



Research Article

Regulating Generative AI in India: Legal and Ethical Challenges in the Age of ChatGPT

Vijay Kumar Verma ^{1*}, Anshika Gupta ²

¹⁻² Research Scholar, Teerthanker Mahaveer College of Law & Legal Studies,
Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, India

Corresponding Author: * Vijay Kumar Verma

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ABSTRACT

The rapid advancement of Generative Artificial Intelligence (Generative AI), particularly tools such as ChatGPT, has transformed the manner in which information is created, disseminated, and utilized across various sectors, including education, business, healthcare, and governance. While these technologies offer significant opportunities for innovation, efficiency, and economic growth, they also raise complex legal and ethical concerns. Issues relating to data privacy, intellectual property rights, algorithmic bias, misinformation, accountability, transparency, and the protection of fundamental rights have emerged as major challenges in the deployment of Generative AI systems.

This paper examines the evolving regulatory landscape for Generative AI in India and analyses the adequacy of existing legal frameworks in addressing the risks associated with AI-generated content. It explores the implications of India's data protection regime, emerging AI governance initiatives, and international regulatory developments to identify gaps in current laws and policies. The study further investigates ethical concerns surrounding fairness, explainability, human oversight, and responsible innovation.

Using a doctrinal and analytical research methodology, the paper argues that India requires a balanced and adaptive regulatory framework that promotes technological advancement while ensuring accountability, transparency, and the protection of constitutional values. The study concludes by proposing policy recommendations for responsible AI governance, emphasising the need for a human-centric approach that safeguards individual rights and public trust in the age of Generative AI.

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1. INTRODUCTION

Artificial Intelligence (AI) has emerged as one of the most transformative technologies of the twenty-first century, revolutionising various sectors including education, healthcare, finance, governance, and legal services. Among its recent advancements, Generative Artificial Intelligence (Generative AI) has gained significant attention due to its ability to create human-like text, images, audio, and other forms of content. The emergence of advanced AI systems such as ChatGPT, Google Gemini, and other large language models has demonstrated the immense potential of AI to enhance productivity, innovation, and decision-making processes.

Despite its numerous benefits, Generative AI presents complex legal and ethical challenges. Issues relating to data privacy, intellectual property rights, misinformation, algorithmic bias, transparency, accountability, and cyber security have become increasingly prominent. AI-generated content often raises questions regarding ownership, liability, and the protection of individual rights. Furthermore, the widespread use of Generative AI has intensified concerns about the misuse of technology for creating deep fakes, spreading false information, and influencing public opinion.

In India, the rapid adoption of AI technologies has created new opportunities for economic growth and digital transformation. At the same time, it has highlighted the need for an effective regulatory framework capable of addressing the risks associated with AI while fostering innovation. The enactment of the Digital Personal Data Protection Act and ongoing discussions on AI governance reflect India's growing commitment to developing a responsible and human-centric approach to AI regulation.

This study examines the legal and ethical challenges posed by Generative AI in India and evaluates the adequacy of existing regulatory mechanisms. It further explores the need for a balanced governance framework that promotes technological advancement while safeguarding fundamental rights, transparency, accountability, and public trust in the digital age.

2. LITERATURE REVIEW

The rapid development of Generative Artificial Intelligence (Generative AI), particularly advanced language models such as ChatGPT, has generated significant academic and policy discussions regarding its legal, ethical, and societal implications. Existing literature highlights both the transformative potential of Generative AI and the challenges it poses to regulatory frameworks worldwide, including India.

Early studies on Artificial Intelligence focused primarily on automation, machine learning, and decision-support systems. However, the emergence of Generative AI has shifted scholarly attention toward issues such as data privacy, algorithmic bias, misinformation, intellectual property rights, accountability, and transparency. Researchers argue that Generative AI systems possess unprecedented capabilities to generate human-like text, images, audio, and video, thereby creating new legal and ethical concerns that traditional regulatory mechanisms may not adequately address.

Several scholars have emphasized the privacy implications of Generative AI. The training of AI models on vast datasets often

involves the collection and processing of personal information, raising concerns regarding consent, data protection, and individual autonomy. Studies suggest that existing privacy frameworks must evolve to address the challenges posed by large-scale AI systems that rely on extensive data collection and analysis.

Another significant area of research relates to algorithmic bias and discrimination. Academic literature demonstrates that AI systems may reproduce or amplify biases present in training data, leading to discriminatory outcomes based on gender, race, religion, caste, or socioeconomic status. Scholars have argued that regulatory measures should mandate fairness assessments, transparency standards, and accountability mechanisms to mitigate such risks.

The issue of intellectual property rights has also attracted considerable scholarly attention. Researchers debate whether AI-generated content should receive copyright protection and whether the use of copyrighted materials for AI training constitutes infringement. The absence of clear legal standards has created uncertainty regarding ownership, authorship, and liability in relation to AI-generated works.

Furthermore, numerous studies examine the role of Generative AI in spreading misinformation and deepfakes. Scholars warn that AI-generated content can be used to manipulate public opinion, undermine democratic processes, and facilitate cybercrime. Consequently, legal experts advocate stronger regulatory oversight and content authentication mechanisms to prevent misuse while preserving freedom of expression.

Within the Indian context, the literature highlights the country's evolving approach toward AI governance. Researchers note that India has adopted a policy-oriented strategy focused on innovation and digital growth while simultaneously recognizing concerns related to privacy, cyber security, and ethical AI deployment. The enactment of the Digital Personal Data Protection Act, 2023 represents a significant step toward strengthening data governance; however, scholars argue that India still lacks a comprehensive AI-specific regulatory framework.

Recent studies also emphasize the need for a balanced regulatory model that encourages technological innovation while safeguarding constitutional values, fundamental rights, and public interests. Comparative analyses of regulatory approaches adopted by the European Union, United States, and China suggest that India can develop a context-specific framework that combines ethical principles, risk-based regulation, transparency obligations, and institutional oversight.

Overall, the existing literature reveals a growing consensus that Generative AI offers substantial opportunities for economic growth, education, healthcare, and governance. At the same time, it underscores the urgent need for effective legal and ethical safeguards to address challenges related to privacy, bias, accountability, intellectual property, and misinformation. This study seeks to contribute to the existing body of knowledge by examining these issues within the Indian legal framework and proposing regulatory measures suitable for the age of Generative AI and ChatGPT.

3. RESEARCH METHODOLOGY

The present study adopts a doctrinal and analytical research methodology to examine the legal and ethical challenges associated with the regulation of Generative Artificial Intelligence (AI) in India, particularly in the context of ChatGPT and other advanced AI systems. The research is descriptive, analytical, and exploratory in nature, aiming to understand the existing legal framework governing AI technologies and to identify the regulatory gaps that arise from the rapid advancement of Generative AI. The study primarily relies on secondary sources of data, including books, research articles, law journals, government reports, policy documents, statutory provisions, judicial decisions, and reports published by national and international organizations. Relevant legal instruments such as the Information Technology Act, 2000, the Digital Personal Data Protection Act, 2023, and various international AI governance frameworks have been critically examined to assess their applicability to Generative AI systems.

The methodology further involves a qualitative analysis of legal literature, policy debates, and scholarly opinions relating to privacy, data protection, algorithmic bias, accountability, intellectual property rights, misinformation, and ethical AI governance. Comparative references to international regulatory approaches have also been considered to understand global best practices and their relevance to the Indian legal system. The scope of the study is limited to the legal and ethical dimensions of Generative AI and does not include empirical research methods such as surveys, interviews, or field investigations. Through a critical evaluation of existing laws and emerging regulatory trends, the study seeks to assess whether the current legal framework in India is capable of addressing the challenges posed by Generative AI and to propose suitable recommendations for developing a balanced, effective, and rights-oriented regulatory framework.

LEGAL AND ETHICAL ANALYSIS OF GENERATIVE AI IN INDIA

Generative Artificial Intelligence (AI), particularly advanced systems such as ChatGPT, has transformed the digital landscape by enabling machines to generate human-like text, images, audio, video, and other forms of content. While these technologies offer significant benefits in areas such as education, healthcare, business, governance, and legal services, their widespread adoption has also given rise to numerous legal and ethical concerns. In India, the increasing use of Generative AI presents unique challenges that require careful examination within the framework of existing laws, constitutional principles, and ethical standards.

One of the most significant legal concerns relates to data privacy and protection. Generative AI systems rely on vast amounts of data for training and operation, which may include personal and sensitive information. The collection, processing, and utilization of such data raise important questions regarding consent, data security, and privacy rights. Although the Digital Personal Data Protection Act, 2023 provides a legal framework for personal data protection, it does not specifically address several issues arising from the training and functioning of large

AI models. Consequently, concerns remain regarding the lawful use of personal information and the potential misuse of data by AI systems.

Another important legal challenge concerns intellectual property rights. Generative AI models are trained using large datasets that may contain copyrighted materials. This raises questions regarding whether the use of such materials constitutes copyright infringement and whether AI-generated outputs are eligible for legal protection under existing intellectual property laws. Since Indian copyright law primarily recognizes human authorship, the ownership and legal status of AI-generated content remain uncertain, creating potential disputes concerning authorship and infringement.

Accountability and liability represent further areas of concern. Generative AI systems can produce inaccurate, misleading, defamatory, or harmful content. Determining responsibility for such outputs is legally complex because AI-generated content may result from interactions between developers, platform providers, and users. The absence of clear legal standards regarding liability creates uncertainty and may hinder effective remedies for individuals affected by harmful AI-generated content.

The risk of misinformation and digital manipulation has also become increasingly significant. Generative AI can produce highly realistic content capable of influencing public opinion, spreading false information, and facilitating online fraud. The rapid dissemination of AI-generated misinformation may undermine democratic processes, damage reputations, and create social instability. Existing legal mechanisms addressing cybercrime and harmful online content may not be sufficient to effectively regulate these emerging risks.

From an ethical perspective, algorithmic bias and discrimination constitute major concerns. AI systems learn from historical data that may reflect existing social inequalities and prejudices. As a result, Generative AI may unintentionally produce biased outputs that reinforce stereotypes or disadvantage certain groups. In a diverse society such as India, where equality and social justice are fundamental constitutional values, addressing algorithmic bias is essential to ensure fair and inclusive technological development.

Transparency and explain ability are equally important ethical considerations. Many Generative AI systems operate through complex computational processes that are difficult for users to understand. This lack of transparency may reduce trust in AI technologies and make it challenging to identify errors, biases, or unfair outcomes. Ethical AI governance therefore requires mechanisms that promote transparency, explain ability, and meaningful human oversight.

Another ethical concern relates to the impact of Generative AI on employment, education, and human creativity. While AI can improve productivity and automate routine tasks, it may also contribute to job displacement and excessive dependence on automated systems. Ethical questions arise regarding the balance between technological efficiency and the preservation of human skills, creativity, and decision-making autonomy.

The analysis demonstrates that the legal and ethical challenges associated with Generative AI are closely interconnected. Issues relating to privacy, intellectual property, accountability,

misinformation, bias, and transparency require a comprehensive regulatory approach that integrates legal safeguards with ethical principles. As India continues its digital transformation, there is a growing need for a balanced governance framework that encourages innovation while protecting fundamental rights, promoting fairness, and ensuring the responsible use of Generative AI technologies.

4. FINDINGS AND DISCUSSION

The analysis conducted in this study reveals that Generative Artificial Intelligence (AI), particularly ChatGPT and similar large language models, has emerged as a powerful technological innovation with significant implications for Indian society, economy, and legal systems. The findings indicate that while Generative AI offers considerable benefits in enhancing productivity, facilitating access to information, supporting education, improving public services, and promoting innovation, it also creates a range of legal and ethical challenges that require immediate regulatory attention. A major finding of the study is that India currently lacks a comprehensive legal framework specifically governing Generative AI technologies. Existing legislation, including the Information Technology Act, 2000 and the Digital Personal Data Protection Act, 2023, provides certain safeguards concerning cyber security and data protection; however, these laws were not designed to address the unique characteristics of Generative AI. As a result, important issues relating to AI-generated content, algorithmic accountability, transparency, and liability remain largely unregulated.

The study further finds that data privacy is one of the most significant concerns associated with Generative AI. The extensive use of large datasets for training AI models raises questions regarding informed consent, lawful processing of personal information, and protection against unauthorized use of data. Although recent legislative developments have strengthened privacy protection in India, the existing framework does not adequately address the specific risks associated with AI training and automated content generation. Another important finding concerns algorithmic bias and discrimination. The research demonstrates that Generative AI systems may unintentionally reproduce biases present in training data, resulting in outputs that may be unfair or discriminatory. Such concerns are particularly relevant in the Indian context due to the country's social diversity and constitutional commitment to equality and non-discrimination. The absence of mandatory transparency and auditing mechanisms further increases the risk of biased AI outcomes. The study also identifies accountability and liability as significant regulatory challenges. Generative AI systems are capable of producing inaccurate, misleading, or harmful content, yet there is no clear legal framework determining responsibility when such outputs cause harm. This uncertainty creates difficulties in ensuring legal remedies and may undermine public confidence in AI technologies.

Furthermore, the findings highlight growing concerns regarding intellectual property rights. Existing copyright laws do not provide clear guidance on the ownership of AI-generated content or the legality of using copyrighted materials

for AI training purposes. This legal ambiguity has the potential to generate disputes involving creators, technology companies, and users as Generative AI becomes more widely adopted.

The comparative analysis of international regulatory approaches indicates that several jurisdictions have already begun implementing dedicated AI governance frameworks. The experiences of the European Union, the United States, and China demonstrate the importance of establishing mechanisms for transparency, accountability, risk assessment, human oversight, and ethical compliance. These international developments provide valuable guidance for India in formulating its own regulatory strategy.

The discussion of these findings suggests that a balanced approach is necessary for regulating Generative AI in India. Excessive regulation may hinder technological innovation and economic development, while insufficient regulation may expose individuals and society to significant risks. Therefore, future regulatory efforts should seek to balance innovation with the protection of fundamental rights, public welfare, and ethical values.

Overall, the findings confirm that Generative AI presents both unprecedented opportunities and complex challenges. The study underscores the urgent need for a comprehensive and adaptive regulatory framework capable of addressing emerging legal and ethical concerns while supporting the responsible development and deployment of AI technologies in India.

5. RECOMMENDATIONS

In light of the findings of this study, several measures may be adopted to ensure the responsible development and regulation of Generative Artificial Intelligence (AI) in India. First, there is a need for a comprehensive AI-specific legal framework that clearly defines the rights, duties, and responsibilities of AI developers, service providers, and users. Such legislation should address issues relating to transparency, accountability, liability, and risk management while promoting innovation and technological advancement.

Second, stronger data protection safeguards should be implemented to regulate the collection, processing, and use of personal data in AI training and deployment. Clear standards regarding informed consent, data minimization, and security measures should be established to protect individual privacy rights and prevent misuse of personal information.

Third, mechanisms for algorithmic transparency and independent audits should be introduced to identify and mitigate biases in AI systems. Regular assessments of AI models can help ensure fairness, non-discrimination, and compliance with constitutional values. Developers should also be encouraged to provide explanations regarding the functioning and limitations of AI-generated outputs.

Fourth, the government should formulate clear guidelines regarding liability and accountability for AI-generated content. Defining legal responsibility for harmful or unlawful AI outputs would enhance public trust and provide effective remedies for affected individuals.

Fifth, intellectual property laws should be reviewed and updated to address issues relating to AI-generated works,

ownership rights, and the use of copyrighted materials in AI training. A clear legal framework would reduce uncertainty and encourage responsible innovation.

Sixth, public awareness and digital literacy programs should be promoted to educate citizens about the benefits, risks, and limitations of Generative AI technologies. Increased awareness can help users critically evaluate AI-generated content and reduce the spread of misinformation.

Finally, India should actively participate in international discussions on AI governance and incorporate global best practices into its regulatory framework. Collaboration among governments, industry stakeholders, academic institutions, and civil society organizations can contribute to the development of ethical, transparent, and human-centric AI systems.

6. CONCLUSION AND IMPLICATIONS

Generative Artificial Intelligence represents one of the most significant technological advancements of the digital era, offering transformative opportunities across diverse sectors such as education, healthcare, governance, business, and legal services. Technologies such as ChatGPT have demonstrated the ability to enhance productivity, improve access to information, and support innovation on an unprecedented scale. However, the rapid growth and widespread adoption of Generative AI have also created complex legal and ethical challenges that existing regulatory frameworks are not fully equipped to address.

The study has shown that concerns relating to data privacy, intellectual property rights, accountability, misinformation, algorithmic bias, and transparency pose substantial risks to individuals and society. Although India has taken important steps through initiatives such as the Digital Personal Data Protection Act, 2023 and various AI policy discussions, the current legal framework remains fragmented and insufficient for addressing the unique challenges associated with Generative AI technologies.

The analysis further indicates that international regulatory developments provide valuable lessons for India. A balanced regulatory approach that combines innovation with accountability, transparency, and protection of fundamental rights is essential for ensuring the responsible use of AI. Future governance frameworks should be flexible enough to adapt to technological advancements while maintaining effective safeguards against potential harms.

The implications of this study extend beyond legal regulation. The responsible governance of Generative AI is closely linked to the protection of human dignity, democratic values, social justice, and public trust in technology. As AI systems become increasingly integrated into everyday life, policymakers, regulators, technology companies, and users must work collaboratively to establish ethical standards and effective oversight mechanisms.

In conclusion, Generative AI has the potential to significantly contribute to India's digital transformation and economic development. However, realizing these benefits requires the creation of a comprehensive and future-oriented regulatory framework that promotes innovation while safeguarding individual rights, ensuring accountability, and upholding

ethical principles. Such an approach will enable India to harness the advantages of Generative AI while effectively addressing its legal and ethical challenges in the age of ChatGPT.

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About the author



Vijay Kumar Verma is a Research Scholar at Teerthanker Mahaveer College of Law & Legal Studies, Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, India. His academic interests include legal studies, research, and contemporary issues in law and policy. He is actively engaged in scholarly research and contributes to the development of legal knowledge.