

## Regulating AI in India: A Comparative Analysis with International Standards

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### Abstract

*Artificial Intelligence (AI) has a transformative impact worldwide, and India is not an exception to the global transformation brought about by artificial intelligence (AI). India is witnessing a rapid growth in the adoption of artificial intelligence in different sectors like healthcare, agriculture, finance, education etc. While AI creates many opportunities for innovation and growth, it also poses complex legal and ethical challenges that require urgent attention. AI's growing adoption across sectors like healthcare, finance, and education leads to issues such as data privacy breaches, algorithmic bias, and unclear accountability for AI-driven decisions, which can disrupt industries and society. India currently lacks a comprehensive legal framework to regulate AI technologies effectively. The absence of a comprehensive legal framework for AI in India creates uncertainty and risks for businesses, individuals and government, and the existing laws, such as the Information Technology Act, 2000 (IT Act), do not comprehensively address AI-specific concerns. This paper explores the need for specific artificial intelligence law in India to protect citizens' privacy and rights creating an environment suitable for responsible innovation and development. It highlights the key challenges posed by AI, such as the risk of data misuse, the ethical implications of biased algorithms, and the complexity of assigning accountability for AI-driven decisions. This paper highlights these challenges and explores how international legal frameworks can guide India in developing responsible, fair, and effective AI regulation. By addressing the gaps in the current legal system, India can ensure that AI contributes positively to society, promotes fairness, and prevents potential harm.*

**Keywords:** Artificial Intelligence, Data Protection, Accountability, Algorithmic Bias

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### Introduction

Artificial Intelligence or AI is not a novel concept, it has been in existence at least since 1950s when Alan Turing introduced the theoretical framework for AI and the first intelligent computer programs that could solve problem were introduced. AI and machine learning in particular, has driven a wide range of digital technologies during the last 20 years, such as search engines, recommendation algorithms, drones, self-driving cars, and facial recognition software. Artificial Intelligence (AI) refers to the technology that allows computer systems to simulate human intelligence, involving the simulation of various capabilities such as learning, reasoning, problem-solving, perception, and language understanding. In particular, AI technology may use algorithms and computer models to extract information and patterns from large amount of data, then use those insights to address a range of real-world issues.

AI offers opportunities to enhance and improve human intelligence and enrich the way people live and work through intelligent machines which enables high-level cognitive processes like thinking, perceiving, learning, problem solving and decision making, coupled with advances in data collection and aggregation, analytics and computer processing power. With the second-largest population in the world and the fastest-growing economy, India has a big interest in the AI revolution. Nowadays artificial intelligence is being used globally in almost every economic sector driven by the nation's ambitions to harness AI for economic growth and social good and has revolutionize various sectors in India, including healthcare, agriculture, education, smart cities, and transportation.<sup>1</sup> It has not only lessened the burden but has also increased the productivity based on smart technology<sup>2</sup>, but at the same time, it has many challenges in cyberspace and digital governance.<sup>3</sup>

Due to lack of specific legislation for regulating the AI in our country, a clear framework is required to address issues such as data privacy, bias, and ethical concerns. At present Information Technology, Act 2000 and Digital Media Ethics Code is in force deal with major privacy online digital and artificial intelligence-based operations. India has made attempts in developing a thorough framework like NITI Aayog's Principles for Responsible AI and the Digital Personal Data Protection Act (DPDP Act) of 2023. Moreover, Digital India Act has been proposed which aims at replacing the Information Technology Act of 2000, providing a robust legislative framework to tackle the evolving challenges in the digital and AI sectors.

### Research Objectives

1. To examine the existing laws, regulations, and policies related to AI in India.
2. To analyse the gaps and limitations in current laws and regulations and identify the need for AI-specific legislation in India
3. To discuss the benefits and challenges of implementing AI law in India.

### Research Problem

1. What are the current gaps and limitations in India's existing laws and regulations related to AI?
2. What are the potential risks and consequences of not having a comprehensive AI law in India?
3. How can India balance the need for innovation and entrepreneurship in AI with the need for regulation and oversight?

### Research Methodology

This study will analyse the existing literature, research papers, articles, reports and government documents related to AI in India for investigating the need of AI in India.

### Research Hypothesis

1. The absence of a comprehensive AI law in India leads to increased risks of AI-related biases, errors, and accidents.
2. The implementation of AI law in India will enhance accountability, transparency, and trust in AI systems.
3. AI law in India is essential for protecting citizens' personal data and ensuring data privacy.

## Artificial Intelligence Regulations at International Level

Like any other digital technologies, artificial intelligence (AI) transcends national borders and has a profound effect on people's lives and the structure of society everywhere. Due to rapid growth of AI and its increasing integration into numerous aspects of human life it has become more important to develop common understanding of the legal challenges that arise at international level. Different Nations are tackling AI regulation in different ways.<sup>4</sup>

### The European Union and AI

The first comprehensive legislative framework intended to regulate AI within the European Union (EU) is the European Union AI Act, which was proposed in April 2021. Its objective is to minimise the risks that AI systems may pose while encouraging innovation and competition in the European AI sector.

European Union AI Act 2024 emphasise strongly on transparency, particularly for generative AI systems that produce content and interact with users directly, such as ChatGPT. The Act classifies AI systems based on risk perceptions either high-risk or limited risk depending on how they are used. One essential requirement is that users must be fully informed while they are interacting with an AI. Developers must clearly inform users when content is generated by AI so that they are aware that communicating with a machine, not with a human being. The providers must give proper information to the users regarding the working of systems so that they can decide accordingly.

### Council of Europe Framework Convention on Artificial Intelligence and Human Rights, Democracy and the Rule of Law

This is the first legally binding International Treaty on artificial intelligence which was signed on 5 September by the EU, US and UK. The Convention defines a baseline in international law for rights-respecting AI activities by governments and provides a powerful affirmation of the relevance of existing human rights obligations to AI activities. The treaty

adopts a risk-based approach to the design, development, use and decommissioning of AI systems. The signatories will be responsible for ‘any detrimental and discriminatory outcomes of AI systems’, and will assure that ‘outputs of such systems respect equality and privacy rights and that victims of AI-related rights violations have legal recourse. Even though the treaty is being called ‘legally binding’, it does not contain provisions for punitive sanctions such as penalties and fines. Compliance is primarily ensured through ‘monitoring’ which is not much of a deterrent from an enforcement point of view.<sup>5</sup>

## **G7 Pact on AI**

The G7 pact on AI is called the International Code of Conduct for Organizations Developing Advanced AI Systems. On October 30, 2023, the G7 nations (Canada, France, Germany, Italy, Japan, the UK, and the US), as well as the EU, agreed to the voluntary Hiroshima Process International Code of Conduct for Organizations Developing Advanced AI Systems (the Code of Conduct).<sup>6</sup>

The G7's AI 11 point code Regulations seek to promote safe, secure, and trustworthy AI worldwide and provide practical guidance for organizations developing and using foundation models and generative AI systems. The G7's AI Regulations actively seek to prevent organizations from developing or deploying non acceptable Advanced AI systems that undermine democratic values, harm individuals or communities, facilitate terrorism, enable criminal misuse, or pose substantial risks to safety, security, and human rights.<sup>8</sup>

## **United States and AI**

U.S. takes more sectoral and flexible approach in regulating AI as there are no comprehensive AI Law in U.S. The AI systems governance is being influenced by existing legislations, proposed bills, guidelines both at federal and state levels.

### **Existing Federal Laws and Regulations in U.S.**

- Federal Trade Commission Act
- Civil Rights Laws
- Health Insurance Portability and Accountability Act (HIPAA)

## **Proposed AI Legislations**

### **Algorithmic Accountability Act**

This Act was proposed in 2022 which requires the companies to evaluate the effect of automated decision-making systems on the consumers.

### **AI Bill of Rights**

AI Bill of Rights blueprint was introduced by the Biden government in 2022 which outlined principles of fairness, transparency and the right to challenge automated decisions in ethical application of AI.

### **State Level Regulations**

- California Consumer Privacy Act (CCPA)
- New York City Automated Employment Decision Tools Law
- Health Insurance Portability and Accountability Act (HIPAA)
- Federal Trade Commission (FTC) Act
- Civil rights laws

On October 30, 2023, the US released an executive order on AI that require developers to test the safety of powerful AI models prior to their public release and report the results to the government. The US joined the UK in announcing the creation of its own AI safety institute.

## **China and AI Laws**

China has a state-led approach to AI governance, striking a balance between strict regulation and quick innovation. It maintains strong government control while ensuring security and encouraging ethical usage. China introduced the Regulations on the Administration of Generative Artificial Intelligence Services in 2023 which is framework for the creation, application, and deployment of generative AI technologies. According to the regulations companies must obtain government approval before implementing content-generating AI, ensuring systems don't endanger national interests or stability. Generative AI outputs are strictly monitored by applying censorship to prevent misinformation or content that disrupts social harmony. Companies must be transparent about their algorithms, data sources, and processes to meet

stringent rules, increasing accountability and protecting from misuse.

## Canada and AI

Canada has taken the initiative of regulating the AI by balancing the promotion of innovation and safeguarding ethical standards and social interests. Canada has launched significant government-led initiatives including the Canadian AI Ethics Council and the Pan-Canadian AI Strategy to promote the responsible development of AI and address pertinent ethical challenges in the AI industry. Canada also enacted the Personal Information Protection and Electronic Documents Act in order to regulate the gathering, use, and sharing of public's personal data by AI technology. The Act guarantees the protection of individuals' private rights, and AI technology must adhere to strict standards.<sup>7</sup>

Canadian government launched the world's first strategy for AI in 2017, but AI governance has been a work in progress ever since. There is a proposal for a comprehensive Artificial Data and Intelligence Act that would penalize illegal data use, "reckless deployment," and "fraudulent intent" that results in "substantial economic loss." The office of an AI and Data Commissioner would oversee compliance.

## United Kingdom and AI

The UK has not yet implemented a comprehensive AI, and it has no plans to do so. Rather, it promotes a balanced, context-sensitive strategy that uses current industry-specific legislation to provide guidelines on AI. In the UK, national AI strategy is regulated by a specialized AI review authority - Office for AI. Other authorities relevant for AI compliance include:<sup>8</sup>

- Information Commissioner's Office
- Digital Regulation Cooperation Forum.

Following are key regulations that provide the UK with its current framework for AI regulation<sup>9</sup>:

- Data Protection Act 2018 / General Data Protection Regulation (GDPR).
- Human Rights Act 1998
- Equality Act 2010

## Australia and AI

In Australia, a number of laws support effective AI governance. The National Artificial Intelligence Ethics Framework is the base of AI laws in Australia, which outlines the ethical principles that guide AI systems' development and implementation process. This framework is applied by Australia for ensuring ethical development AI technologies and promotion of the public's confidence in the technology. Australian regulatory authorities, such as the ACCC also plays an important role in the enforcement of AI regulations by monitoring the adherence of consumer protection and competition laws.<sup>10</sup>

India along with other countries including US and China adopted Bletchley Declaration in November in 2023 following the recent UK-led AI Safety Summit which emphasise on global alliance for AI related threats.

## AI Regulation in India

At present India lacks a specific regulation on AI. However, the government has taken important measures to ensure that AI development follows ethical guidelines and addresses key legal concerns. Existing laws that regulate AI activities include the Information Technology Act of 2000, the Digital Personal Data Protection Act of 2023, and the Information Technology Rules of 2021. Along with these laws government has also released number of advisories related to AI. Although these advisories are not laws indicates that the government intends to control AI and the risks that come with it. According to a recent regulation by the Ministry of Electronics and Information Technology (MeitY) platforms that use unproven or unstable AI models must now get express permission before being deployed.

## Information Technology Act, 2000 (IT Act)

The main legislation governing Information Technology Act, 2000 which regulates the electronic transactions, digital governance, and cybersecurity. Although this Act existed even before the advancement of AI technologies, but still several provisions in the IT Act are applicable to AI-related activities. This Act provides for compensation for negligently handling sensitive personal data leading to breach of data privacy. To avoid legal

consequences AI systems processing user data are required to comply with this provision.<sup>11</sup> The Act also deals with AI- driven deep fakes and other generated fraudulent content and penalises individuals for cheating by impersonation using a computer resource.<sup>12</sup> The Act also prohibits the publishing or transmitting of obscene material in electronic form. AI systems capable of generating inappropriate or harmful content could fall under this section.<sup>13</sup>

### **Digital Personal Data Protection Act, 2023**

The Digital Personal Data Protection Act, 2023 is a comprehensive framework for safeguarding personal data in India. The Act regulates collection, storage, processing, and sharing of data by the AI systems. According to this it is mandatory for AI platforms to obtain consent of the user before using personal data, ensure transparency, and also allows for withdrawal of consent by users. The Act requires certain sensitive data to be stored within India, which impacts AI systems that rely on cross-border data transfers. Companies using AI must report data breaches to regulatory authorities within a set timeframe, further assuring accountability.

### **Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 (IT Rules 2021)**

The Information Technology Rules 2021 regulate intermediaries such as social media platforms, digital news media, and over-the-top (OTT) services. Under these rules, intermediaries ensure that their platforms do not host, display, or transmit unlawful content.”<sup>14</sup> In case of non-compliance the AI platforms may be penalised and may lose their intermediary “safe harbour” protections.

### **Draft National Data Governance Framework Policy (NDGFP)**

The Draft National Data Governance Framework Policy (NDGFP) 2022 aims at modernising India’s data governance structure. Its main goal is to establish an environment that supports startups and AI and data-driven research. The quality and accuracy of data used in AI models can significantly impact their output thus this policy is essential for

AI research and development as it makes it easier to obtain high-quality data for AI algorithm training.

### **National Strategy for Artificial Intelligence (2018)**

In 2018, NITI Aayog announced India's first National Strategy for Artificial Intelligence, which strongly emphasise on inclusive AI development through the #AIForAll campaign. The prime focus of this strategy is on Healthcare, Agriculture, Education, Smart Cities, Transportation sectors. The strategy called for developing legal frameworks for AI-related cybersecurity and data protection, improving research capacities, and producing high-quality datasets. The objective was to achieve a balance between innovation and regulation in order to ensure responsible AI development and foster growth in these vital industries.

### **Principles for Responsible AI (2021)**

Based on the National AI Strategy, NITI Aayog announced the Principles for Responsible AI in 2021 for AI development in India with a focus on ethical considerations such as decision-making transparency, accountability, and inclusivity and the societal considerations like AI’s impact on job creation and the automation of industries.

### **Ministry of Electronics and Information Technology (MeitY) Advisories related with AI**

Ministry of Electronics and Information Technology (MeitY) issued an advisory on March 1, 2024 aimed at regulating unreliable AI models, Generative AI, and LLMs. According to the advisory the platforms aiming to introduce these technologies to the Indian public must ensure that AI systems must not encourage biasness, discrimination, violation of the integrity of electoral process. Any AI model which is considered under-tested is required to obtain express permission from MeitY before being used. Also, the Users must be warned about the possible errors of the AI’s output. Media generated by AI like text, audio and video must be identified with unique identifiers and metadata to enable.

### **Why India Need a Comprehensive AI-Specific Legislation?**



The absence of a central legislative framework to grade, assess and regulate the use of different AI tools is one of the main obstacles for responsible AI development in India. Although certain aspects of AI development are covered under the prevailing laws but they are inadequate to address issues like accountability, bias, intellectual property, or liability in AI-generated content like fake news, deep fakes, there is dire necessity of specific law to regulate AI to guarantee responsible innovation considering AI's potential for disruption.

- **Bias and Discrimination in AI systems**

AI systems, especially LLMs, can perpetuate biases present in the data they are trained on. The lack of specific legislation for regulating bias in AI algorithms may lead to discriminatory results in sectors like recruitment, financial services, and healthcare. Although India's efforts to promote AI concepts are commendable but stronger legislative restraints are required.

- **Privacy Concerns**

AI systems process personal data on large scale. Thus, privacy rights have become a major concern these days. Although the Digital Personal Data Protection Act, 2023, deals with some privacy issues, but as AI is evolving at a fast pace, for the protection of user's personal data from AI systems more stringent safeguards are necessary.

- **Deepfakes and Misinformation**

AI has the ability to create realistic deepfakes which has become a major challenge for the authorities. India currently does not have specific legislation addressing deepfakes or misinformation. However, the Information Technology Act, 2000, and the Indian Penal Code (now Bharatiya Nyaya Sanhita) provide for certain provisions related to deepfakes. While these laws provide certain remedies, but still there is a need for dedicated laws to tackle the malicious use of deepfakes.

- **Accountability and Liability of AI**

Accountability of AI means development, deployment and utilisation of AI in such a way that liable parties can be held responsible for bad

outcomes. Determining accountability for errors, biases, or damages caused by AI systems remains a major challenge because of its autonomous nature. Thus, there is a need of AI regulations to ensure the accountability of AI developers and platforms for their actions.

### Suggestions

- Indian should establish a clear regulatory framework that define AI systems, their applications, and their legal implications and ensure alignment with ethical guidelines and international standards
- AI legislations should make it mandatory for AI systems to conduct regular audits to identify and reduce bias in their decision-making in sectors like recruitment, law enforcement, and lending ensuring no discrimination on the basis of gender, caste, religion, or other protected characteristics.
- Law should establish the accountability of AI systems in case of harm or damages to the users.
- India should expand the prevailing Personal Data Protection Bill (PDPB) to protect the citizen's right to privacy as AI systems often use large datasets including the sensitive personal information.
- A clear framework for AI-created Intellectual Property is required to determine ownership rights and to protect the existing innovations. Also, the new inventions may challenge the existing intellectual property laws.
- AI regulations should take into account the socioeconomic effects of AI on employment and labour, especially in industries that are at risk of automation. Job displacement can be minimised by retraining and reskilling employees.
- AI laws should aligned with core human rights, including fairness, transparency, and the right to be informed about decisions made by AI systems.
- Keeping in mind the local needs and conditions India should align its AI laws with international AI standards and frameworks, such as the EU AI Act, OECD AI Principles, or UNESCO's AI ethics guidelines.

- India should formulate the laws to regulate the cross-border data flows as as Ai development requires large amount of data.

## Conclusion

India is leading the way in AI development owing to substantial investments and innovative policy frameworks. As artificial intelligence is developing at a rapid pace in India striking a balance between promotions of innovation and ensuring accountability of AI systems is needed. There are certain legislations like the IT Act, Digital Personal Data Protection Act, and IT Rules that deals with artificial intelligence indirectly but there is a clear need for AI-specific legislation to address the complexities and ethical concerns of AI technologies. India can foster an environment that encourages AI innovation while protecting citizens' rights and promoting the equitable benefits of AI technologies. A Comprehensive legislation that address bias, discrimination, accountability, and privacy issues while boosting AI's enormous capacity to foster economic growth is the need of the hour.

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