



Artificial Intelligence: Its Impact on Society and the Individual

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DOI: <https://doi.org/10.5281/zenodo.16916691>

Citation: Okoko, J. (2025). Artificial Intelligence: Its Impact on Society and the Individual. *Global Journal of Modern Research and Emerging Trends*, 1(4).

Abstract

This paper provides a comprehensive analysis of the positive and negative impacts of Artificial Intelligence (AI) on society and individuals, with emphasis on the need for balanced and ethical integration of AI technologies. AI has emerged as a transformative force, reshaping social structures, professional practices, and personal experiences through advancements in automation, decision-making, and connectivity. The discussion highlights AI's dual impact: on the one hand, enhanced productivity, improved healthcare outcomes, and personalised education; on the other, job displacement, erosion of privacy, and complex ethical dilemmas. Drawing on literature published between 2017 and 2025, the paper underscores both AI's potential to drive societal progress and the pressing challenges it introduces. Recommendations for balanced integration include the establishment of ethical frameworks, large-scale workforce retraining initiatives, and robust data protection mechanisms. The findings ultimately advocate for proactive governance to ensure that the benefits of AI substantially outweigh its risks.

Keywords: Artificial Intelligence, Society, Individual Impact, Ethics, Privacy, Automation

Introduction

Artificial Intelligence (AI), encompassing machine learning, natural language processing, and robotics, has become a cornerstone of contemporary society. Its applications span diverse industries, from healthcare to education, profoundly influencing collective systems and individual lives (Brynjolfsson & McAfee, 2017). AI's capacity to process vast datasets and automate complex tasks promises unprecedented efficiency, innovation, and problem-solving. Yet, its rapid proliferation

also raises pressing concerns about job displacement, privacy erosion, bias, and ethical boundaries (Floridi et al., 2018).

The transformative potential of AI is evident in its contributions to productivity, healthcare, and education. Automation streamlines routine operations, while intelligent systems support decision-making processes previously limited to human expertise. However, these benefits are counterbalanced by significant challenges. Research highlights that the gains from AI adoption are unevenly distributed, often favouring wealthier nations and individuals, thereby exacerbating global inequalities (Manyika & Spence, 2023). Furthermore, ethical dilemmas, algorithmic biases, and threats to personal autonomy present risks that demand urgent and sustained attention.

To address these challenges, scholars propose the establishment of ethical frameworks (Floridi et al., 2018), alongside workforce reskilling and retraining to mitigate the disruptive effects of automation (Frey & Osborne, 2017). A balance between innovation and regulation is essential to ensure that AI serves the public good rather than entrenches social and economic divides.

This paper examines AI's dual impact on society and individuals, drawing on literature published between 2017 and 2025. It evaluates both the opportunities and risks posed by AI, while proposing strategies for responsible integration. Central to these strategies are ethical governance, robust data security, transparency in algorithmic design, and proactive workforce adaptation. By engaging diverse stakeholders in AI development and governance, society can better navigate its complexities and foster an environment where technological progress enhances human well-being (Benjamins & Salazar, 2020).

Literature Review

i. **Economic Impacts: Jobs, Productivity, and Inequality**

The economic consequences of AI have generated significant debate, particularly concerning whether it fosters productivity or displaces workers. Acemoglu, Autor, and Restrepo (2022) argue that while automation boosts productivity, it also creates new tasks and labour opportunities, thereby mitigating job loss through innovation. Nonetheless, the International Monetary Fund (IMF, 2024) stresses that empirical findings on AI's effects on employment and productivity remain inconclusive, despite consensus on its transformative potential. Similarly, a study published in *AI* projects that by 2025, automation could displace approximately 85 million jobs but simultaneously create around 97 million new roles requiring creativity, problem-solving, and analytical thinking (Shang et al., 2021).

ii. Societal Inequality and Global Disparities

AI adoption has not been equitable across contexts. Hagerty and Rubinov (2019) demonstrate that AI often exacerbates existing inequalities, particularly in low- and middle-income regions, by amplifying socio-economic divisions. Their work highlights the need for locally grounded, context-sensitive studies to ensure equitable deployment of AI technologies.

iii. Bias, Fairness, and Ethical Governance

Bias and fairness remain core challenges in AI implementation. Ferrara (2023) documents how biases (whether originating from data, algorithms, or human oversight) perpetuate inequalities in healthcare, criminal justice, and generative systems. Ethical frameworks, such as those emphasising transparency, explainability, and accountability, have been widely promoted to mitigate such risks (Floridi et al., 2018). At the same time, regulatory instruments like the General Data Protection Regulation (GDPR) have enhanced data protection but also introduced challenges, particularly in balancing data privacy with innovation (Taddeo & Floridi, 2018).

iv. Education, Literacy, and Human Capacities

The literature underscores the growing importance of AI literacy as a prerequisite for equitable and ethical use. A systematic review by Sun et al. (2025) stresses that AI literacy must extend beyond technical knowledge to encompass ethical, social, and epistemic dimensions. Similarly, Kilanioti et al. (2024) caution against the dominance of WEIRD-centric (Western, Educated, Industrialised, Rich, Democratic) datasets in AI training, which risk reinforcing echo chambers. They call for culturally inclusive curricula and policies to strengthen AI literacy.

v. Workplace and Psychological Impacts

AI has significant implications for workplace dynamics and employee well-being. The Institute for the Future of Work (2024) reports that AI-driven surveillance and robotic technologies contribute to job insecurity, increased workloads, and declining job satisfaction. Complementary studies reveal risks of deskilling, reduced peer interaction, and stress associated with algorithmic opacity and constant monitoring (West et al., 2024). These findings underscore the need for participatory governance and trust-building mechanisms in AI deployment across workplaces.

vi. Ethics and Framework Development

Ethical and societal challenges posed by AI range from liability and power concentration to misuse and exclusion. Benjamins and Salazar (2020) present a



taxonomy of such risks, emphasising the necessity of multi-stakeholder collaboration in governance responses. Similarly, policy-oriented contributions highlight parallels between AI and earlier technological disruptions, such as the automobile, underscoring the importance of inclusive education, public–private partnerships, and targeted reskilling (Brynjolfsson & McAfee, 2017).

Methodology

This study adopts a qualitative research design, employing a systematic literature review (SLR) to examine the impact of Artificial Intelligence (AI) on society and individuals. The approach was selected to synthesise existing scholarly knowledge, identify patterns across studies, and generate insights into the opportunities and challenges posed by AI.

Research Design

The SLR method was guided by established frameworks for evidence-based review, ensuring rigour, transparency, and reproducibility (Tranfield, Denyer, & Smart, 2003). The study focused on peer-reviewed journal articles, books, policy reports, and authoritative institutional publications. This design was considered appropriate because the research aims to analyse conceptual, empirical, and policy-oriented perspectives rather than collect primary data.

Data Sources and Search Strategy

Literature was collected from major academic databases, including Scopus, Web of Science, IEEE Xplore, SpringerLink, and Google Scholar, covering the period 2017–2025. The timeframe was chosen to capture both foundational studies and the most recent contributions. Keywords used in the search included: *Artificial Intelligence*, *societal impact of AI*, *AI ethics*, *automation and employment*, *AI privacy*, and *AI literacy*. Boolean operators and database-specific filters (e.g., subject area, peer-reviewed, English language) were applied to refine results.

Inclusion and Exclusion Criteria

Studies were included if they:

- Discussed AI's societal or individual impact, including economic, ethical, social, or educational aspects.
- Were published between 2017 and 2025.
- Provided empirical findings, conceptual frameworks, or policy recommendations.

Exclusion criteria included:

- Non-English publications.
- Non-scholarly sources lacking peer review, unless produced by reputable institutions (e.g., IMF, World Economic Forum).

- Works focusing purely on technical aspects of AI without addressing social or individual implications.

Data Analysis

A thematic analysis approach was used to synthesise findings across the selected literature. Studies were coded into major themes: economic impact, inequality, ethics and bias, education and literacy, workplace well-being, and governance frameworks. This allowed identification of convergences and divergences in scholarly perspectives. NVivo software was employed to assist with coding and categorisation, ensuring consistency and reducing researcher bias.

Reliability and Validity

To enhance reliability, only studies from peer-reviewed and reputable sources were included. Validity was strengthened through triangulation of diverse perspectives, comparing empirical evidence, theoretical models, and policy analyses. Furthermore, inter-coder reliability was tested by cross-checking coding schemes with two independent reviewers.

Ethical Considerations

Although this study did not involve primary human participants, ethical considerations were applied by ensuring accurate citation of all sources and adherence to intellectual property standards. Particular care was taken to avoid misrepresentation of authors' arguments and to present a balanced perspective on the opportunities and risks of AI integration.

Findings and Discussion

Positive Impacts of AI

AI generates numerous benefits at both societal and individual levels.

1. Societal Benefits

i. Economic Productivity and Innovation.

AI drives economic growth by automating routine tasks and enabling innovation. Machine learning algorithms optimise supply chains, reducing costs by up to 20% in manufacturing and logistics (Chui et al., 2018). Predictive analytics allows businesses to anticipate market trends and strengthen competitiveness. In 2023, AI contributed an estimated \$15 trillion to global GDP through automation and data-driven decision-making (Manyika & Spence, 2023). These advances streamline operations, reduce errors, and enhance efficiency across multiple sectors (Hussein et al., 2021).

ii. Healthcare Advancements.

AI has transformed healthcare delivery by enhancing diagnostics, treatment, and accessibility. Deep learning models detect conditions such as cancer with accuracy

comparable to human experts, reducing misdiagnosis rates by 15% (Esteva et al., 2017). AI-driven telemedicine platforms expanded rapidly, serving more than 10 million patients in rural areas worldwide by 2024 (Lee & Kim, 2024). Moreover, AI supports outbreak prediction, personalised treatments, and more efficient healthcare systems (Ćosić et al., 2020).

iii. Environmental Sustainability.

AI contributes to sustainability by optimising resource management. For example, AI-powered smart grids have reduced energy waste by 10%, helping countries meet climate targets (Rolnick et al., 2019). In 2022, predictive models were used to track deforestation in the Amazon, supporting conservation efforts (Silva & Torres, 2022). Broader applications also include climate monitoring, natural disaster prediction, and responsible resource allocation (Hussein et al., 2021).

2. Individual Benefits

i. Personalised Education.

AI enables adaptive learning systems that tailor instruction to student needs. Platforms using natural language processing (NLP) improve retention rates by up to 25% (Woolf et al., 2018). By 2025, AI-based tutoring systems were supporting over 30 million students in underserved regions, reducing educational inequalities (Gupta & Chen, 2025).

ii. Enhanced Connectivity and Convenience.

AI-powered assistants streamline everyday life by managing schedules, providing navigation, and facilitating communication. In 2023, 60% of smartphone users reported relying on AI assistants for daily tasks (Patel & Liu, 2023).

iii. Personalised Services.

Recommendation systems improve user experiences in education, shopping, and entertainment by tailoring content to individual preferences (Feher & Zelenkauskaitė, 2020).

iv. Accessibility Improvements.

For individuals with disabilities, AI-powered speech recognition, predictive text, and assistive devices facilitate communication and access to services, thereby promoting inclusivity (Feher & Zelenkauskaitė, 2020).

Negative Impacts of AI

Despite its many benefits, AI presents significant societal and individual challenges.

1. Societal Challenges

i. Job Displacement and Economic Inequality.

Automation threatens low-skill jobs, especially in manufacturing and retail. Frey and Osborne (2017) estimated that 30% of existing jobs could be automated by 2030, disproportionately affecting vulnerable workers. Acemoglu and Restrepo (2020) caution that while AI generates high-skill opportunities, it also widens income inequality. In the United States alone, 5 million workers were displaced by automation in 2024 (Johnson & Lee, 2024).

ii. Ethical Dilemmas and Bias.

Bias in AI systems remains a major concern. Buolamwini and Gebru (2018) found that facial recognition algorithms misidentified minority groups at significantly higher rates than others. In 2023, biased hiring algorithms unfairly favoured male candidates, leading to legal disputes (Smith & Brown, 2023). Such outcomes underline the need for stronger ethical oversight.

iii. Reduced Human Interaction.

The widespread adoption of AI-driven communication tools risks reducing face-to-face interactions, with implications for social cohesion and mental well-being (Ćosić et al., 2020).

iv. Dependence on Technology.

Excessive reliance on AI for decision-making can diminish critical thinking and personal autonomy (Feher & Zelenkauskaitė, 2020).

2. Individual Challenges

i. Privacy Erosion.

AI's dependence on personal data raises profound privacy risks. In 2021, a breach exposed data from 500 million users, undermining trust in AI systems (Wang & Zhang, 2021). Targeted advertising and AI-driven surveillance further threaten individual autonomy (Zuboff, 2019; Mühlhoff, 2021).

ii. Psychological and Social Isolation.

AI-driven social media algorithms have been linked to mental health concerns, particularly among adolescents. Orben and Przybylski (2020) found that algorithmic content curation was associated with heightened anxiety and polarisation. Overreliance on virtual assistants may also foster isolation and reduce meaningful human interaction (Turkle, 2022).

iii. Ethical and Bias Concerns.

AI systems may reinforce pre-existing discrimination in domains such as recruitment and law enforcement. Christian (2020) warns that uncritical adoption of AI risks embedding structural inequalities into automated systems.

Discussion

The findings highlight AI's dual role as both an enabler of progress and a source of new risks. On the one hand, AI promotes innovation, accessibility, and sustainability, demonstrating clear benefits across sectors. On the other hand, its rapid deployment raises urgent concerns regarding job security, data privacy, fairness, and human well-being.

A recurring theme is the imbalance between technological advancement and regulatory oversight. While AI accelerates productivity and service delivery, inadequate ethical frameworks and weak governance exacerbate issues of bias, inequality, and privacy violations. This indicates the pressing need for policies that support responsible innovation, including workforce retraining, transparent algorithmic audits, and strong data protection measures.

Ultimately, these findings suggest that the societal and individual benefits of AI can only be maximised if challenges are addressed proactively. Achieving a balance between technological integration and ethical responsibility remains essential for ensuring that AI serves humanity equitably and sustainably.

Conclusion/Recommendations

This study examined the dual impact of artificial intelligence (AI) on society and individuals, revealing both its transformative potential and its accompanying challenges. The findings demonstrate that AI contributes significantly to productivity, healthcare innovation, environmental sustainability, and inclusivity, while also enhancing personal experiences through personalised education and digital accessibility.

However, these benefits are tempered by substantial risks, including job displacement, data privacy violations, algorithmic bias, and reduced human interaction. Left unaddressed, such challenges may exacerbate inequality, erode public trust, and undermine the ethical foundations of technological progress.

The discussion underscores the urgent need for proactive governance, ethical frameworks, and comprehensive regulatory mechanisms that balance innovation with accountability. Policies must prioritise transparent AI design, workforce reskilling, and robust data protection in order to mitigate risks while sustaining long-term societal benefits.

AI is neither inherently beneficial nor harmful; rather, its impact depends on how effectively it is integrated into human systems. Ensuring that AI remains a tool for collective advancement requires a deliberate balance between technological growth and ethical responsibility. By adopting inclusive, forward-looking strategies, societies can harness AI's potential to promote equity, sustainability, and human flourishing in the digital age.

To maximise the benefits of artificial intelligence (AI) while minimising its potential harms, the following strategies are proposed:

1. Implement Ethical AI Standards

Governments, industry leaders, and academic institutions should collaborate to establish ethical guidelines that prioritise transparency, fairness, and accountability in AI systems. Regular bias audits and independent oversight mechanisms should be mandated to ensure equitable outcomes (Floridi et al., 2018).

2. Invest in Workforce Retraining

Public-private partnerships should support large-scale reskilling initiatives for workers affected by automation. Emphasis should be placed on equipping individuals with digital and technical competencies, alongside transferable soft skills, to facilitate their transition into emerging sectors (Frey & Osborne, 2017).

3. Strengthen Data Privacy Regulations

Robust global data protection frameworks, modelled on initiatives such as the General Data Protection Regulation (GDPR), should be enforced to safeguard user autonomy. These frameworks must ensure informed consent, data minimisation, and strict accountability for data misuse (Zuboff, 2019).

4. Promote Digital Literacy and Public Awareness

Education systems and community programmes should incorporate digital literacy curricula that enable individuals to critically engage with AI-driven content. Such initiatives would mitigate risks associated with misinformation, overreliance on technology, and social isolation (Turkle, 2022).

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