Navigating the Ethical, Legal, and Moral Landscape of Artificial Intelligence: Socio-Legal Challenges in the Age of AI

1. Dr. Abhishek Srivastava
(Assistant Professor, ALS-Amity University Rajasthan)
E-mail ID – abhishek.sri121@gmail.com
Institutional mail: asrivastava@jpr.amity.edu
(Orcid Account): - https://orcid.org/0009-0002-1646-8161

2. Dr. Dinesh Ashok
(Assistant Professor, Amity University Rajasthan, Research Partner, ICLAIM – Cyprus)
E-mail (Corresponding): ashoka.jnu@outlook.com
Institutional mail: dashok1@jpr.amity.edu
(Orcid Account): - https://orcid.org/0000-0002-7689-2522

3. Dr. Abhinav Bhardwaj
(Assistant Professor, ALS-Amity University Rajasthan)
E-mail: bhardwajabhinav93@gmail.com
Institutional mail: abhardwaj2@jpr.amity.edu
(Orcid Account): - https://orcid.org/0000-0001-5668-7591

Abstract

This article offers an in-depth examination and analysis of the socio-legal, ethical, and moral issues associated with 'Artificial Intelligence (AI)'. Advancements in AI technologies continue to evolve and seamlessly integrate into various domains of society, and profound challenges emerge at the intersections of legality, ethics, and morality. This article explores the complex web of AI issues, delving into the socio-legal implications of data privacy, bias, and the potential impacts on employment and socioeconomic structures. Ethical considerations encompass the fairness and accountability of AI algorithms, addressing questions of transparency, bias mitigation, and the responsible deployment of intelligent systems in key areas like healthcare and criminal justice. Moreover, the article examines the moral dimensions of AI, questioning the ethical boundaries of autonomous decision-making and the implications for human agency and dignity. As society grapples with the transformative power of AI, a comprehensive understanding of these socio-legal, ethical, and moral dimensions is essential to steer responsible development, deployment, and regulation of 'Artificial intelligence' technologies.

Keywords: *Artificial intelligence, accountability, privacy, transparency.*

I. Introduction

In the rapidly advancing landscape of Artificial Intelligence (AI), wherein technological innovations unfold unprecedented pace, a pressing need emerges to navigate the intricate web of ethical, legal, and moral considerations (Marsden, C. Meyer T. & Brown I., 2020). AI is transforming various domains, such as personalisation, voice assistants, healthcare, customer service, smart homes, transportation, and financial services. As society witnesses the transformative power of AI in various fields, ranging from 'healthcare' and 'finance' to 'education' and beyond, it becomes imperative to critically examine the socio-legal challenges that accompany this technological revolution (Green B., 2018). Deepfake technology driven by 'artificial intelligence' to create realistic fake videos or audio recordings,

has raised apprehensions regarding its possible misuse for spreading misinformation, creating fraudulent content, or even impersonating individuals (Bhaumik A, 2023). It has already been a complex intersection of ethics, law, and morality in the age of AI, aiming to unravel the multifaceted dilemmas posed by these intelligent systems. From questions of algorithmic bias and data privacy to the ethical implications of autonomous decision-making, the exploration of these challenges becomes paramount for fostering a responsible and equitable integration of AI into our society (Naik N., 2022).

The author made a comprehensive analysis of 'artificial intelligence' through the ethical, moral, and legal landscapes of AI as we navigate the intricate challenges that define the contemporary era of artificial intelligence. The general concerns of misuse of AI can be seen as cyber security

900

_____

which covers a wide range of issues such as deepfakes and other social media manipulations, automated Weapons and Warfare, Biased AI Algorithms, Surveillance and Privacy Concerns, Biasness i.e. discrimination of gender and age, lack of transparency and Accountability in case of violation of individual human right, concern of job displacement (Magrani E., 2019). AI holds the potential to improve various aspects of individual life, such as health care, education, and environmental protection, but also poses some challenges, such as ethical dilemmas, social inequalities, and job displacement. The global dialogue on the responsible governance and regulation of AI is to be ensured and different stakeholders should work together to ensure responsible alignment of AI with human values for the greater benefit (Siau K. & Wang W., 2020).

Complete reliance on technology could indeed be harmful. The pervasive integration of technology into daily life presents both opportunities and challenges. It facilitates unprecedented access to information and streamlines tasks, yet it also fosters a dependency that can atrophy basic skills and compromise privacy. Health concerns arise from sedentary lifestyles and screen overexposure, while cybersecurity becomes a critical issue as society's infrastructure becomes increasingly digital (Ameli L., 2022). Moreover, the potential erosion of social skills due to virtual interactions highlights the need for a balanced approach to technology, ensuring it augments rather than dominates our lives. Parsons, (Mitchell P., 2002). Development of AI must be reliable, safe, and trustworthy, and reflect the values and principles of the countries and communities that use it, and it must serve the common good. AI technology developed for one purpose may be repurposed for harmful uses. Legal frameworks may need to address dual-use concerns. Developers and organizations should consider the potential misuse of AI technologies and take ethical precautions to prevent unintended harm (Bhambulkar R., 2023).

II.   AI and Cybersecurity

There are always inherent dangers of AI and could lead to misinformation, manipulation, and existential risk if it is used like an unguided missile. Misuse of AI might be tackled by enhancing cyber security. Cyber security refers to the technical and organizational measures that organizations take to prevent, detect, and respond to cyber-attacks that target their data, systems, and networks. There are concerns about the potential misuse of AI in cyber-attacks. Malicious actors could use AI algorithms to enhance the sophistication of cyber threats, making it challenging for traditional cybersecurity measures to detect and mitigate these attacks (Yang K., 2023). Some major concerns are:

A.   *Social Media Manipulation*

In the digital era 'Authentic' is the word that reflects the growing concerns over the ability of artificial intelligence (AI) to deceive and dehumanize, as well as the desire for something real and genuine in a world of fake news and deepfakes (Borel B., 2018). It is true that language and technology are intertwined and influence each other. 'authentic' is a word that captures the mood and the challenges of our times, as we face the rapid development and adoption of AI and its implications for our society and ourselves.

AI tools can be misused to automate the generation of fake social media accounts, manipulate public opinion, and spread disinformation. This poses challenges for identifying and mitigating the impact of misinformation campaigns. The concerns about the safety and ethics of AI systems demand more regulation and oversight of AI development and deployment, as well as more research on the social and environmental impacts of AI (Seneviratne O., 2022).

Data protection and privacy require that the creators and users of deepfake audio and video must ensure the 'security, accuracy, and reliability' of the data, and prevent or mitigate the risks of data breaches, misuse, or harm. Data protection and privacy also require that the creators and users of deepfake audio and video must conform to the applicable laws and regulations and adhere to the ethical and social norms and values of society.

B.   *AI voice scam*

AI voice scams are becoming more common and sophisticated, as fraudsters use AI tools to generate realistic and convincing voices of people that the victims know and trust. They often create a sense of urgency and panic and ask the victims to keep the conversation secret. They also target people who have relatives or friends in foreign countries, especially Canada and Israel, where there are large Indian diaspora communities. To avoid falling prey to such scams, people should be aware and cautious of such calls, and verify the identity and situation of the caller before transferring any money. They should also contact their relatives or friends directly through other means, such as video calls, messages, or emails, and inform them about the suspicious call. They should also report the fraud to the police and the cybercrime authorities.

C. *Cyber frauds and how artificial intelligence (AI) is changing their face*

Cyber fraudsters are using AI to create sophisticated scams that are difficult to detect and can cause huge money loss, harm reputations, and invade privacy. The techniques that fraudsters are using, such as AI voice cloning, deepfakes, and generative AI software, and how they can manipulate people's trust and emotions.

D. *Surveillance and Privacy Concerns*

Privacy issues are brought up by the use of AI in "surveillance" systems, "facial recognition" technology, and other monitoring applications. The possible abuse of these technologies in ways that violate people's rights has drawn criticism for governments and organizations (Carmody J., 2021). People's private rights may be violated by the use of AI in data mining, face recognition, and spying. Consent, the right to be forgotten, and the possibility of abuse are all raised. (Gilani S., 2023).

901

_____

E. Automated Weapons and Warfare: Impact of artificial intelligence (AI) on the future of warfare

The development of autonomous weapons systems and the integration of AI in military applications raise ethical concerns. The potential misuse of AI in warfare without adequate human oversight has prompted discussions on the need for responsible AI deployment in military contexts (Sharma P., 2020).

AI can revolutionize warfare by enabling new forms of autonomous weapons, such as robots, drones, and torpedoes, that can identify and engage with human targets without requiring direct human involvement. The ethical and strategic challenges that AI poses for global security and stability, and the need for international cooperation and regulation to prevent the misuse and escalation of AI-enabled conflict (Johnson J., 2020).

III. AI and its impact on the future of medicine and healthcare

Doctors and other health professionals should be aware of and familiar with AI, as it will become an integral part of their practice soon. 'Artificial intelligence' represents a potent and swiftly advancing field of technology that can enhance the quality and accessibility of health care. AI is a boon for patient care, as it can help diagnose diseases, suggest treatments, and monitor health conditions (Gerke S., 2020). However, AI is also a bane for research, as it can make theses and dissertations redundant, as they can be easily generated and plagiarized by AI tools (Figueroa B., 2023). While AI won't fully replace a doctor's role, physicians who understand AI will gain an edge over those who don't. AI can enhance efficiency in certain medical tasks and rapidly extract information from large databases, its involvement in diagnosis remains a decade or two away. AI has limited applications in robotic surgeries now, and human judgment will always be needed in medicine (Tat E., 2021). The contribution of AI to the quick development of vaccines during the pandemic could be seen, but its diagnostic capabilities were not robust. AI development in healthcare should be led by individuals with medical training." it should be humans with technology, not humans against or instead of technology (Vaishya R., 2020).

Now coming to the limitations of ChatGPT, an AI chatbot that can generate text based on a huge amount of information sourced from the internet. The free version of ChatGPT may provide false or incomplete answers to questions about medicines, which could be harmful to patients who rely on it for medical advice. People should not trust the free ChatGPT for medical information, and they should always consult a professional doctor or pharmacist before taking any medication. It also implies that the paid version of ChatGPT, which uses a more advanced and updated model, maybe more reliable and accurate, but it does not provide any evidence or comparison to support this claim (Sallam M., 2023). Companies using and promoting the use of AI chatbots must follow strict guidelines and safety instructions to ensure responses are helpful, positive, polite, empathetic, interesting, entertaining, and engaging. They must use predefined internal tools to search the web and provide information from reliable sources, which they always cite and reference in responses. It is well known fact that machines cannot claim to be an expert or a replacement for professional advice, therefore it is always advised to users to verify the information provided by ChatGPT and seek qualified help when needed (Murtarelli G., 2020).

IV. Transparency and Accountability

As AI systems make decisions that affect individuals and society, questions about accountability and transparency arise. Regulations may require organizations to explain and justify automated decisions. Ensuring transparency in AI processes is essential for building trust. Insufficient transparency can erode trust and can lead to suspicion, especially when AI is involved in critical decision-making processes (Lolaeva A., 2021).

V. Job Displacement

The widespread adoption of AI may lead to job displacement (Bensinger G.,2023). Legal and policy frameworks may be needed to address issues related to unemployment, retraining, and the economic impact of automation. Ensuring a just transition for workers affected by AI-driven job displacement is an ethical consideration. Society needs to address the social and economic consequences of widespread automation.

A. Generative artificial intelligence (Gen AI) and its impact on the future of work:

'Gen AI' is a type of AI that can generate code and detailed text responses from brief prompts, and it is seen to excel at automating rote tasks that workers have been diligently doing the same way for years or decades (George A, 2023). In the era of AI soft skills, such as critical thinking, creativity, and collaboration, will be in higher demand in the age of 'Gen AI' (Green B., 2018). It is often said that AI will do all the work and humans will have no jobs.

However it seems half-truth, AI will replace some jobs that are prone to human error, boredom, or danger, but it will not replace all jobs that require human judgment, empathy, or innovation (Mok A, 2023).

B. Exploring the possibility of a future where artificial intelligence (AI) would play an important role:

AI will surpass human capabilities in many domains, such as manufacturing, customer service, education, and entertainment. AI will create a huge wealth gap and social unrest, and we will need to implement a universal basic income to support the unemployed masses. It could be proposed that we will have to shift our focus from IQ and EQ to LQ, or the love quotient, which is the ability to empathize, connect, and care for others. Humans will have to find meaning and happiness in activities that AI cannot do, such as art, music, spirituality, and social interactions (Du S., 2020). The potential for human-AI collaboration and co-creation, and the resilience and adaptability of human workers are important. AI will significantly shape the future of work and society, and we will

902

_____

have to prepare ourselves for the changes and opportunities that it will bring. To prepare for the jobs of the future people must do something different as learning new skills, staying updated on the latest trends, and embracing lifelong learning (Wang D., 2020). Due to Gen AI, no one's job will be the same anymore. 'Gen AI' might be applied in various domains, such as education, health care, and entertainment. Previous technological waves, such as computerisation, resulted in the polarisation of employment by decreasing the share of medium-skilled workers. The challenges and opportunities that AI poses for the labour market, need for reskilling, regulation, and innovation (Albanesi S, 2023).

VI.   Autonomy and Decision-Making

Liability issues related to artificial intelligence arise when AI systems make decisions that have legal consequences. Determining who is responsible for AI-related actions can be legally complex. Questions about the ethical implications of delegating decision-making to autonomous systems, especially in critical areas like healthcare or criminal justice, need careful consideration (Coeckelbergh M., 2019).

VII.   Environmental Impact

'Artificial intelligence' serves as a potent tool to enhance and expand transformative climate efforts in developing nations. By offering creative solutions for adaptation, mitigation, and monitoring, AI can significantly contribute to climate-resilient and low-emission development. (Cowls, J., 2021). Early warning systems with artificial intelligence capabilities might continuously watch real-time data. Conditions indicative of a heatwave or drought, such as extended hot spells and little precipitation, may be recognized by them. The data on soil moisture helps predict when and how severe a drought will be. A. Sharma (2022). AI-powered precision farming can increase food output, minimize water use, and improve crop management (Thilakarathne, N., 2022). Power generation, storage systems, and consumer demand are just a few of the grid components that AI algorithms optimize for communication and coordination. "AI" systems dynamically balance supply and demand, control peak loads, and enable the integration of distributed energy resources by utilizing real-time data and predictive analytics. (M. Suardi, 2023).

However, there are always two sides to the same coin. AI consumes significant energy, leads to increased carbon emissions, and may disrupt natural ecosystems, requiring ethical considerations and the implementation of energy-efficient algorithms. The 'environmental' impact of training large AI models and running AI systems raises ethical considerations, particularly from the perspective of climate change and sustainability (Mikhailova A., 2023). Everyone should agree that AI should be used responsibly and ethically and that its environmental and social impacts should be carefully assessed and monitored. Addressing legal, ethical, and moral issues requires a collaborative effort involving policymakers, industry stakeholders, researchers, and the wider

public to ensure the responsible development and deployment of AI technologies (Hagendorff T., 2019).

There must be laws and regulations addressing the 'environmental' impact of AI, especially in the context of 'energy consumption'.

VIII.   Biased AI Algorithms

Inadvertent or intentional bias in AI algorithms can result in discriminatory outcomes. Misuse of AI in areas such as hiring, 'law enforcement', and 'financial services can perpetuate and exacerbate existing social inequalities. Discrimination based on race, gender, or other protected characteristics is prohibited by law in many places (Walambe R., 2023). If AI systems exhibit biased behaviour, it may lead to legal challenges. Building AI models on biased data can perpetuate and even exacerbate existing social biases (Mehrabi N., 2019). Addressing bias and ensuring fairness in AI algorithms is a moral imperative. AI algorithm bias can manifest in various ways, leading to unfair or discriminatory outcomes. AI algorithms, from hiring tools to facial recognition systems, are increasingly integral to decision-making processes in various sectors (Zhou N., 2021). However, these algorithms can inadvertently perpetuate existing biases if they're trained on historical data that reflects societal inequalities (Hajian S., 2016). For example, a hiring algorithm might favour male candidates if it learns from data where women are underrepresented in certain roles. Similarly, facial recognition systems might struggle with accuracy for ethnic groups that are not well-represented in the training datasets. Predictive policing and credit scoring algorithms can also reinforce biases, leading to discriminatory practices against certain neighbourhoods or socioeconomic groups (Serna I., 2020).

To mitigate these issues, a comprehensive strategy is essential. This includes assembling diverse and inclusive datasets for training algorithms, implementing fairness-aware machine learning techniques, and continuously monitoring and auditing AI systems for biased outcomes. Additionally, engaging with a broad range of stakeholders is crucial to ensure that AI deployments are ethical and equitable (Khalil A., 2020).

IX.   Legal landscape on Artificial Intelligence: *Whether there will be global norms to rein in artificial intelligence (AI)*

There are the challenges and opportunities of regulating AI, and the different perspectives and approaches of various countries and organizations. AI is a powerful and disruptive technology that can have positive and negative impacts on society, the economy, and the environment. Therefore, there is a need for global cooperation and coordination to ensure that AI is used for good and not evil and that it respects human rights and values. However, it is also pointed out that there is no consensus on what constitutes ethical and responsible AI, and that different countries and regions have different interests and priorities

903

_____

when it comes to AI development and governance (Feijóo C., 2020).

The "AI" Act, which was passed by the European Union, is the first comprehensive law in history to limit "AI." It establishes a broad legislative framework to encourage the safe advancement of "AI" while addressing the problems related to the rapidly developing technology. The law forbids detrimental AI techniques including mass monitoring, social scoring, and manipulation that pose an obvious risk to people's rights, livelihoods, and safety. To guarantee the quality, accountability, and transparency of high-risk AI systems—such as those employed in healthcare, education, and law enforcement—the law also places stringent restrictions and obligations on them. The law also aims to foster innovation and competitiveness in the EU's AI sector, by providing support and guidance for AI developers and users, as well as creating a European AI Board to oversee the implementation and enforcement of the law (Elbashir M, 2024).

On the other hand, India has adopted a different approach to AI, focusing on both economic growth and social inclusion, while also promoting research to address important issues such as ethics, bias, and privacy related to AI (Chatterjee, S. (2020). India has launched a national strategy for AI that focuses on leveraging AI for social and economic development and has also participated in some multilateral initiatives and dialogues on AI ethics and governance.

In addition to the technology's pure economic benefits, India's National Strategy on Artificial Intelligence (NSAI), published by NITI Aayog in 2018, emphasizes AI's potential to address s ocial issues that its citizens face in sectors like agriculture, hea lth, and education. The strategy emphasizes sectors that are relevant to India's development, such as smart mobility, smart cities, and smart manufacturing, and identifies five core pillars to achieve its vision of 'AI for All': research, skilling, adoption, data, and governance. The strategy also proposes a set of principles for responsible AI, based on the tenets of the Indian Constitution, which provide a guiding framework for various stakeholders in leveraging AI (NITI Aayog Report, 2018).

The United States (US) has adopted a more flexible and innovation-friendly approach to AI regulation and has issued some principles and guidelines for federal agencies to ensure that AI is fair, transparent, and accountable (Taiwo E., 2023). US Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence outlines the policy and principles of the US government on AI, and the roles and responsibilities of various agencies and stakeholders (Jobin A., 2019).

The agreement reached by three governments Germany, France, and Poland on the future AI regulation, have agreed on a common position on how to regulate AI in the European Union, and they support mandatory self-regulation for foundation models of AI, which are the core algorithms and architectures that underpin various AI applications (Woszczyna K., 2023). China has emerged as a global leader in AI innovation and

application and has issued some ethical norms and standards for AI development and use, but also faces some criticisms and concerns over its use of AI for surveillance and social control (Zhang Y., 2022).

The United Nations (UN) has established a High-level Panel on Digital Cooperation that aims to foster global collaboration and dialogue on digital technologies, including AI, and to promote a human-centric and inclusive digital future. AI regulation is a complex and dynamic issue that requires continuous engagement and adaptation from all stakeholders, and there is no one-size-fits-all solution for achieving ethical and responsible AI. There is a need for more awareness and education on AI among the public and policymakers, and there is a role for civil society and the media to monitor and report on the impacts and implications of AI (Clarke R., 2019).

X. Information Technology Act, 2000 and Artificial Intelligence:

India does not have a specific law that governs Artificial Intelligence (AI). However, the Information Technology (IT) Act, of 2000 does provide a framework that could be applied to AI in certain contexts. It is a key piece of legislation governing electronic commerce and various online activities. These sections of this Act could be relevant to issues arising from the misuse of AI in the digital space.

The IT Act includes provisions for electronic governance, digital signatures, and electronic records, which can be relevant to AI operations, especially in terms of data security and authentication. Information Technology Act, of 2000 addresses issues related to unauthorized access, data breaches, and other cyber threats. Misuse of AI in the context of cyber-attacks could be covered by this law. Section 66E of the Information Technology Act, 2000 (IT Act) pertains to deepfake crimes, where the unauthorized capture, publication, or transmission of a person's images in mass media violates their privacy. Offenders can face up to three years of imprisonment or a fine of ₹2 lakh. Similarly, Section 66D deals with malicious intent related to communication devices or computer resources, leading to impersonation or cheating, with penalties of up to three years imprisonment and/or a fine of ₹1 lakh. Furthermore, Sections 67, 67A, and 67B of the IT Act allow prosecution for publishing or transmitting obscene or sexually explicit deepfakes. Section 43-A imposes liability on corporate bodies handling sensitive personal data or information.

Negligence in implementing reasonable security practices can result in damages payable to affected individuals. However, this section does not precisely define sensitive data or reasonable security practices. Lastly, Section 72 penalizes individuals who disclose electronic records or other material without consent while providing services under the IT Act 2000.

Moreover, there have been discussions and initiatives to update the IT Act to address the nuances of AI more directly. For instance, the Indian government has considered amendments to ensure that AI algorithms and language models used for machine training are free from bias (Sabreena Basheer,

904

_____

2024). Additionally, there's an ongoing conversation about a new framework, possibly under the proposed Digital India Act, which may include a chapter devoted to regulating emerging technologies like AI (Chandrasekhar R). Apart from the IT Act, of 2000, The Personal Digital Data Protection Act, of 2023 has been enacted, it will regulate the processing of personal data and impose obligations on entities handling such data. AI applications often involve the processing of large amounts of data and compliance with data protection laws is crucial (Hacker P., 2022).

The Ministry of Electronics and Information Technology has also issued advisories to guide the use of AI, emphasizing the need for due diligence by intermediaries and platforms under the IT Act and related rules (Agrawal A, 2024). These steps indicate a move towards more specific regulations for AI in India, balancing the promotion of technology with the protection of users. Also, Intellectual property laws, including patent and copyright laws, may apply to AI technologies. The protection of AI-related innovations and the prevention of unauthorized use can be addressed under these laws (Barat D., 2024). Governments and regulatory bodies around the world are increasingly recognizing the need for specific regulations to address the challenges and opportunities presented by AI technologies. It's essential to enact comprehensive laws, which would deal with various dimensions of use and misuse of AI.

XI.   Conclusion

It would be presumed that AI could surpass human intelligence in the next five years. AI could soon overtake the level of information that a human brain holds, and it could create sub-goals that could harm humans. The kind of intelligence that AI is developing is very different from the intelligence that humans have. AI poses fundamental questions about the nature and scope of human dignity, autonomy, and agency, and that the law must ensure that AI is used responsibly and ethically. AI should not be seen as a threat or a competitor but as a tool and a partner that can augment human capabilities and enhance social welfare. The legal community embraces AI and uses it to improve the delivery of justice and access to justice. There are concerns about the dangers of deepfakes and the need for media education and awareness. Deepfakes, which are AI-generated videos or images that can manipulate the appearance or voice of a person, can cause a big crisis, and even stoke the fire of discontent in a diverse society like India's. Recently India's prime minister was a victim of a deepfake video that showed him playing garba, a traditional dance, during Navratri festivities. Media must spread awareness about the misuse and impact of deepfakes, and educate people about how to verify their authenticity. The potential risks associated with AI are challenges that countries should deal with together. It's important to note that AI technology itself is neutral, and its impact depends on how it is developed, deployed, and regulated. Efforts are ongoing to establish ethical guidelines, regulations, and best practices to mitigate the risks associated with the misuse of AI. However, there is a need for common security in cyberspace instead of confrontation. There is a need for a global initiative that brings together researchers, civil society organizations, and companies to promote the responsible use of AI.

References:
1. Agrawal, A. (2024, March 15). In the revised AI advisory, the IT ministry removes the requirement for govt permission. Hindustan Times. https://www.hindustantimes.com/india-news/in-revised-ai-advisory-it-ministry-removes-requirement-for-government-permission-101710520296018.html
2. Albanesi, S., Dias da Silva, A., Jimeno, J. F., Lamo, A., & Wabitsch, A. (2023, November 28). Reports of AI ending human labour may be greatly exaggerated. European Central Bank Research Bulletin, 113. https://www.ecb.europa.eu/press/research-publications/resbull/2023/html/ecb.rb231128~0a16e73d87.en.html
3. Ameli, L., Chowdhury, M., Farid, F., Bello, A., Sabrina, F., & Maurushat, A. (2022). AI and fake news: A conceptual framework for fake news detection. Proceedings of the 2022 International Conference on Cyber Security. https://doi.org/10.1145/3584714.3584722
4. Barat, D. (2024, May). On the question of regulating artificial intelligence ("AI"), India's position remains an evolving one – even while the country closely tracks, and accounts for, global developments. Mondaq. https://www.mondaq.com/india/new-technology/1410758/indias-initiatives-on-regulating-artificial-intelligence-balancing-promotion-with-protection
5. Basheer K.C., S. (2024, January 5). Indian government contemplates adding AI regulations to IT Act. Analytics Vidhya. https://www.analyticsvidhya.com/blog/2024/01/indian-government-contemplates-adding-ai-regulations-to-it-act/
6. Bensinger, G. (2023, November 18). Amazon.com to cut 'several hundred' Alexa jobs. Reuters. https://www.reuters.com/technology/amazoncom-cut-several-hundred-alexa-jobs-2023-11-17/#:~:text=Nov%2017%20(Reuters)%20%2D%20Amazon,Alexa%2C%20according%20to%20the%20email.
7. Bhambulkar, R., Choudhary, S., & Pimpalkar, A. (2023). Detecting fake profiles on social networks: A systematic investigation. 2023 IEEE International Students' Conference on Electrical, Electronics and Computer Science (SCEECS), 1-6. https://doi.org/10.1109/SCEECS57921.2023.10063046
8. Bhaumik, A. (2023, December). Regulating deepfakes and generative AI in India. The Hindu. https://www.thehindu.com/news/national/regulating-deepfakes-generative-ai-in-india-explained/article67591640.ece
9. Borel, B. (2018). Clicks, lies and videotape. Scientific American, 319(4), 38-43. https://doi.org/10.1038/scientificamerican1018-38

_____

10. Carmody, J., Shringarpure, S., & Venter, G. (2021). AI and privacy concerns: A smart meter case study. Journal of Information, Communication and Ethics in Society, 19, 492-505. https://doi.org/10.1108/jices-04-2021-0042

11. Chandrasekhar, R. (2024, March 20). New Digital India Act to look at guardrails for AI, emerging tech via the prism of user harm. The Indian Express. https://indianexpress.com/article/india/new-digital-india-act-guardrails-ai-emerging-tech-user-harm-rajeev-chandrasekhar-8627186/

12. Chatterjee, S. (2020). AI strategy of India: Policy framework, adoption challenges and actions for government. Transforming Government: People, Process and Policy, 14, 757-775. https://doi.org/10.1108/tg-05-2019-0031

13. Clarke, R. (2019). Regulatory alternatives for AI. Computer Law & Security Review, 35, 398-409. https://doi.org/10.1016/j.clsr.2019.04.008

14. Coeckelbergh, M. (2019). Artificial intelligence: Some ethical issues and regulatory challenges. Technology and Regulation, 2019, 31-34. https://doi.org/10.26116/techreg.2019.003

15. Cowls, J., Tsamados, A., Taddeo, M., & Floridi, L. (2021). The AI gambit: Leveraging artificial intelligence to combat climate change—Opportunities, challenges, and recommendations. AI & Society, 38, 283-307. https://doi.org/10.1007/s00146-021-01294-x

16. Du, S., & Xie, C. (2020). Paradoxes of artificial intelligence in consumer markets: Ethical challenges and opportunities. Journal of Business Research. https://doi.org/10.1016/j.jbusres.2020.08.024

17. Elbashir, M. (2024, April 22). EU AI Act sets the stage for global AI governance: Implications for US companies and policymakers. Atlantic Council. https://www.atlanticcouncil.org/blogs/geotech-cues/eu-ai-act-sets-the-stage-for-global-ai-governance-implications-for-us-companies-and-policymakers/

18. Feijóo, C., Kwon, Y., Bauer, J., Bohlin, E., Howell, B., Jain, R., Potgieter, P., Vu, K., Whalley, J., & Xia, J. (2020). Harnessing artificial intelligence (AI) to increase wellbeing for all: The case for a new technology diplomacy. Telecommunications Policy, 44, 101988. https://doi.org/10.1016/j.telpol.2020.101988

19. Figueroa, B., & Eaton, S. (2023). Examining recommendations for artificial intelligence use with integrity from a scholarship of teaching and learning lens. RELIEVE - Revista Electrónica de Investigación y Evaluación Educativa. https://doi.org/10.30827/relieve.v29i2.29295

20. George, A. (2023, December 8). Thanks to Gen AI, no one's job will be the same anymore. Times Ascent. https://timesascent.com/articles/thanks-to-gen-ai-no-one-s-job-will-be-the-same-anymore/158094

21. Gerke, S., Minssen, T., & Cohen, G. (2020). Ethical and legal challenges of artificial intelligence-driven healthcare. Artificial Intelligence in Healthcare, 295-336. https://doi.org/10.2139/ssrn.3570129

22. Gilani, S., Al-Matrooshi, A., & Khan, M. (2023). Right of privacy and the growing scope of artificial intelligence. Current Trends in Law and Society. https://doi.org/10.52131/clts.2023.0301.0011

23. Green, B. (2018). Ethical reflections on artificial intelligence. Scientia et Fides. https://doi.org/10.12775/SETF.2018.015

24. Green, B. (2018). Ethical reflections on artificial intelligence. Scientia et Fides. https://doi.org/10.12775/SETF.2018.015

25. Hacker, P., Naumann, F., Friedrich, T., Grundmann, S., Lehmann, A., & Zech, H. (2022). AI compliance – Challenges of bridging data science and law. ACM Journal of Data and Information Quality (JDIQ), 14, 1-4. https://doi.org/10.1145/3531532

26. Hagendorff, T. (2019). The ethics of AI ethics: An evaluation of guidelines. Minds and Machines, 30, 99-120. https://doi.org/10.1007/s11023-020-09517-8

27. Hajian, S., Bonchi, F., & Castillo, C. (2016). Algorithmic bias: From discrimination discovery to fairness-aware data mining. Proceedings of the 22nd ACM SIGKDD International Conference on Knowledge Discovery and Data Mining. https://doi.org/10.1145/2939672.2945386

28. Jobin, A., Ienca, M., & Vayena, E. (2019). The global landscape of AI ethics guidelines. Nature Machine Intelligence, 1, 1-11. https://doi.org/10.1038/s42256-019-0088-2

29. Johnson, J. (2020). Artificial intelligence, drone swarming and escalation risks in future warfare. The RUSI Journal, 165, 26-36. https://doi.org/10.1080/03071847.2020.1752026

30. Khalil, A., Ahmed, S., Khattak, A., & Al-Qirim, N. (2020). Investigating bias in facial analysis systems: A systematic review. IEEE Access, 8, 130751-130761. https://doi.org/10.1109/ACCESS.2020.3006051

31. Lolaeva, A., & Sakaeva, K. (2021). Artificial intelligence: legal and ethical aspects. Digital Law Journal, 2(8), 1-12. https://doi.org/10.25136/2409-7136.2021.8.36306

32. Magrani, E. (2019). New perspectives on ethics and the laws of artificial intelligence. Internet Policy Review, 8. https://doi.org/10.14763/2019.3.1420

33. Marsden, C., Meyer, T., & Brown, I. (2020). Platform values and democratic elections: How can the law regulate digital disinformation? Computer Law & Security Review, 36, 105373. https://doi.org/10.1016/j.clsr.2019.105373

34. Mehrabi, N., Morstatter, F., Saxena, N., Lerman, K., & Galstyan, A. (2019). A survey on bias and fairness in machine learning. ACM Computing Surveys (CSUR), 54, 1-35. https://doi.org/10.1145/3457607

35. Mikhailova, A., & Sharova, D. (2023). Artificial intelligence ethics code in healthcare. Digital Diagnostics. https://doi.org/10.17816/dd430356

36. Mok, A. (2023). AI could mean free doctors, lawyers: OpenAI Vinod Khosla prediction. Business Insider. https://www.businessinsider.com/ai-could-mean-free-doctors-lawyers-openai-vinod-khosla-prediction-2023-12?IR=T

906

_____

37. Murtarelli, G., Gregory, A., & Romenti, S. (2020). A conversation-based perspective for shaping ethical human-machine interactions: The particular challenge of chatbots. Journal of Business Research. https://doi.org/10.1016/j.jbusres.2020.09.018

38. Naik, N., Hameed, B., Shetty, D., Swain, D., Shah, M., Paul, R., Aggarwal, K., Ibrahim, S., Patil, V., Smriti, K., Shetty, S., Rai, B., Chłosta, P., & Somani, B. (2022). Legal and ethical consideration in artificial intelligence in healthcare: Who takes responsibility? Frontiers in Surgery, 9. https://doi.org/10.3389/fsurg.2022.862322

39. NITI Aayog. (2018, June). National Strategy for Artificial Intelligence. https://www.niti.gov.in/sites/default/files/2023-03/National-Strategy-for-Artificial-Intelligence.pdf

40. Parsons, S., & Mitchell, P. (2002). The potential of virtual reality in social skills training for people with autistic spectrum disorders. Journal of Intellectual Disability Research: JIDR, 46(Pt 5), 430-443. https://doi.org/10.1046/j.1365-2788.2002.00425.x

41. Sallam, M. (2023). ChatGPT utility in healthcare education, research, and practice: Systematic review on the promising perspectives and valid concerns. Healthcare, 11. https://doi.org/10.3390/healthcare11060887

42. Seneviratne, O. (2022). Blockchain for social good: Combating misinformation on the web with AI and blockchain. Proceedings of the 14th ACM Web Science Conference 2022. https://doi.org/10.1145/3501247.3539016

43. Serna, I., Morales, A., Fierrez, J., Cebrian, M., Obradovich, N., & Rahwan, I. (2020). SensitiveLoss: Improving accuracy and fairness of face representations with discrimination-aware deep learning. Artificial Intelligence, 305, 103682. https://doi.org/10.1016/j.artint.2022.103682

44. Sharma, A. (2022). Civic-centred heuristic early warning system fashioned using artificial intelligence and the Internet of Things. 2022 Second International Conference on Computer Science, Engineering and Applications (ICCSEA), 1-6. https://doi.org/10.1109/ICCSEA54677.2022.9936300

45. Sharma, P., Sarma, K., & Mastorakis, N. (2020). Artificial intelligence-aided electronic warfare systems—Recent trends and evolving applications. IEEE Access, 8, 224761-224780. https://doi.org/10.1109/ACCESS.2020.3044453

46. Siau, K., & Wang, W. (2020). Artificial intelligence (AI) ethics: Ethics of AI and ethical AI. Journal of Database Management, 31, 74-87. https://doi.org/10.4018/jdm.2020040105

47. Suardi, M., Cannarile, F., Guastone, G., Fidanzi, A., Millini, R., & Testa, D. (2023). A framework for the application of AI solutions for facilitating and speeding up the industrialization of innovative R&D technologies for targeting net-zero emissions. *Day 1 Mon, October 02, 202

48. Taiwo, E., Akinsola, A., Tella, E., Makinde, K., & Akinwande, M. (2023). A review of the ethics of artificial intelligence and its applications in the United States. arXiv, abs/2310.05751. https://doi.org/10.5121/ijci.2023.1206010

49. Tat, E., & Rabbat, M. (2021). Ethical and legal challenges. Ethics and Legal Challenges in Artificial Intelligence and the Internet of Things, 395-410. https://doi.org/10.1016/B978-0-12-820273-9.00017-8

50. The White House. (2023, October 30). Executive order on the safe, secure, and trustworthy development and use of artificial intelligence. https://www.whitehouse.gov/briefing-room/presidential-actions/2023/10/30/executive-order-on-the-safe-secure-and-trustworthy-development-and-use-of-artificial-intelligence/

51. Thilakarathne, N., Bakar, M., Abas, P., & Yassin, H. (2022). A cloud-enabled crop recommendation platform for machine learning-driven precision farming. Sensors, 22, 6299. https://doi.org/10.3390/s22166299

52. Vaishya, R., Javaid, M., Khan, I., & Haleem, A. (2020). Artificial intelligence (AI) applications for the COVID-19 pandemic. Diabetes & Metabolic Syndrome, 14, 337-339. https://doi.org/10.1016/j.dsx.2020.04.012

53. Walambe, R., Chaudhary, P., Bajaj, A., Rathore, A., Jain, V., & Kotecha, K. (2023). Generative adversarial networks for mitigating bias in disinformation. 2023 IEEE International Conference on Contemporary Computing and Communications (InC4), 1-6. https://doi.org/10.1109/InC457730.2023.10262880

54. Wang, D., Churchill, E., Maes, P., Fan, X., Shneiderman, B., Shi, Y., & Wang, Q. (2020). From human-human collaboration to human-AI collaboration: Designing AI systems that can work together with people. Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems. https://doi.org/10.1145/3334480.3381069

55. Woszczyna, K., & Mania, K. (2023). The European map of artificial intelligence development policies: A comparative analysis. International Journal of Contemporary Management. https://doi.org/10.2478/ijcm-2023-0002

56. Yang, K., & Menczer, F. (2023). Anatomy of an AI-powered malicious social botnet. arXiv, abs/2307.16336. https://doi.org/10.48550/arXiv.2307.16336

57. Zhang, Y., Ren, G., & Wang, D. (2022). Ethical challenges and strategies of artificial intelligence applications. 2022 Eleventh International Conference of Educational Innovation through Technology (EITT), 110-113. https://doi.org/10.1109/EITT57407.2022.00025

58. Zhou, N., Zhang, Z., Nair, V., Singhal, H., Chen, J., & Sudjianto, A. (2021). Bias, fairness, and accountability with AI and ML algorithms. arXiv, abs/2105.06558. https://doi.org/10.48550/arXiv.2105.06558Top of Form.

907