

AI-DRIVEN SOCIETY: CONTEMPORARY PERSPECTIVES ON ARTIFICIAL INTELLIGENCE FOR SOCIAL GOOD

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1.INTRODUCTION

The rapid advancement and widespread adoption of Artificial Intelligence (AI) into various aspects of human life have evoked both excitement and apprehension among users (Li et al., 2022). On one hand, AI holds the promise to improve efficiency, uncover novel insights, and facilitate more informed decision-making (Sanderson et al., 2023). On the other hand, its deployment raises significant concerns regarding social justice, equity, and the well-being of all individuals within society (Crivellaro & Dix, 2021). A growing body of research has delved deep into the complex relationship between AI and social justice, showcasing how the technology can both uphold and contest existing power hierarchies based on social differences such as race, gender, nationality, and socioeconomic status (AI Now Institute, 2023). The scholarly community have empirically establish that the embedded biases and structural inequalities within the algorithms and data can underpin AI systems, resulting into discriminatory outcomes that may have adverse impact on the interest of marginalized communities (Hajian et al., 2016; Mills & Whittaker, 2019).

Concurrently, the potential of AI to improve transparency, accountability, and evidence-driven policymaking has also been recognized as valuable tool for addressing the existing social injustice present in the society (Min, 2023 ; Savaşan, n.d.). The challenge lies in striking a careful balance, one that harnesses the benefits of AI while minimising its risks and unforeseen consequences. Several case studies have showcased the convergence of data bias and discrimination in AI. In the realm of employment, AI-driven recruitment practices have been shown to amplify gender and racial biases, disadvantaging women and minorities during the recruitment process (Avery et al., 2023; Yarger et al., 2019). In the same vein, within the criminal justice system, predictive policing algorithms have been criticized for elevating the existing racial disparities, resulting into the over-surveillance of different communities (Purves, 2022; Richardson et al., 2019). The healthcare sector is also struggling with the growing issues of biased AI models, leading to adverse impact on underserved communities (Samorani & Blount, 2020 ; Ibrahim et al., 2020).These instances highlights the need for adopting a comprehensive, multi-stakeholder approach for addressing the challenges arising due to widespread adoption of AI in different domains. Technical solutions alone are not sufficient to address these issues rather a holistic approach must be adopted which incorporate elements of data governance, algorithmic accountability, and substantive community engagement (Aizenberg & Hoven, 2020; Sanderson et al., 2023; Leavy et al., 2020; Aizenberg & Hoven, 2020). As AI continues to evolve and permeate various aspects of society, it is imperative that we proactively understand and tackle with these complex issues. Fostering a deeper understanding of the relationship between AI and social justice, and developing effective strategies to leverage the benefits of the evolving technology while alleviating its risks, will be the key factor in shaping a more equitable and inclusive future for the coming generation (Burgess & Owen, 2004; Aizenberg & Hoven, 2020; Crivellaro & Dix, 2021).

The objective of the current study is to have a deep dive into the academic landscape of AI and explore the multifaceted relationship between AI and social justice, examining both the potential benefits and the inherent risks.

2. LITERATURE REVIEW

2.1 The Promise of AI for Social Good

Artificial Intelligence has garnered significant attention for its ability to enhance decision-making, optimize processes, and uncover new insights across a wide range of domains (Savaşan, n.d.; Aizenberg & Hoven, 2020; Crivellaro & Dix, 2021). It holds immense potential for addressing complex societal challenges.

2.1.1 Promote Inclusive Education: AI-empowered academic platforms may accommodate diverse learning styles and needs, hence making education more accessible for marginalized groups of the society (Kamalov & Gurrib, 2023; Maghsudi et al., 2021; Gupta et al., 2024). These personalized learning platforms employ adaptive learning technology to tailor educational content according to individual strengths, weaknesses, and pace, promising that no one is overlooked. Through multimodal learning formats including videos, interactive simulations and real-time feedback, AI cater to different learning needs, ensuring a more engaging and effective learning experience of the user (Buccella, 2022; Woolf et al., 2013). Additionally, AI increases accessibility for students with disabilities with additional features like text-to-speech, voice recognition, and adaptive assessments, while also offering real-time translations and captions for persons with hearing-impairment (Panjwani-Charani & Zhai, 2023). For marginalized communities who have limited access to quality educational resources, AI-empowered platforms provide customized tutors, multilingual digital textbooks, and quick assessments, bridging educational gaps (Buccella, 2022). Moreover, these platforms provide economical and scalable solutions, reducing the requirement of physical infrastructure hence making quality education possible and affordable for all segments of society. AI also empowers academic community with valuable data-driven feedback, helping them identify the non-performers at an early stage and introduce targeted interventions to improve their performance in future. With the help of real-time feedback and continuous monitoring and assessment, learners receive quick assistance on their grey areas, which is especially beneficial for those who found it difficult with traditional grading systems (Zawacki-Richter et al., 2019). In nutshell, AI-enabled learning platforms have revolutionized the domain of education by fostering inclusivity, bridging socio-economic hurdles, and empowering learners from marginalized community to achieve their academic pursuit in more effective and efficient manner.

2.1.2 Enhance Healthcare Access: In healthcare sector also, AI is doing wonders, by enabling early diagnosis, personalized treatment, and remote patient monitoring, thereby significantly improving healthcare facilities especially for disadvantaged groups (Hosny & Aerts, 2019). Using advanced machine learning algorithms, AI can deeply analyze extensive medical data to detect diseases at an early stage with improved accuracy than traditional diagnostic techniques (Jiang et al., 2017; Varnosfaderani & Forouzanfar, 2024). Early detection of conditions life threatening diseases such as cancer, diabetes, and various cardiovascular disorders helps in timely treatment resulting in improved survival rates. Moreover, AI-driven predictive analytics is there to assist medical practitioners to decide the best prescription and therapies for each patient, thereby reducing the usage of the trial-and-error approach in treatment plans and alleviating the risk of adverse reaction of drugs (Johnson et al., 2020). Other than this, the combination of AI-driven wearable devices and telemedicine platforms have completely revolutionized the way patient care is undertaken as it has made possible the real-time remote monitoring of health conditions and vital signs. (Li et al., 2024). For people in remote areas, AI-powered remote healthcare solutions help overcome the challenges caused by the availability of limited medical practitioners and infrastructure. Further, the growing adoption of AI-enabled chatbots and virtual health care assistants has reduced the burden on healthcare systems and making high-

quality medical services more accessible (Dave & Patel, 2023) .

2.1.3 Bridge Digital Divides: These days there is growing trend towards the adoption of AI-enabled translation tools and assistive technologies that have the potential to overcome communication barriers and help disabled people by offering seamless, real-time support across various languages and accessibility needs (Saina & SSML Carlo Bo, Rome and Bari, Italy, n.d.; Tzoukermann & Miller, 2018). These advanced techniques use artificial intelligence, natural language processing, and speech recognition technology to facilitate hassle free interactions for people with hearing, speech, visual, and mental impairments (Perzanowski et al., 2004). Nowadays, Artificial intelligence has made it possible to interpret sign language and convert it into text or speech, bridging the gap between deaf individuals and those unfamiliar with sign language.

Moreover, AI-driven screen readers, help visually impaired individuals by reading aloud digital content, on the other hand smart magnifiers enhance readability for those with low vision (Buccella, 2022). How can we overlook the role of virtual assistants like Siri, Google Assistant, and Alexa. With their voice-controlled functionality, they enable people with mobility impairments to perform everyday tasks more independently (Hakobyan et al., 2013). Consistent with this, AI tools support individuals suffering from cognitive disabilities by offering simplified content, structured task management, and personalized learning support, aiding those with conditions such as dyslexia or autism. AI-powered technology is breaking barriers in workplace and public domain by providing facilities of automated captions in meetings, real-time transcription services, and assistive communication device (Martiniello et al., 2020; Warschauer & Matuchniak, 2010). These days public transportation systems and smart cities projects are also integrating AI tools, including voice-assisted navigation and kiosks with multilingual and sign language support for better accessibility (Hersh et al., 2018). In the backdrop of above discussion, it is evident that as AI advances, it will play a key role in bridging accessibility gaps and fostering a more inclusive world by breaking language and disability barriers.

2.1.4 Combat Discrimination

AI can help tackle discrimination by alleviating the possibility of human biases in key decision-making areas including hiring, loan approvals, and legal judgments (Lepri et al., 2021). Unlike human decision-makers, who may unconsciously favour certain groups due to personal biases, well-designed AI systems can be trained to evaluate candidates, or situations based on their merits including skills, experience, and qualifications rather than subjective factors such as gender, race, or age, reducing the influence of prejudices (MacCarthy, 2019; Chen, 2022). Similarly, be it AI based financial advisor popularly known as robo-advisors or AI-driven financial models primarily used in loan applications evaluate creditworthiness on basis of well-defined criteria such as income and repayment history of borrower, minimizes the risk of discrimination faced by disadvantageous group of the society (Demajo et al., 2020). However, to leverage the full potential of AI in the current dynamic world and to ensure that it take fair and transparent decisions, it must be carefully developed and continuously monitored to prevent inheriting biases present in historical data (Srivastava & Sinha, 2023; Savaşan, n.d.). Therefore, regular audits must be conducted, and diversity in datasets ensured to make AI-driven decisions as unbiased as possible.

2.2 The Perils of Unchecked AI Development

Despite its potential for good, unchecked AI development poses significant risks to social justice: algorithmic bias, privacy infringement, and the perpetuation of societal inequalities (Min, 2023; Ferrara, 2023). AI systems can perpetuate and enhance the existing biases present in the data used to train them, leading to unfair and discriminatory outcomes. Moreover, the use of AI also raises significant concerns around privacy and data protection. The aggregation and monetization of personal data by tech giants may exacerbate existing socio-economic disparities.

2.2.1 Bias and Discrimination: While AI tools, when used effectively, can help combat discrimination and bias, poorly managed AI systems trained on historical datasets that reflect societal inequalities, may instead perpetuate and increase the existing societal biases, resulting into discriminatory outcomes in key areas including criminal justice, hiring decisions, and availability of various resources (Min, 2023; Savaşan, n.d; Srivastava & Sinha, 2023). AI-based risk assessment tools in criminal justice mostly rely on historical dataset to forecast the likelihood of reoffending or assessing risk levels. If this training data contains biases than there is high risk that people from marginalized communities may face rigorous consequences (Mayson, 2019; Schiff et al., 2020). Similarly, in employment, there is high possibility that AI-enabled recruitment systems trained on old data base favour certain community based on demographic characteristics including gender and race, perpetuating existing biases and discrimination. As AI is making decisions in critical areas, means that any embedded biases can quickly proliferate, exacerbating the existing social inequalities (Zajko, 2021). There is pressing need to address these issue by carefully designing, ongoing monitoring, and the use of fair and transparent algorithms which has the ability to detect and correct biases in training data (Min, 2023). Researchers have consistently emphasized that the benefits of AI need to be evenly distributed, else it would widen the gap between the haves and have-nots. As AI technologies are developed for the betterment of society at large, access to AI-driven tools should not be concentrated in the hands of privileged groups (Zajko, 2021; Felix & Webb, 2024; Crivellaro & Dix, 2021).

2.2.2 Privacy Concerns

AI-based technologies like surveillance systems, facial recognition systems, and predictive policing have been widely disparaged for unreasonably targeting and monitoring the marginalized community of the society, often perpetuating the existing systemic biases and social inequalities (Davis et al., 2022). Such intrusive practices jeopardize fundamental civil rights, such as the right to privacy, freedom of expression, and protection from unnecessary interference and scrutiny by governments or corporations. Promoting the development of AI enabled technologies that prioritize privacy like machine learning, differential privacy, and decentralized data storage can reduce the potential risk of privacy along with continued innovation (Min, 2023). There is an urgent need to ensure that AI-driven development do not come at the cost of fundamental human rights and that digital ecosystems remain equitable, transparent, and inclusive for all.

2.2.3 Lack of Transparency and Accountability:

The "black box" nature of many AI systems poses a significant challenge to transparency and accountability, as their complex algorithms and decision-making processes often remain unclear to users, and society at large (Woodruff et al., 2020). This lack of understanding raises serious concerns about their use in critical areas like healthcare, financial services, criminal justice where AI based algorithmic decisions can have significant and sometimes irreversible effect. When AI systems do not provide clear explanations for their decisions, affected individuals may find it difficult to challenge decisions, as they do not fully understand as to how AI reach to the conclusion. Thus, it becomes difficult for them to ask for any compensation or hold institutions responsible for unfair or biased outcomes. Furthermore, when decision making power is handed over to AI systems, it can create a diffusion of responsibility, where neither the developers, user organizations, nor policymakers take full accountability for any adverse outcome.

2.2.4 Data Exploitation and Commodification

The widespread collection and commercialisation of personal data by numerous technology-based companies threaten individual autonomy and disproportionately harm vulnerable groups of the society (Rayhan & Rayhan, 2023). AI-enabled platforms continuously collect and analyse user data without taking their consent and to drive targeted advertising, shape user behaviour, and algorithmic decision-

making (Madden, 2017). This exploitation aggravates existing power imbalances, resulting into manipulative practices, price discrimination, and algorithmic bias particularly in domains like credit scoring and employment opportunities (Schelenz et al., 2020). Moreover, it escalates the risks of data breaches, personal frauds, and pervasive surveillance. To deal with these privacy issues there is an urgent need to frame stringent data protection laws, ethical AI regulatory frameworks, increased public awareness to uphold transparency, accountability, and user privacy rights in the current digital landscape (Bormida, 2021).

2.2.5 Job Displacement

The widespread adoption of AI based technologies in the workplace has raised serious concerns about job displacement, specifically for low-skill workers. As AI systems become more capable of performing a wide range of tasks just in few seconds, spanning from manufacturing to service industries, there is an increased risk of widespread job losses resulting into exacerbating the existing economic inequalities in the near future (Rayhan & Rayhan, 2023; Sanderson et al., 2023). Governments and policymakers must pay attention to this matter on urgent basis and prioritize the development of comprehensive strategies and take initiatives for workforce re-training and the opening of new employment opportunities considering the needs of an AI-driven economy. There is a need to invest in human capital development and encourage business houses to hold training programs for the affected workers in order to alleviate the negative impacts of automation and ensure a more equitable transition and adaptation of AI in the future workplace scenario.

3 CONCLUDING THOUGHTS

The integration of artificial intelligence into different domain is both beneficial and challenging, particularly in the pursuit of social justice. While AI has the potential to bring many positive changes in the society such as improving access to resources, optimizing decision-making, and addressing systemic inequalities, it also raises concerns relating to enhanced biasness, low transparency, accountability, and enhanced risk of commodification of personal data. To ensure that AI serves as a tool for an inclusive advancement there is a need to have a comprehensive, multi-pronged approach that emphasises ethical considerations throughout its development and deployment. It is essential to address the growing issue of algorithmic bias to prevent perpetuation of existing inequalities, there is an urgent need to ensure diverse representation in AI development and robust mechanisms for early detection and mitigation of existing bias. Transparency and explainability are equally important aspects that cultivates public trust and ensure accountability in AI based decision-making. The regulatory bodies of the country must consider the establishment of clear regulatory frameworks and ethical guidelines to safeguard human rights, and to ensure that AI technologies adhere to the values of fairness and justice. Furthermore, it is crucial to improve digital literacy and involving marginalized communities in shaping AI policies which may help in addressing their unique needs and concerns. The ethical standards we set today will define AI's future impact on society. Policymakers, researchers, technologists, and society must come together to ensure AI promotes social justice. Through encouraging inclusive innovation, and facilitating continuous discourse on responsible AI deployment, it is possible to leverage the full potential of AI for the Bonafide interest of mankind. The fate of an AI driven future is rooted in equity and justice, requiring unwavering commitment, interdisciplinary collaboration, and proactive regulatory measures.

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