



Regulation of Artificial Intelligence in India: Need for A Comprehensive Legal Framework

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Abstract

One of the most groundbreaking technological developments of the 21st century, artificial intelligence (AI) is already making waves in many fields, from healthcare and banking to education and governance. In order to speed up economic growth, India is increasingly depending on AI technology. This is because India's digital industry is growing at a faster rate than any other country. Many ethical, legal, and regulatory issues have arisen as a consequence of AI's quick adoption. Among these worries are issues with data privacy, responsibility, cyber defence, bias in algorithms, IP rights, and the protection of fundamental freedoms. Based on the results, it is clear that India needs a comprehensive legal framework to control AI. The existing legislative framework is examined critically in this paper. This research considers many government initiatives, such as the National Strategy for Artificial Intelligence created by NITI Aayog, as well as the Information Technology Act of 2000 and the Digital Personal Data Protection Act of 2023. To find the best ways to control AI on a global scale, this research also looks at legal frameworks that countries like the US, UK, and EU have put in place around AI. A thorough and transparent legal framework, backed by the creation of a regulatory body, and specific ethical standards and rules linked to responsibility are all put up for consideration in this article as necessities for India. It offers a balanced approach that promotes innovation while safeguarding constitutional rights and the public interest.

Keywords: Artificial Intelligence, AI Regulation, Indian Legal Framework, Data Protection, Technology Law, Digital Governance, AI Policy, Corporate Law

1. Introduction

Many aspects of modern life have been profoundly altered by the advent of AI, which ranks high among the most momentous technological developments of our time. Developments in robots that can do jobs that once needed human intelligence have had a significant impact on many different industries and governmental processes throughout the world. Due to its extensive application in several domains, such as healthcare, banking, corporate management, defence, governance, and

education, artificial intelligence has evolved into an essential part of any endeavour to achieve digital transformation. Indian companies are using AI as the nation quickly moves towards a digital economy.

There are advantages and disadvantages to the widespread use of AI in people's everyday life. Artificial intelligence relies on algorithms and massive amounts of data, some of which may include personally identifiable information. As a result, concerns about personal information security and privacy take center stage. The constitutional significance of protecting personal data is underscored by the Supreme Court of India's recognition of the right to privacy as a basic right in *Justice K.S. Puttaswamy v. Union of India*.

When it comes to AI regulation, the Indian legal framework is still lacking at the moment. While there are a number of laws that address data and cyber security to a certain degree—for example, the Information Technology Act of 2000 and the Digital Personal Data Protection Act of 2023—these laws are insufficient to govern AI. In light of various government strategies, such as the National Strategy for Artificial Intelligence by NITI Aayog and various policy frameworks connected to the Digital India Act, it has been noted that the Indian government is contemplating the establishment of a legislative framework for controlling AI. However, at this point in time, there is no adequate legislative framework that specifies responsibility, accountability, or regulatory requirements for AI; all that has been done thus far is policymaking.

Some countries have chosen to control AI in various ways within the context of international relations. In contrast, the US is more focused on policy-based governance, whilst the UK has adopted a more accommodating stance. A European law governing AI has been enacted, with a focus on risk assessment. This clearly demonstrates the need of global AI regulation and the need for India to establish a thorough legal framework in this area.

The growing importance of AI in business and industry highlights the need for India to enact a thorough legislation governing AI research and development. Concerns about corporate accountability, intellectual property, and contract law have arisen as a result of the use of AI in corporate analysis, financial decision-making, automated contracts, and corporate governance. The vagueness of legal principles might lead to AI rulings that confuse the legal system. This highlights the critical need of a regulatory framework that promotes creativity, development of the economy, transparency in government, and accountability.

The social and ethical challenges that come with using AI are another major issue surrounding AI. Democracy, human dignity, privacy, and job prospects are just a few areas that artificial intelligence might potentially damage. Even more concerning is the fact that surveillance and facial recognition systems, both powered by artificial intelligence, might lead to unethical data collection and processing practices.

Human dignity, liberty, and other rights protected by the Indian Constitution may be directly violated by these actions. Some members of society may be more vulnerable to the prejudice and unfair outcomes that can emerge from AI's opaque decision-making process and biased

algorithms. In light of these concerns, it is very evident that a legal framework balancing technological advancement with constitutional norms is urgently required.

This study intends to look at the need for regulation of artificial intelligence in India and also suggest an appropriate legal framework. This research is based on the analysis of current legal frameworks, foreign examples, and legal issues related to the topic. It also highlights the necessity for India to follow a structured regulatory approach that balances innovation with the protection of fundamental right.

2. Concept of Artificial Intelligence

The capacity of machines to carry out activities that typically require human intelligence is the essence of artificial intelligence. Things like reasoning, thinking, making decisions, and solving problems are part of these duties. Thanks to its technological capabilities, this system can evaluate vast volumes of data and provide results independently of human intervention. Because of these features, AI has emerged as a powerful instrument for advancing both technology and the economy. Capabilities allow for the categorisation of various forms of artificial intelligence. It is referred to as weak artificial intelligence since its only capabilities are voice recognition, picture processing, and suggestion making. The first group consists of limited or feeble AI. But even if it isn't available right now, general AI can carry out any intellectual activity that humans do. Super artificial intelligence, on the other hand, describes machines that can do better than humans in every possible way.

The development of AI makes use of a wide range of technological elements, including robotics, deep learning, machine learning, and natural language processing. With machine learning, entities may learn from their mistakes and become more useful over time, all without human intervention or code. Natural language processing allows computers to interpret and imitate human speech, while robotics makes it possible for robots to do physical tasks.

Healthcare, banking, agriculture, education, and government are just a few of the Indian sectors that make use of AI technology. Artificial intelligence has several potential uses, including the detection of fraud in the financial sector, the improvement of healthcare diagnosis, and the formulation of government policy. Despite the potential for AI to boost productivity, questions of data security, responsibility, and ethics have been raised by this technology.

Both digitalisation and economic growth are closely related to the idea of artificial intelligence. On the other side, there are a lot of dangers that come with discrimination, incomplete accountability, and improper information use that may happen in a society without a legal framework. Consequently, building a comprehensive legal framework requires a thorough understanding of the concept of artificial intelligence.

3. Necessity for Regulation of Artificial Intelligence in India

Rapid changes brought about by AI have transformed India's digital and economic environment, opening up new opportunities for innovation, industrial growth, and efficient governance. The creation of a legislative framework for AI is more important than ever before due to the growing

prevalence of AI in many different industries, including healthcare, banking, business, the military, and public services. Concerns about privacy, liability, discrimination, and security have prompted calls for a legislative framework to govern AI.

Article 21 of the Indian Constitution guarantees some fundamental rights, and this is the main reason why AI in India needs regulation. The Indian Supreme Court's decision in *Justice K.S. Puttaswamy v. Union of India* upheld the right to privacy and stressed the need of data security in the modern digital age. Because of their reliance on personally identifiable information, AI systems pose a serious threat to privacy if they are not properly regulated. There is a serious danger to personal privacy from the widespread use of technologies like biometric identification, surveillance systems, and facial recognition.

The question of who is responsible and accountable for AI decisions is another important consideration. The independence of AI makes it more difficult to assign blame when mistakes are made. There are currently no regulations in India that establish liability for damages caused by AI. *Shreya Singhal vs. Union of India*, a case that highlighted the need for accountability in technological regulation, was decided by the Supreme Court, which recognised the need of protecting individual rights against arbitrary state activities in digital settings.

There is a need for the regulation of artificial intelligence in order to avoid discrimination and bias. The training of artificial intelligence models takes place using datasets which could be socially and economically biased. As a result of this, discrimination will occur when it comes to fields like employment, credit rating, law enforcement, and provision of public services. Article 14 and 15 of the Constitution protect individuals from discrimination, and therefore there is a possibility that the lack of proper regulation will violate the constitution.

Furthermore, India needs AI legislation because to economic and corporate governance problems. Making decisions, financial technology, and business research are just a few of the corporate functions that are greatly impacted by artificial intelligence. Intellectual property, antitrust laws, and contractual duties are therefore subject to new legal considerations. Problems may arise if AI is used by corporations for planning, decision-making, and risk analysis and anything goes wrong with the technology. While encouraging the ethical use of AI in commercial settings, a solid legislative framework may provide much-needed clarity and stability to corporate operations.

Cybersecurity and national security are two more critical areas that show why AI regulation is necessary. Cyberattacks, data manipulation, and digital warfare are all possible outcomes of AI abuse, putting the nation's security at risk. The use of AI in cybercrime and the creation of deep fakes poses serious risks to the integrity of our democratic process, our economy, and the way our government operates. *Anuradha Bhasin v. Union of India* was a landmark decision in which the highest court in India emphasised the need of balancing technological advancements with basic human rights and considerations of national security.

The need for artificial intelligence regulation in India arises from concerns related to privacy, accountability, discrimination, corporate governance, cyber security, and national security. A

comprehensive legal framework is essential to address these challenges and ensure responsible use of artificial intelligence.

4. Current legal framework in India that regulates artificial intelligence

Currently, India lacks legislation that is specifically designed to address artificial intelligence regulations. Nevertheless, the legal framework for artificial intelligence regulations is established by a variety of other pieces of legislation, policies, and government initiatives that are designed to regulate artificial intelligence. The legislation primarily pertains to the regulation of artificial intelligence, as well as data protection, cyber security, and digital governance.

The Information Technology Act, 2000 is the main law that governs digital technologies in India. This Act legally recognizes electronic documents and digital signatures through Section 4 and 5 respectively. Penalties for cybercrimes are provided in Sections 43 and 66. Section 79 of the Act provides safe harbour protection to intermediaries, subject to due diligence requirements. While the Act does not specifically discuss artificial intelligence, it serves an essential purpose in regulating digital platforms in which AI systems run.

An important step forward in the evolution of data privacy legislation in India is the Digital Personal Data Privacy Act of 2023. A foundational tenet of data processing, the Act stresses data minimisation, data fiduciaries' accountability, and the importance of permission. Since AI relies so much on personal data, this legislation is crucial to ensuring the security of data and privacy. Nevertheless, it fails to tackle AI-related concerns like algorithmic transparency and automated decision-making. One tool for preventing the abuse of AI is the Act's provisions about fines for data misuse.

The regulation of artificial intelligence also requires action from the government. Promoting responsible AI research and outlining essential areas that must use AI technology are the goals of the National Strategy for Artificial Intelligence, which was proposed by NITI Aayog. Among the fields that have been brought up are healthcare, farming, schools, and smart cities. When applied to these fields, AI has the potential to greatly boost economic growth. However, the document lacks the force of law.

Another move toward controlling digital technologies and artificial intelligence is the projected Digital India Act. This law establishes new rules for digital platforms, artificial intelligence, and blockchain technology; it supersedes the Information Technology Act of 2000. Indirectly regulating AI technologies, this legislation prioritises consumer safety, privacy, and accountability among digital technology service providers. But this proposed law is still in the works. India adheres to several global AI standards.

There are several weaknesses in the current legal regime of India when it comes to artificial intelligence regulation. The present laws only cover concerns related to data privacy and cyber security, but there are still many other pressing issues like algorithmic accountability and transparency, liability, ethics, and regulations that remain untouched. Thus, an additional legal mechanism for regulating AI should be developed.

5. Challenges in Artificial Intelligence Regulation in India

Despite the growing importance of artificial intelligence regulation, India faces several challenges in developing and implementing a comprehensive legal framework. These challenges arise from technological complexity, regulatory gaps, lack of infrastructure, and limited awareness about artificial intelligence governance. Addressing these challenges is essential to create an effective and balanced regulatory system.

- The rapid development of new technologies is a major obstacle to controlling AI. The capacity of laws and regulations to keep up with the fast advancements in artificial intelligence technology is becoming more difficult. Regulating AI requires flexible and adaptive mechanisms, since traditional legal frameworks may be slow and rigid. An efficient government cannot be established due to the chasm that exists between technological advancement and legal control.
- The lack of a specific legal framework designed for AI is another obstacle. Data protection and cybersecurity are the current focal points of Indian law, while broader issues like algorithmic accountability, ethical leadership, and liability go unaddressed.
- Significant challenges in controlling AI are posed by a lack of technical expertise and infrastructure. Skilled professionals, state-of-the-art tools, and strong institutional support are necessary for developing and regulating AI. There is a shortage of experts in artificial intelligence policy and regulation, although India's technological infrastructure is still improving.
- Concerns about data governance and international data flow make AI regulation difficult. Regulating AI on a global scale is complicated because of differences in data protection laws and legal frameworks across countries. While protecting its own interests, India's policies should be in line with global standards.

Challenges such as rapid technological development, lack of legal framework, limited expertise, regulatory gaps, data governance issues, and low public awareness make artificial intelligence regulation in India a complex task. Addressing these challenges requires strong government initiatives, institutional support, and international cooperation.

6. Conclusion

AI is transforming governance, business operations, economic systems, and societal structures worldwide. AI's fast adoption in healthcare, finance, public administration, and corporate governance in India has improved efficiency and innovation. However, this technological innovation has created complicated legal, ethical, and regulatory issues that the fragmented legal structure cannot solve.

This study shows that the Indian legal framework, largely overseen by the Information Technology Act, 2000 and the Digital Personal Data Protection Act, 2023, cannot adequately regulate artificial intelligence. Data protection and cyber security are the main emphasis of these regulations, but

algorithmic responsibility, autonomous system liability, and AI ethics are not. A large regulatory gap makes legal enforcement and technical advancement questionable.

The regulation of artificial intelligence in India is necessary. A comprehensive legal framework will not only address the legal and ethical challenges posed by AI but also provide clarity, stability, and confidence for stakeholders, including government, industry, and society. India must adopt a forward-looking and balanced regulatory approach that aligns with global standards while addressing domestic priorities.

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