechanisms must play a central role in shaping AI-related labor policies. To prepare the workforce for an AI-dominated job market, employees must have access to affordable education and an increased awareness of AI's possible impact on future careers. At the same time, the public must unite to enforce regulations, ensuring companies follow the rules and economically punish those who do not. It is unrealistic to stop the development of artificial intelligence or entirely oppose its integration into our daily lives. It is here to stay, and it will inevitably shape both our personal lives and career paths. If we spend the time and energy now to ensure a smooth transition into a world dominated by AI, we can continue to live successful and fulfilling lives. If we fail to do so, we may end up living in a world characterized by poverty, misery, and possibly class warfare. The limitations of this study include a lack of analysis in regard to more specific aspects of what is a very large and complex global job market. For example, it may be very difficult to judge the efficacy of standardized and broadly defined government retraining programs in industry specific cases. In addition to industry specific differences, the global workforce is neither standardized nor equitable. While some regions have access to advanced AI technologies, others have limited or no access at all. In these cases, again, standardized solutions may not produce desired program results. Future research should focus on exploring the solutions presented in more specific contexts, including different regions of the world and more specific industries. Doing so will provide more specialized information that can help ensure the long-term effectiveness of strategies designed to ensure a smooth transition to an AI-driven future.

References

Acemoglu, D., & Restrepo, P. (2018). The race between man and machine: Implications of technology for growth, factor shares, and employment. *American Economic Review*, *108*(6), 1488-1542. https://doi.org/10.1257/aer.20160696

Adhikari, P., Hamal, P., & Jnr, F. B. (2024). Impact and regulations of AI on labor markets and employment in USA. *International Journal of Science and Research Archive*, *13*(1), 470-476. https://doi.org/10.30574/ijsra.2024.13.1.1670

Ampofo, J. W., Emery, C. V., & Ofori, I. N. (2023). Assessing the level of understanding (knowledge) and awareness of diagnostic imaging students in Ghana on artificial intelligence and its applications in medical imaging. *Radiology Research and Practice*, *2023*(1), 4704342. https://doi.org/10.1155/2023/4704342

Autor, D. H. (2015). Why are there still so many jobs? The history and future of workplace automation. *Journal of Economic Perspectives*, *29*(3), 3-30. https://doi.org/10.1257/jep.29.3.3

Banerjee, S., Alsop, P., Jones, L., & Cardinal, R. N. (2022). Patient and public involvement to build trust in artificial intelligence: A framework, tools, and case studies. *Patterns*, *3*(6), 100506. https://doi.org/10.1016/j.patter.2022.100506

Bănescu, C.-E., Titan, E., & Manea, D. I. (2023). Continuous learning: The solution to stay on digital labour market. *Management and Economics Review, 8*(2)*, 237-245.* https://doi.org/10.24818/mer/2023.06-08

Barrera, R. (2009). Crisis! jobless and small business: Danger and hope. *Proceedings of the 53rd Annual Meeting of the ISSS* (pp. 1-12). https://journals.isss.org/index.php/proceedings53rd/index

Bessen, J. (2018). *AI and jobs: The role of demand* (NBER Working Paper No. 24235). National Bureau of Economic Research. https://doi.org/10.3386/w24235

Böhmer, N., & Schinnenburg, H. (2023). Critical exploration of AI-driven HRM to build up organizational capabilities. *Employee Relations: The International Journal*, *45*(5), 1057-1082. https://doi.org/10.1108/er-04-2022-0202

Brynjolfsson, E., & McAfee, A. (2014). *The second machine age: Work, progress, and prosperity in a time of brilliant technologies*. WW Norton & Company.

Capinding, A. T., & Dumayas, F. T. (2024). Transformative pedagogy in the digital age: Unraveling the impact of artificial intelligence on higher education students. *Problems of Education in the 21st Century*, *82*(5), 630-657. https://doi.org/10.33225/pec/24.82.630

De Cremer, D. (2022). With AI entering organizations, responsible leadership may slip! *AI and Ethics*, *2*(1), 49-51. https://doi.org/10.1007/S43681-021-00094-9

Dweck, C. S., & Yeager, D. S. (2019). Mindsets: A view from two eras. *Perspectives on Psychological science*, *14*(3), 481-496. https://doi.org/10.1177/1745691618804166

Ekuma, K. (2023). *Rethinking Upskilling and Reskilling in the Age of AI and Automation: A fsQCA Approach.* Preprints. https://doi.org/10.20944/preprints202309.0055.v1

Faishal, M., Mathew, S., Neikha, K., Pusa, K., & Zhimomi, T. (2023). The future of work: AI, automation, and the changing dynamics of developed economies. *World Journal of Advanced Research and Reviews*, *18*(3), 620-629. https://doi.org/10.30574/wjarr.2023.18.3.1086

Farrow, E. (2021). Mindset matters: how mindset affects the ability of staff to anticipate and adapt to Artificial Intelligence (AI) future scenarios in organisational settings. *AI & Society*, *36*(3), 895-909. https://doi.org/10.1007/s00146-020-01101-z

Gao, S., He, L., Chen, Y., Li, D., & Lai, K. (2020). Public perception of artificial intelligence in medical care: content analysis of social media. *Journal of Medical Internet Research*, *22*(7), e16649. https://doi.org/10.2196/16649

Gonçalves, B. (2023). The Turing test is a thought experiment. *Minds and Machines*, *33*(1), 1-31. https://doi.org/10.1007/s11023-022-09616-8

Höyng, M., & Lau, A. (2023). Being ready for digital transformation: How to enhance employees' intentional digital readiness. *Computers in Human Behavior Reports*, *11*, 100314. https://doi.org/10.1016/j.jsis.2024.101885

Ibegbulam, C., Olowonubi, J., Fatounde, S., & Oyegunwa, O. (2023). Artificial intelligence in the era of 4IR: drivers, challenges and opportunities. *Engineering Science & Technology Journal*, *4*(6), 473-488. https://doi.org/10.51594/estj.v4i6.668

Jaiswal, A., Arun, C. J., & Varma, A. (2023). Rebooting employees: Upskilling for artificial intelligence in multinational corporations. In A. Malik & P. Budhwar (Eds.), *Artificial intelligence and international HRM: Challenges, opportunities and a research agenda* (pp. 114–143). Routledge. https://doi.org/10.4324/9781003377085-5

James, D., Sadik, S., & Brown, P. (2023). Rethinking Lifelong Learning in the "Fourth Industrial Revolution". In K. Evans, W. O. Lee, J. Markowitsch, & M. Zukas (Eds.), *Third international handbook of lifelong learning* (pp. 1091–1110). Springer International Publishing. https://doi.org/10.1007/978-3-031-19592-1_49

Kim, W., Choi, Y., Lee, T.-H., Jang, S.-Y., Han, K.-T., & Park, E.-C. (2018). Job displacement and social safety net on depressive symptoms in individuals aged 45 years or above: Findings from the Korean longitudinal study of aging. *Ageing & Society*, *38*(6), 1199-1222. https://doi.org/10.1017/s0144686x16001471

Kopka, A., & Grashof, N. (2022). Artificial intelligence: Catalyst or barrier on the path to sustainability? *Technological Forecasting and Social Change*, *175*, 121318. https://doi.org/10.1016/j.techfore.2021.121318

Kovacev, R. J. (2020). A taxing dilemma: robot taxes and the challenges of effective taxation of AI, automation and robotics in the fourth industrial revolution. *The Ohio State Technology Law Journal*, *16*(2), 182-218.

Krskova, H., & Breyer, Y. A. (2023). The influence of growth mindset, discipline, flow and creativity on innovation: Introducing the MDFC model of innovation. *Heliyon*, *9*(3). e13884 https://doi.org/10.1016/j.heliyon.2023.e13884

Kuziemski, M., & Misuraca, G. (2020). AI governance in the public sector: Three tales from the frontiers of automated decision-making in democratic settings. *Telecommunications policy*, *44*(6), 101976. https://doi.org/10.1016/j.telpol.2020.101976

Liu, J. (2024). The impact of the development of artificial intelligence on unemployment rates. *Advances in Economics, Management and Political Sciences*, *121*(1), 154-163. https://doi.org/10.54254/2754-1169/121/20242410

Marku, M. (2024). Navigating the future of work: human capital in the age of industry 4.0. *Interdisciplinary Journal of Research and Development*, *11*(1), 190-195. https://doi.org/10.56345/ijrdv11n127

McAfee, A., & Brynjolfsson, E. (2017). *Machine, platform, crowd: Harnessing our digital future*. WW Norton & Company.

Mishra, D. (2024). Strategic communication for AI-driven sustainability initiatives: Bridging technology, policy, and public engagement in achieving SDGs. In B. Riswandi, B. Singh, C. Kaunert, & K. Vig (Eds.), *AI applications for clean energy and sustainability* (pp. 187–211). IGI Global. https://doi.org/10.4018/979-8-3693-6567-0.ch010

O'neil, C. (2017). *Weapons of math destruction: How big data increases inequality and threatens democracy*. Crown.

Pedota, M., Grilli, L., & Piscitello, L. (2023). Technology adoption and upskilling in the wake of Industry 4.0. *Technological Forecasting and Social Change*, *187*, 122085. https://doi.org/10.1016/j.techfore.2022.122085

Peoples, L. F. (2025). Artificial intelligence and legal analysis: Implications for legal education and the profession. *Law Library Journal, 117*(1), 52-85.

Rikala, P., Braun, G., Järvinen, M., Stahre, J., & Hämäläinen, R. (2024). Understanding and measuring skill gaps in Industry 4.0—A review. *Technological Forecasting and Social Change*, *201*, 123206. https://doi.org/10.1016/j.techfore.2024.123206

Robles, P., & Mallinson, D. J. (2025). Artificial intelligence technology, public trust, and effective governance. *Review of policy research*, *42*(1), 11-28. https://doi.org/10.1111/ropr.12555

Sahoh, B., & Choksuriwong, A. (2023). The role of explainable Artificial Intelligence in high-stakes decision-making systems: A systematic review. *Journal of Ambient Intelligence and Humanized Computing*, *14*(6), 7827-7843. https://doi.org/10.1007/s12652-023-04594-w

Saidakhror, G. (2024). The impact of artificial intelligence on higher education and the economics of information technology. *International Journal of Law and Policy*, *2*(3), 1-6.

Shrivastava, A., Pandey, A., Singh, N., Srivastava, S., Srivastava, M., & Srivastava, A. (2024). Artificial intelligence (AI): Evolution, methodologies, and applications. *International Journal for Research in Applied Science and Engineering Technology*, *12*(4), 5501-5505.

Siregar, R. A. (2023). A legal perspective on the transformation of health services with artificial intelligence. *Soepra Jurnal Hukum Kesehatan*, *9*(2), 306-314. https://doi.org/10.24167/sjhk.v9i2.11270

Srivastava, J., Dixit, A., & Narayan, J. (2023). Artificial intelligence and the legal profession. In *International Conference on Green Energy, Computing and Intelligent Technology* (pp. 366–371). Institution of Engineering and Technology.

Stahl, B. C., Antoniou, J., Ryan, M., Macnish, K., & Jiya, T. (2022). Organisational responses to the ethical issues of artificial intelligence. *AI & Society*, *37*(1), 23-37. https://doi.org/10.1007/s00146-021-01148-6

Susskind, R., & Susskind, D. (2022). *The future of the professions: How technology will transform the work of human experts*. Oxford University Press.

Teuscher, C. (2012). Foreword: Special issue on Alan Turing. *Evolutionary Intelligence*, *5*(1), 1-2. https://doi.org/10.1007/S12065-011-0063-2

Tiwari, R. (2023). The impact of AI and machine learning on job displacement and employment opportunities. *International Journal of Engineering Technologies and Management Research*, *7*(1), 1-9. https://doi.org/10.55041/ijsrem17506

Wallén, J. (2008). *The history of the industrial robot*. Linköping University Electronic Press.

Wang, K.-H., & Lu, W.-C. (2025). AI-induced job impact: Complementary or substitution? Empirical insights and sustainable technology considerations. *Sustainable Technology and Entrepreneurship*, *4*(1), 100085. https://doi.org/10.1016/j.stae.2024.100085

Yigitcanlar, T., Degirmenci, K., & Inkinen, T. (2024). Drivers behind the public perception of artificial intelligence: insights from major Australian cities. *AI & Society*, *39*(3), 833-853. https://doi.org/10.1007/s00146-022-01566-0

Zhao, T. (2023). AI in educational technology. *Preprints.* https://doi.org/10.20944/preprints202311.0106.v1

Zidaru, T., Morrow, E. M., & Stockley, R. (2021). Ensuring patient and public involvement in the transition to AI-assisted mental health care: A systematic scoping review and agenda for design justice. *Health Expectations*, *24*(4), 1072-1124. https://doi.org/10.1111/hex.13299

Zirar, A., Ali, S. I., & Islam, N. (2023). Worker and workplace artificial intelligence (AI) coexistence: Emerging themes and research agenda. *Technovation*, *124*, 102747. https://doi.org/10.1016/j.technovation.2023.102747