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ARTIFICIAL INTELLIGENCE IN INDIA: INNOVATION, REGULATION AND LEGAL ACCOUNTABILITY

~Arunendra Kumar Sharma

INTRODUCTION

Imagine waking up in a world where your phone understands your voice better than some people do. A world where an application predicts what you want to watch, what you want to buy and sometimes even what you are thinking about. Sounds unreal, right? Yet, this is exactly the world people are living in today because of **Artificial Intelligence (AI)**.¹

A few years ago, Artificial Intelligence felt like something limited to science fiction movies and technology laboratories. Today, it has quietly become a part of daily life in India. From AI-powered chatbots and facial recognition systems to smart assistants like Siri and Alexa, technology is changing the way people communicate, work and make decisions. India's rapid digital growth under initiatives such as **Digital India** and **Startup India** has further accelerated the use of AI across different sectors.²

What happens when an AI system makes a mistake?

Suppose a facial recognition system wrongly identifies an innocent person as a criminal or an AI platform leaks personal information of millions of users. **Who should be held responsible: the company, the programmer or the machine itself?** Indian law still does not provide a clear answer to these questions.

The increasing use of Artificial Intelligence has also raised concerns regarding **privacy, surveillance and misuse of personal data**. This becomes even more important after **Justice K. S. Puttaswamy v. Union of India**, where the Supreme Court recognised privacy as a

¹ Stuart Russell & Peter Norvig, *Artificial Intelligence: A Modern Approach* 2 (Pearson Educ. 2021).

² NITI Aayog, *National Strategy for Artificial Intelligence* 5 (2018).

fundamental right under **Article 21** of the Constitution.³ Technology is advancing rapidly, but legal regulation is struggling to keep pace with it.

Artificial Intelligence undoubtedly has the power to transform India's future. However, **innovation without proper regulation can slowly become dangerous.**

RISE OF ARTIFICIAL INTELLIGENCE IN INDIA

Today, India is witnessing rapid technological growth due to increasing internet accessibility, smartphone usage and government initiatives promoting digital development. Programs such as **Digital India, Startup India** and the **National Strategy for Artificial Intelligence** introduced by NITI Aayog have encouraged innovation and investment in AI-based technologies.⁴

The impact of AI can now be seen across multiple sectors:

- a) **Healthcare** – Hospitals use AI tools for early disease detection, medical imaging and patient analysis.
- b) **Banking and Finance** – AI helps banks detect fraud, analyse risks and improve customer support through chatbots.
- c) **Education** – Online learning platforms use AI to personalise learning experiences for students.
- d) **E-Commerce** – Applications such as Amazon and Flipkart rely upon AI algorithms to recommend products based on consumer behaviour.
- e) **Law and Governance** – AI-powered systems are now being explored for legal research, document management and public administration.

LEGAL AND ETHICAL CHALLENGES OF ARTIFICIAL INTELLIGENCE

Artificial Intelligence may look futuristic and efficient, but real-life incidents across the world have shown that even smart technology can make serious mistakes.

I. LEGAL CHALLENGE

In India, the increasing use of **facial recognition technology** by law enforcement agencies during protests and public surveillance has raised major legal concerns. Reports regarding the

³ Justice K. S. Puttaswamy v. Union of India, (2017) 10 SCC 1.

⁴ Digital India Programme, Ministry of Electronics and Information Technology, <https://www.digitalindia.gov.in/> (last visited May 9, 2026).

use of AI-powered facial recognition systems during the Delhi protests reopened the debate surrounding surveillance and absence of proper legal safeguards.⁵ *Can citizens truly feel secure if technology is capable of monitoring them without clear regulation?*

At the global level, a man named **Robert Williams** in the **United States** was wrongfully arrested after a facial recognition system incorrectly identified him as a criminal suspect. Later, it was discovered that the AI software had made a false match.⁶

II. ETHICAL CHALLENGE

AI systems also create ethical concerns because machines function on data and algorithms rather than human morality or emotions. Studies have shown that some **facial recognition systems are more likely to make errors while identifying women and people belonging to minority communities.**⁷

PRIVACY, SURVEILLANCE AND DATA PROTECTION CONCERNS

Every time a person unlocks a phone using facial recognition, uploads a picture online or accepts cookies on an application, a large amount of personal data is silently being collected. Most people enjoy the convenience of technology without realising how valuable their digital information has become.

In India, concerns regarding **AI-based surveillance** increased after reports of facial recognition systems being used during public protests and police monitoring activities. At the global level, companies such as **Clearview AI** faced criticism for collecting billions of images from the internet without users' consent in order to build facial recognition databases.⁸

NEED FOR LEGAL REGULATION AND ACCOUNTABILITY

While technology continues to evolve, legal safeguards are developing at a much slower pace. This is exactly why India urgently needs a strong and accountable AI regulatory framework.

- India still **does not** have a **dedicated legislation** specifically regulating Artificial Intelligence.

⁵ Facial Recognition Technology and its Implications on Privacy: An Indian Perspective, INT'L J. L. SOC. LEGAL STUD., <https://www.ijlsi.com/wp-content/uploads/Facial-Recognition-Technology-and-its-Implications-on-Privacy-An-Indian-Perspective.pdf> (last visited May 9, 2026).

⁶ Kashmir Hill, Wrongfully Accused by an Algorithm, WIRED (June 24, 2020), <https://www.wired.com/story/flawed-facial-recognition-system-sent-man-jail/> (last visited May 9, 2026).

⁷ Joy Buolamwini & Timnit Gebru, *Gender Shades: Intersectional Accuracy Disparities in Commercial Gender Classification*, 81 PROC. MACH. LEARNING RES. 1, 8 (2018).

⁸ Clearview AI, <https://clearview.ai/> (last visited May 9, 2026).

- Existing laws such as the **Information Technology Act, 2000** are not fully capable of addressing challenges like deepfakes, AI liability and algorithmic bias.
- AI systems used in **healthcare, policing and banking** should function under strict legal supervision.
- Companies using AI must clearly disclose **how personal data is collected, stored and processed**.
- AI-generated content such as **deepfake videos** should be properly labelled to prevent misinformation and online fraud.
- Most importantly, technological innovation should progress alongside **constitutional values and protection of fundamental rights** rather than replacing them.⁹

CONCLUSION AND SUGGESTIONS

The author is of the opinion that Artificial Intelligence should not be viewed only as a threat, but also as an opportunity capable of transforming India's future in a positive manner. Fear regarding AI replacing humans has increased rapidly in recent years, especially in sectors like law and technology. However, the reality is that AI is designed to assist human efficiency rather than completely replace human intelligence. Industries such as e-commerce, healthcare and banking are already using AI extensively while still depending heavily upon human involvement and supervision.

In the words of Stephen Hawking, ***“AI is likely to be either the best or worst thing to happen to humanity.”***¹⁰ The future of Artificial Intelligence in India will ultimately depend upon **how responsibly society and the legal system choose to govern it.**

⁹ NITI Aayog, Responsible AI for All: Approach Document for India 12 (2021).

¹⁰ Stephen Hawking, “The rise of powerful AI will either be the best or the worst thing ever to happen to humanity”, UNIV. OF CAMBRIDGE (Oct. 19, 2016), <https://www.cam.ac.uk/research/news/the-best-or-worst-thing-to-happen-to-humanity-stephen-hawking-launches-centre-for-the-future-of> (last visited May 9, 2026).