

Full Length Research Paper

AI and job market: Analysing the potential impact of AI on employment, skills, and job displacement

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Artificial Intelligence (AI) has rapidly evolved, permeating various industries and transforming business operations. While AI offers immense potential for efficiency and innovation, it also raises concerns about its impact on the job market. This paper delves into the potential consequences of AI on employment, skills, and job displacement. The historical context of technological advancements and their corresponding effects on labor markets is examined. The specific ways in which AI is likely to disrupt traditional job roles and create new opportunities are explored. The paper analyses the potential for AI to automate routine tasks, augment human capabilities, and even displace certain occupations. The implications of AI on the demand for different skill sets are investigated. The growing importance of skills such as critical thinking, problem-solving, creativity, and adaptability, which are less susceptible to automation, are discussed. Additionally, the potential for AI to create new jobs and industries, such as AI development, data science, and ethical AI governance, are explored. Strategies for policymakers, businesses, and individuals to prepare for the AI-driven job market are proposed. These strategies include investments in education and training, fostering a culture of lifelong learning, and developing ethical guidelines for AI deployment. By understanding the potential implications of AI on employment, skills, and job displacement, proactive measures can be taken to address the challenges and maximize the benefits of this transformative technology.

Key words: Artificial Intelligence (AI), employment, skills and jobs, machine learning.

INTRODUCTION

Artificial intelligence (AI) has greatly advanced since the turn of the twenty-first century, and its uses are now present in almost every aspect of daily business operation. There are numerous definitions of AI. Tai (2020) explains artificial intelligence as the technology developed to enable intelligent operations of computers and other machines in human operations. AI is also explained as computer systems that can carry out tasks usually associated with human intelligence, including

learning, problem-solving, decision-making, and perception (Jakhar and Kaur, 2020). In business, AI involves applying these technologies to improve operational efficiency, enhance decision-making processes, and boost customer engagement. Through automation, predictive analytics, and personalized user experiences, AI enables businesses to streamline workflows, anticipate market trends, and provide tailored services, thereby fostering innovation and competitiveness

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across various industries (Di Vaio et al., 2020). Artificial intelligence is growing so rapidly that by 2030, AI is expected to contribute \$15.7 trillion to the global economy and permeate most industries (Murphy et al., 2021).

The rise of powerful AI systems is sparking debate about how we think of automation within the work environment (Brynjolfsson and McAfee, 2014). AI can now automate many tasks, both simple and complex. This is great for making things more efficient, but it also raises worries about job losses and economic inequality. Some people might lose their jobs, and others might need new skills to keep up (Acemoglu and Restrepo, 2019).

AI is rapidly transforming various industries, and the labour market is no exception. As AI systems grow more sophisticated, they are increasingly capable of handling tasks once thought to be only exclusively done by humans. This technological advancement opens up new possibilities but also raises concerns about job displacement and the future of work (Brynjolfsson and McAfee, 2014).

AI is set to reshape the job market in complex ways, with both job creation and displacement on the horizon (Frey and Osborne, 2017).

Whilst AI can automate routine tasks, leading to job losses in sectors like the manufacturing and retail industries, it can also create new opportunities in fields that demand creativity, problem-solving, and emotional intelligence (Murphy et al., 2021). As AI continues to evolve, it's essential to strike a balance between these two forces to ensure a sustainable future of work (Frey and Osborne, 2017).

AI is dramatically reshaping the skills landscape. As AI systems automate routine tasks, there's a rising demand for skills that complement, rather than compete with, machine capabilities. These include critical thinking, complex problem-solving, creativity, and emotional intelligence. To thrive in this new era, educational institutions and workplaces must adapt. This involves revamping curricula to prioritise these skills, offering continuous learning opportunities, and fostering a culture of innovation and adaptability. By equipping individuals with the right skills, we can ensure a smooth transition into an AI-driven future where humans and machines work in harmony (Bughin et al., 2018).

AI-driven automation has the potential to significantly disrupt the job market, leading to job displacement and economic inequality. While historical patterns suggest that technological advancements eventually create new jobs, the rapid pace of AI development may exacerbate these challenges (Acemoglu and Restrepo, 2019).

It is crucial to address the social and economic implications of AI-driven job displacement. This includes implementing policies to support workers affected by automation, such as retraining programs and income support. Additionally, it's essential to foster a culture of lifelong learning to equip individuals with the skills

needed to thrive in an AI-powered economy (Susskind and Susskind, 2020).

In recent years, artificial intelligence (AI) has grown at an incredible pace, spreading across a wide range of industries. This rapid progress has sparked a mix of excitement and concern, especially when it comes to how AI might affect jobs and the workforce (Agarwal et al., 2024).

As AI systems become increasingly sophisticated and capable of performing tasks traditionally done by humans, questions arise about the extent of job displacement, the evolution of required skills, and the overall workforce transformation (Merhi and Harfouche, 2024). Some specific questions guiding this study are:

- 1) What are the current trends and advancements in AI technologies, and how are they being integrated into different industries?
- 2) To what extent could AI lead to job displacement across various sectors, and which occupations are most susceptible to automation?
- 3) What are the potential impacts of AI on the demand for specific skills and the overall skill landscape of the workforce?
- 4) What strategies and policies can be implemented to mitigate the negative consequences of AI-driven job displacement and foster a smooth transition for affected workers?

This paper delves into the complex relationship between AI and the job market. We'll examine how AI is reshaping the workforce, the skills needed for future jobs, and strategies to address potential job losses. By analysing academic research, real-world examples, and economic models, we aim to shed light on the future of work in the AI era. This knowledge is essential to mitigate risks and harness AI's potential for a prosperous and equitable future.

Objectives

- i) Analyse the potential impact of AI on job creation and job destruction in different sectors.
- ii) Discuss how AI alters skill requirements for existing and emerging jobs.
- iii) Access how AI impacts modern job operations.
- iv) Explore the potential for AI to create new job categories.
- v) Propose recommendations for individuals, organisations, and policymakers to adapt to the evolving AI world.

METHODOLOGY

This study will use a systematic literature review method to analyse existing research on the impact of AI on employment, skills, and job displacement. The literature review approach is appropriate, given

the focus on synthesizing and evaluating the wealth of studies that have already been conducted on this topic, with the aim of identifying key trends, gaps, and insights in the current body of knowledge.

The research employs a descriptive and analytical design, focusing on synthesizing and critically evaluating existing research. The review will systematically examine a diverse range of academic papers, industry reports, and policy documents to provide a comprehensive understanding of how AI technologies are shaping the job market.

Part of the focus area of the research is:

- i) Understanding the types of jobs most susceptible to automation.
- ii) Looking into the shifts in skill demands due to AI integration.
- iii) Analysing potential job displacement across different sectors.
- iv) Delving into strategies and policy responses to mitigate job losses due to AI.

A crucial aspect of the literature review will involve assessing the quality of the selected studies. Each source will be evaluated based on its methodological rigour, considering factors such as the study design, sample size, and data analysis techniques. Although the literature review provides a comprehensive overview of existing research, it is not without limitations. The reliance on secondary data means that the availability and scope of existing publications constrain the study.

HISTORY OF TECHNOLOGICAL ADVANCEMENTS

The origins of technology can be traced back to ancient times when tools like the abacus helped people perform simple calculations. Fast forward to history, we can credit the groundwork for modern computers laid in the 19th century with the invention of mechanical calculators. English mathematician Charles Babbage is often celebrated as the pioneer who imagined the first programmable mechanical computer, the Analytical Engine (Swade, 2000). Computing technology took off more rapidly in the 20th century. With the invention of electronic components like vacuum tubes computers became more powerful and dependable; one of the biggest milestones in computing came in 1946 with the creation of the Electronic Numerical Integrator and Computer (otherwise known as ENIAC). ENIAC was so large it filled an entire room, and it officially launched the era of electronic computers (Haigh and Ceruzzi, 2021).

The invention of the transistor in the 1940s further developed the state of computing. Transistors were smaller and used less energy than vacuum tubes, making it possible to build computers that were faster, smaller, and more affordable. In 1951, MIT built the TX-0, the first computer to use transistors, marking a big step forward in computer design (Zaletov, 2022).

The invention of personal computers (PCs) in the 1970s and 1980s started to become very popular. Early models like the Altair 8800 and the Apple II were mainly used by hobbyists and in schools. However, as microprocessors and software improved, PCs became more powerful and versatile; eventually changing industries and the way people lived and worked (Zaletov,

2022).

In the late 20th century, the world of computing saw a further transformation in how we communicate and share information. In 1989, Tim Berners-Lee invented the World Wide Web, which made it much easier for people to access information online. The internet has had a huge impact on society, making global connections possible, opening the door to e-commerce, and allowing knowledge to spread faster than ever before (Talukder, 2020).

In 2024, AI has become an integral part of our lives. AI-powered systems are used in a wide range of applications, including healthcare, finance, transportation, and entertainment. In recent years, breakthroughs in machine learning, especially deep learning, have taken AI to new levels. Inspired by how the human brain works, deep learning allows machines to recognise complex patterns by learning from huge amounts of data (Jakhar and Kaur, 2020).

The advent of AI

The origin of AI can go back to ancient civilisations, where there were myths and speculations of often featured artificial beings with intelligence and even consciousness. But AI as a formal scientific field didn't take shape until the mid-20th century (Muthukrishnan et al., 2020). A key figure in early AI research was Alan Turing. In 1950, he proposed the Turing Test as a way to judge whether a machine could show intelligence that's indistinguishable from a human. This idea became a cornerstone of AI, sparking ongoing debates about what intelligence really means and whether machines could truly think and reason (Muggleton, 2014).

The 1950s and 1960s were a time of excitement and fast progress in AI, often called the "Golden Age of AI." Researchers created groundbreaking techniques like neural networks and symbolic reasoning, showing that AI could tackle complex problems. However, as the limits of these early methods became clear, enthusiasm faded, leading to a slowdown in the 1970s known as the AI Winter (Shin, 2019). Interest in AI surged again in the 1980s, thanks to progress in expert systems and knowledge-based systems. These systems used specialized knowledge and rules to help in fields like medicine, finance, and engineering. However, their limitations—especially their lack of flexibility and inability to learn from experience—eventually caused interest to dip again, leading to another "AI Winter" in the late 1980s (Shin, 2019).

In the late 20th and early 21st centuries, AI entered a new era, with major strides in machine learning, especially deep learning and neural networks. These methods have allowed machines to recognize complex patterns from huge datasets, sparking breakthroughs in areas like image recognition, natural language

processing, and autonomous systems (Muthukrishnan et al., 2020).

A major breakthrough in recent years has been the development of large language models like GPT-3. These models have shown impressive abilities, from generating human-like text to translating languages and creating different types of content. They have the potential to transform a range of industries, including customer service and scientific research (Roumeliotis and Tselikas, 2023).

The integration of AI into workplaces is not only transforming the nature of jobs but also the skills required to succeed. As AI automates routine tasks, Oyekunle and Boohene (2024) postulate workers will need to develop skills that complement AI, such as digital literacy, critical thinking and problem-solving, creativity and innovation.

Artificial intelligence's impact on the job market

With all the advancements and all the progress in AI, there are still important challenges and ethical issues to consider. A major concern is that AI could worsen social inequalities and lead to job displacement. As AI systems become more advanced, they're likely to automate tasks that people have traditionally done, which could result in job losses and economic disruption.

The role of AI in transforming employment

As AI technology advances, it's sparking important questions about the future of work, the types of jobs that will exist, and the skills people will need to succeed in an AI-driven world (Samek and Squicciarini, 2023).

One of the most pressing concerns surrounding AI is its potential to displace workers. The study of George et al. (2023) shows that AI technologies like chatGPT can help organisations automate routines and generate needed content/ideas, leading to job losses in certain sectors. However, it is important to note that AI also creates new job opportunities. As AI systems become more complex, there will be a growing demand for skilled workers to develop, maintain, and manage these systems. Moreover, AI can augment human capabilities, enabling workers to focus on higher-level tasks that require creativity, critical thinking, and problem-solving skills.

A recent study by McKinsey Global Institute (2023) found that while AI could lead to the loss of many jobs, it will also create new ones, resulting in overall job growth. However, the roles that emerge will be different from those of today, meaning workers will need to adapt to a fast-changing tech landscape.

Additionally, workers will need to stay flexible and open to learning new skills throughout their careers. Lifelong learning will be crucial in the age of AI, as technology keeps transforming the job market.

To mitigate the negative impacts of AI and maximise its benefits, policymakers, businesses, and individuals must work together to implement strategies that support a smooth transition to the AI era (Capraro et al., 2024). Key policies that would play a crucial role in policy-making around AI include investment in education/training, social safety nets and ethical considerations.

Job automation

One of the primary concerns regarding AI is its potential to automate jobs, particularly those that are repetitive and routine. A study by McKinsey Global Institute (2017) suggests that the early 2030s could automate up to 30% of jobs in the United States. However, it is essential to note that automation is not necessarily synonymous with job loss. As AI takes over routine tasks, it can free up human workers to focus on more complex and creative work.

AI-powered automation, fueled by technologies like machine learning and robotics, has the potential to take over many tasks ranging from simple, repetitive jobs to more complex cognitive work. While this can drive productivity and boost economic growth, it also raises concerns about job security for many workers (Acemoglu and Restrepo, 2019). As AI technology advances, it has the potential to replace human workers in industries like manufacturing, customer service, and transportation. This shift could lead to higher unemployment and widen the gap between rich and poor (Wang and Siau, 2019).

AI is transforming the retail experience and customer support. Chatbots are increasingly taking over customer service roles, enabling customers to ask questions and receive answers, thereby reducing the need for human representatives in call centers and customer support. The use of machines to scan and pay for groceries is also becoming more prevalent, streamlining the shopping process. Additionally, AI can suggest products that customers might like, making shopping more enjoyable. While AI enhances efficiency, it may also lead to job displacement, particularly in low-skilled positions. However, it may also create new opportunities for individuals who can perform more complex and helpful tasks in sales and customer service.

Acemoglu and Restrepo (2019) suggest that the jobs most susceptible to automation are often low-skilled and low-paying, which could disproportionately affect workers with limited education and training, potentially exacerbating the wealth gap. Autor (2015) posits that artificial intelligence (AI) will significantly alter the job landscape in the future. Projections suggest that between 10 and 30% of current jobs may be automated by machines by 2030, potentially leading to substantial changes.

AI is likely to assume jobs that require physical labor and minimal skill. Conversely, positions demanding

critical thinking, creativity, and problem-solving skills may become more prominent. As AI continues to improve in pattern recognition, language comprehension, and decision-making, it is poised to take over tasks that rely on these skills.

An examination of various industries reveals areas where AI can significantly impact job automation. In manufacturing, robots already perform mundane and hazardous tasks. With AI, robots can execute more complex and precise tasks, such as quality control and diverse construction methods. This enhances efficiency but also reduces the need for human labor, particularly in low-skilled positions (Zeba et al., 2021). The transportation sector is also vulnerable to job displacement, with autonomous vehicles and AI-driven logistics systems threatening the roles of truck drivers, delivery workers, and warehouse staff. Although self-driving technology is still in its infancy, AI-powered logistics can already optimize routes, manage inventory, and streamline supply chains, reducing the demand for traditional labor (Ma et al., 2020).

AI is transforming the retail experience and customer support. Chatbots are increasingly taking over customer service roles, enabling customers to ask questions and receive answers, thereby reducing the need for human representatives in call centers and customer support. Stores are also utilizing machines to scan and pay for groceries, streamlining the shopping process. Additionally, AI can suggest products that customers might like, making shopping more enjoyable (Yang and Evans, 2019).

While AI enhances efficiency, it may also lead to job displacement, particularly in low-skilled positions. However, it may also create new opportunities for individuals who can perform more complex and helpful tasks in sales and customer service (Chong et al., 2021).

AI is also assisting doctors in various ways, such as diagnosing illnesses, analyzing medical images, and patient care. This makes healthcare more efficient, but it may also lead to job displacement for administrative tasks or simple diagnoses. Nevertheless, AI is unlikely to replace jobs that require significant human connection, such as nursing or counseling (Hamet and Tremblay, 2017).

Job augmentation

In the context of the job market, augmentation involves using AI tools to improve human workers' efficiency, accuracy, and decision-making processes. This shift from automation to augmentation has the potential to radically change the nature of work, making tasks more productive and allowing workers to focus on higher-level, creative, and strategic functions. As such, it is critical to explore how AI augmentation can affect the job market, how it will influence job roles and industries, and the challenges it presents for workers and employers (Frey and Osborne,

2017).

Instead of replacing humans, it works alongside us to make our jobs easier and better. This is called AI augmentation. For example, in healthcare, AI can help doctors analyse lots of medical data to find illnesses, but the doctor is still the one who makes the final decision and talks to the patient (Harborth and Kümpers, 2022).

One of the key advantages of AI augmentation is the increase in productivity. AI can take care of boring and repetitive tasks, like answering simple customer questions or doing the same thing over and over in a factory (Dégallier-Rochat et al., 2022). This frees up people to do more interesting and challenging work, like solving complex problems or coming up with new ideas. For example, AI chatbots can handle basic customer questions, while human agents can focus on helping customers with difficult problems (Chong et al., 2021). In factories, robots with AI can do precise tasks, while people can focus on making sure everything is perfect and coming up with new ways to make things. This teamwork between humans and AI can make businesses more productive and efficient (Autor, 2015).

AI can be a helpful assistant that takes care of the boring work. This can make work more enjoyable and satisfying. For example, in office jobs, AI can handle scheduling meetings, typing up notes, and sending emails (Wang and Siau, 2019). This frees up people to focus on more interesting tasks like solving problems, planning projects, and thinking creatively. AI can also be a great tool for learning. AI-powered learning tools can help teachers personalize lessons for each student so teachers can spend more time inspiring and supporting their students. This can make work more rewarding for both teachers and students.

Job displacement due to AI

Artificial intelligence is getting smarter and smarter, and this is making people worry about their jobs. AI can do many things better and faster than humans, especially tasks that are repetitive and predictable. This means that AI could take over many jobs, and it's becoming a big concern for the future of work. Many industries are worried that machines could replace their jobs.

AI can take away jobs in a few different ways. One way is by automating tasks that people used to do. AI is really good at doing things that are repetitive and predictable and following specific rules. So, jobs that involve these kinds of tasks are at risk of being replaced by AI. For example, in the manufacturing sector, robots have already replaced many assembly line workers, and in the retail industry, automated checkout systems are reducing the need for cashiers (Brynjolfsson and McAfee, 2014). These technological advancements have profound implications for employment, especially in low-skill and manual labour jobs.

The economic implications of widespread job

displacement due to AI are significant. As automation replaces jobs, many workers will likely face long periods of unemployment or underemployment. The loss of income for displaced workers can lead to decreased consumer spending, which could slow economic growth. Additionally, the displacement of jobs could strain social welfare systems as more individuals rely on unemployment benefits or government assistance (Chui et al., 2016).

AI can make the gap between rich and poor even bigger. People with good skills and education can adapt to the new job market and find better jobs with the help of AI. But people with fewer skills might lose their jobs or have to take lower-paying jobs. This could create a bigger divide between people who work in tech and those who work in manual labour or customer service. Also, AI tools are often more available to wealthy people and big companies, which could make the gap between rich and poor even wider (Rapanyane and Sethole, 2020).

Furthermore, the shift to a more AI-driven economy could lead to changes in workplace dynamics. For example, some workers may find their roles shifting to collaboration with AI systems, which may require them to learn new skills in areas such as data analysis, AI interpretation, or machine learning (Davenport and Kirby, 2016). However, those who cannot adapt to these new demands may find themselves marginalized, further exacerbating the divide between skilled and unskilled workers.

Job creation in an AI era

The AI era is transforming the way industries operate, driving innovation across sectors and influencing job trends. While AI is often discussed in the context of job displacement, it is also a powerful catalyst for job creation. As companies incorporate AI into their operations, new roles can emerge that require specialised skills in data science, machine learning, AI ethics and other roles (Brynjolfsson and McAfee, 2014).

Manyika et al. (2017) emphasize that AI systems get smarter; they need more and more data to learn from. This means businesses are on the lookout for data scientists, engineers, and analysts to collect, clean, and analyse this data. These experts use powerful tools and techniques to uncover valuable insights that help AI systems improve. It's no wonder that data science is one of the fastest-growing fields in the world.

Data engineering has also emerged as a vital profession, focusing on the creation and maintenance of data pipelines and ensuring that data is accessible for machine learning models. This field includes roles like database administrators, data quality analysts, and big data architects. According to Manyika et al. (2017), the demand for data professionals is expected to grow as organisations continue to invest in AI technologies, with a

projected increase in demand for skilled data scientists of up to 30% annually in certain sectors.

The emergence of AI technology also births a wide range of specialized skills, creating a demand for professionals such as machine learning engineers, AI researchers, and AI infrastructure architects. These professionals design, test, and deploy AI models across various applications, from healthcare diagnostics to autonomous vehicles (Chui et al., 2016).

By automating tedious tasks, AI frees up workers to tackle more complex and creative challenges. This boost in productivity can fuel economic growth. As AI reshapes industries, it also creates new jobs in areas like customer service, marketing, and management, which support AI-powered businesses (Chui et al., 2016). As established earlier in the paper, the AI-era is also making the operations of existing jobs more efficient and faster with automation, better quality output, and the total removal of mundane tasks.

While AI is opening up new job markets, it also requires specialised skills that not everyone has. This can leave many people, especially those without access to education and training, behind. To address this, governments, schools, and businesses need to work together to make learning opportunities available to everyone (Jobin et al., 2019).

Job opportunities presented by AI

AI is poised to significantly reshape the job market. While there are concerns about job displacement in sectors like manufacturing, retail, and transportation, AI is also creating new opportunities in fields such as data analysis, AI programming, and cybersecurity, as highlighted by the McKinsey Global Institute (2023).

According to their report, AI-driven job growth is projected to be substantial, with estimates suggesting the creation of over 50 million new jobs globally by 2030 (McKinsey Global Institute, 2023). These roles will emerge in industries that are not only directly tied to AI development but also in sectors that benefit from AI applications, such as healthcare, education, and financial services.

AI excels at repetitive tasks, potentially putting jobs involving manual labor or routine cognitive work at risk. However, this automation also creates space for more complex and creative roles that machines cannot easily handle. A report by PwC (2024) suggests that AI will most significantly impact jobs involving routine decision-making or physical tasks, while simultaneously boosting sectors that require human interaction, creativity, and advanced problem-solving skills.

The integration of AI into various industries is generating a demand for new types of expertise. According to World Economic Forum (WEF, 2023) report, AI has led to the rise of roles such as machine learning

engineers, AI researchers, data scientists, and AI ethics specialists (WEF, 2023). Beyond technical roles, there's a rising demand for interdisciplinary positions. For instance, AI systems need human oversight to ensure ethical implementation and alignment with societal values. This is driving the growth of jobs in AI ethics, policy-making, and governance.

AI's role in transforming traditional sectors is also noteworthy. In healthcare, for instance, AI is expected to generate new roles that combine medical expertise with technological knowledge. AI applications, such as predictive analytics for patient care, diagnostic assistance, and robotic surgery, are creating demand for healthcare professionals who can work alongside AI systems (Aminizadeh et al., 2024).

Policy making around AI

The benefits of AI are accompanied by significant risks and ethical concerns, including issues around privacy, security, and accountability. The implementation of AI regulation is essential to mitigate these risks while encouraging innovation. As AI continues to permeate society, the need for effective policy frameworks becomes paramount. One of the biggest challenges in regulating AI is finding the sweet spot between encouraging innovation and addressing ethical concerns.

Policymakers must carefully craft regulations that do not stifle technological progress while still safeguarding individual rights and society as a whole. AI systems need massive amounts of data to learn and improve, but using personal data raises privacy and consent issues (Binns, 2018). Plus, AI is evolving so quickly that regulators often struggle to keep up, creating gaps that can be exploited. AI algorithms are vulnerable to biases that may lead to unfair or discriminatory outcomes, especially when trained with biased datasets. There are concerns about discriminatory AI outcomes in areas such as hiring, criminal justice, and lending practices have highlighted the need for regulatory oversight to prevent biased decision-making systems (Zou and Schiebinger, 2018).

To effectively address the global implications of AI, national policies and international cooperation are necessary. Through collaborative efforts, countries can establish consistent regulations and prevent companies from exploiting loopholes in different jurisdictions.

Organizations such as the OECD and the United Nations are leading the way in promoting global AI standards, focusing on data privacy, transparency, and accountability (Floridi, 2019). These collaborations enable countries to tackle complex cross-border issues like data privacy and cybersecurity risks.

Given the unique impact of AI on various industries, a one-size-fits-all regulatory approach may not be the most effective solution. For instance, AI in healthcare raises concerns about patient privacy and treatment outcomes, while AI in finance focuses on fraud prevention and

algorithmic transparency. By creating sector-specific regulations, policymakers can address the unique risks and challenges of AI in each domain while maintaining a flexible framework that adapt to future technological advancements (Crawford et al., 2019).

Conclusion

The AI revolution is transforming the job market, creating new roles in data management, AI development, ethics, and human-AI collaboration. These jobs fuel the growth of AI-powered industries and offer opportunities for people to transition into high-demand, tech-focused careers. To fully reap the benefits of AI-driven job growth, workers need access to training programs that provide the necessary skills. As AI evolves, promoting equitable access to AI-related jobs is crucial for creating a fair and resilient workforce. AI is poised to play a major role in reshaping the job market, with many jobs at risk of displacement due to automation. Industries such as manufacturing, retail, transportation, and administrative support are particularly vulnerable to AI's impact.

The integration of AI technology into the job market offers significant benefits but also poses serious challenges. Addressing these challenges requires a proactive approach involving education, ethical considerations, and government support. AI augmentation can lead to more innovative, efficient, and fulfilling work experiences by combining the strengths of AI and human workers. However, realizing the benefits of AI augmentation requires addressing challenges related to reskilling, equitable access to technology, and ethical concerns.

Effective AI regulation must strike a balance between innovation and ethics, address transparency and accountability, and promote fairness in all applications. Policymakers can create a strong regulatory framework for AI by adopting principles such as privacy protection, fairness, transparency, and accountability, and by fostering collaboration at national and international levels.

CONFLICT OF INTERESTS

The author has not declared any conflict of interests.

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