Research Paper

Governing Artificial Intelligence in the 21st Century: India's Vision of Ethical, Inclusive and Sustainable AI Governance

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ABSTRACT

Artificial Intelligence (AI) has emerged as a defining force in contemporary global politics, reshaping power relations, governance structures, and developmental trajectories. While much of the existing scholarship focuses on the technological rivalry between the United States and China, relatively less attention has been paid to alternative governance models emerging from democratic developing states. This paper examines India's evolving approach to Artificial Intelligence governance and argues that India is attempting to construct a distinct normative framework rooted in ethical responsibility, social inclusion, and long-term sustainability. Situated within the discipline of International Relations, the study analyzes how AI functions simultaneously as a source of geopolitical power, an instrument of socio-economic transformation, and a site of regulatory contestation. The paper explores India's AI trajectory through key policy initiatives such as the IndiaAI Mission, Digital Public Infrastructure, and NITI Aayog's AI for Inclusive Societal Development framework, highlighting their emphasis on openness, affordability, and public welfare. It further examines India's response to critical governance challenges including data concentration, algorithmic bias, accountability gaps, information warfare, and sustainability concerns. By comparing India's approach with dominant US and Chinese models, the paper positions India as a potential norm entrepreneur in global AI governance rather than a technological hegemon. The study concludes that although India's AI governance model faces significant institutional and regulatory constraints, its emphasis on democratic values, inclusive development, and ethical restraint offers a credible alternative in an increasingly polarized global technological order. In doing so, India contributes meaningfully to ongoing debates on governing AI in the twenty-first century.

Keywords: *Artificial Intelligence, Governance, India, Global Politics, Ethical AI, Digital Public Infrastructure, Global South, International Relations*

Artificial Intelligence has quietly moved from the margins of technological curiosity to the very center of global politics. Trang and Thao (2025) underlined that by transforming economic competition, security, and decision-making, Artificial Intelligence (AI) has profoundly impacted world politics. It gives countries cutting-edge capabilities for cyber-security, diplomacy, and predictive analytics, increasing their strategic

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clout on the international scene. Global security, defenses, political economics, and political
systems have all entered a new era with the advent of AI technology (Trang & Thao, 2025).

A decade ago, AI was still largely discussed in laboratories, conferences, and speculative
policy documents. Today, it shapes military doctrines, electoral politics, financial markets,
surveillance systems, and even the way wars are imagined before they are fought. Obviously,
this shift did not happen overnight. Nor did it follow a neat or predictable trajectory.

What is striking, however, is that AI governance has not kept pace with AI power. States
have rushed to deploy algorithms but hesitated to regulate them. Mostafaei et al. (2025)
underscores that there are advantages as well as challenges associated with integrating AI
into international diplomacy that need meticulous examination (Mostafaei et al., 2025).
Global institutions, already struggling with issues like climate change and cyber governance,
appear unsure about how to approach AI without stifling innovation or reinforcing inequality.
Perhaps this is the central dilemma of the 21st century that is how to govern a technology that
evolves faster than political consensus.

Dev (2025) highlights that AI is creating a new, unstable "AI World Order," which is
characterized by a central paradox as it both decentralizes and centralizes power at the same
time. On the one hand, AI accelerates the major power struggle between the United States
(US) and China, concentrates corporate and geopolitical dominance, and strengthens
authoritarian monitoring. Conversely, it fragments the global information environment,
strengthens non-state actors with generative tools, and distributes agency through systems
that are autonomous (Dev, 2025).

In this unsettled landscape, India occupies an unusual position. It is neither a technological
hegemon like the US nor an authoritarian AI powerhouse like China. Yet it is too large, too
digitally connected, and too politically consequential to remain a passive observer. India's
approach to AI governance reflects this in-between status. It seeks influence without
domination, regulation without suffocation, and innovation without abandoning ethical
restraint. Whether this balance can be sustained remains open to debate. Still, India's
evolving vision deserves serious scholarly attention.

This paper argues that India is attempting to carve out a distinct model of AI governance
grounded in ethical responsibility, inclusivity, and long-term sustainability. It is a model
shaped not only by technological ambition but also by democratic constraints, developmental
priorities, and geopolitical realities. The discussion unfolds within the broader framework of
International Relations, where AI increasingly functions as a tool of power, persuasion, and
competition.

Artificial Intelligence and the Changing Nature of Global Power
The AI revolution is about to begin. Global economy, scientific advancement, and human
productivity could all be drastically altered by this profound dual-use technology. This
technological turning point will help India achieve its national goal of Viksit Bharat by 2047
(PIB, 2025a).

According to Bode (2024), IR scholars are becoming more interested in AI technologies.
Four significant areas have dominated IR research on AI: misinformation, ethics, governance,
and power balance. A strategic studies viewpoint on AI is the first theme. The second theme

is the expanding discourse on AI governance that unites scholars of norms, global governance, and law. The intersection of disinformation and AI (and other digital) technologies is the focus of a third IR academic theme. The fourth and last established theme focuses on the ethical implications of AI technologies in general. There is some overlap between the preceding governance issue and this discussion on AI ethics. However, there is also a deeper discussion over the morality of applying AI in the context of IR (Bode, 2024).

To understand AI governance, one must first acknowledge that AI has altered the grammar of power itself. Traditional markers of power such as territory, population, and military hardware still matter, but they are no longer sufficient. Control over data, algorithms, and digital infrastructure has become equally decisive. States that master AI gain advantages not only in economic productivity but also in strategic foresight, surveillance, and information dominance.

The US and China recognized this early. Washington relies on private sector innovation, venture capital, and military integration. Beijing, by contrast, has pursued a state-driven model where data extraction, surveillance, and industrial policy operate in close alignment. Both models have produced results, though at considerable social and ethical cost. The American model struggles with corporate monopolies and opaque algorithms. The Chinese model raises deeper concerns about civil liberties and political control.

India enters this contest with fewer resources but greater normative constraints. It cannot replicate China's surveillance-heavy approach, nor can it fully mirror the American dependence on private tech giants. After all, India's political legitimacy rests on democratic accountability, judicial oversight, and public trust. This limits certain options but also opens alternative pathways.

AI, therefore, becomes not just a technological issue for India but a question of strategic identity. Should India chase dominance at any cost, or should it attempt to shape the rules of the game? The evidence so far suggests that India is leaning toward the latter, even if imperfectly.

India's AI Trajectory: Between Development and Governance

Cupać et al. (2024) brings out that in the present, AI systems are changing politics. However, it's crucial to acknowledge that AI is just getting started in the political sphere. A significant change in world politics occurred at the same time as OpenAI's historic 2022 release of ChatGPT, which gave individuals worldwide access to a cutting-edge AI system (Cupać et al., 2024).

Filgueiras (2022) highlights that governments around the world have made the development of AI technology a top priority, enlisting actors to create plans and regulations to speed up and use AI in business, commerce, and governments (Filgueiras, 2022).

India's engagement with AI is deeply tied to its development priorities. Unlike advanced economies where AI often replaces labor, India confronts a different challenge. It must use AI to enhance productivity without triggering large-scale job dislocation. This tension shapes many policy choices.

Governing Artificial Intelligence in the 21st Century : India's Vision of Ethical, Inclusive and Sustainable AI Governance

India is on the verge of a new AI-powered era where technology is changing people's lives and advancing the country. At the core of this change are programs like the Centers of Excellence for AI and the IndiaAI Mission. They are facilitating research, increasing access to computing power, and assisting institutions and businesses in developing solutions that directly aid people. In order to ensure that innovation benefits society as a whole, India's strategy focuses on making AI open, accessible, and cost-effective (PIB, 2025b).

The IndiaAI Mission will ensure India's technological sovereignty by fostering innovation and strengthening indigenous capabilities. Additionally, it will generate highly skilled jobs to capitalize on the nation's demographic dividend. The IndiaAI Mission will assist India in showcasing to the world how this game-changing technology can improve its competitiveness internationally and be used for the greater good of the society (PIB, 2024).

What is particularly notable about India's approach is its clear normative orientation. Rather than treating AI solely as a tool for technological dominance, Government of India has emphasized openness, affordability, and accessibility. The underlying assumption is straightforward yet ambitious that innovation should not remain confined to elite institutions or urban markets but must generate tangible public value. In this sense, AI governance in India is framed not only as a technological challenge but also as a question of distributive justice and social responsibility.

This inclusive orientation is articulated most clearly in NITI Aayog's October 2025 report: "AI for Inclusive Societal Development". The report foregrounds the transformative potential of AI for India's vast informal economy, which employs nearly 490 million workers (PIB, 2025b). By improving access to healthcare, education, skill development, and financial services, AI-driven interventions are projected to enhance productivity, reduce vulnerability, and increase resilience among populations that have historically remained outside the formal policy framework. The report argues, with some conviction, that AI can function as a bridge across deep social and economic divides, provided it is governed with sensitivity to local contexts and structural inequalities. In this framing, AI is not presented as a disruptive force alone, but as an enabling technology capable of widening participation in India's growth story towards Viksit Bharat 2047 (PIB, 2025b).

Government initiatives such as Digital India, Aadhaar, and the Unified Payments Interface have already demonstrated India's capacity to deploy large-scale digital systems with relative efficiency. These platforms generate massive datasets, which in turn feed AI-driven governance tools. Predictive analytics in welfare delivery, automated fraud detection, and AI-supported healthcare diagnostics are no longer theoretical exercises. They are already part of India's administrative reality.

These normative commitments are supported by the rapid expansion of India's AI ecosystem at present. The country's technology sector continues to grow at an impressive pace, with annual revenues projected to cross USD 280 billion by year 2025. More than six million people are currently employed within the broader technology and AI ecosystem, underscoring its significance as both an economic and social pillar. India also hosts over 1,800 Global Capability Centres, of which more than 500 are dedicated specifically to AI-related work, reflecting growing confidence among global firms in India's technical and human capital (PIB,2025b).

The startup landscape further reinforces this momentum. With approximately 1.8 lakh startups, India now ranks among the world's most vibrant innovation hubs. Notably, nearly 89 percent of startups launched in year 2024 incorporated AI into their products or services, indicating that AI adoption is no longer experimental but increasingly foundational. Enterprise-level adoption mirrors this trend. According to the NASSCOM AI Adoption Index, India's score is 2.45 out of 4.0, with 87 percent of enterprises actively deploying AI solutions. Sectors such as industrial manufacturing, automotive, consumer goods, retail, banking, financial services, insurance, and healthcare collectively account for nearly 60 percent of the total economic value generated by AI, highlighting its cross-sectoral relevance (PIB,2025b).

Yet these successes also raise difficult questions. Data concentration increases the risk of misuse. Algorithmic decision-making can quietly reproduce social biases. And accountability becomes blurred when automated systems fail. India's policymakers seem aware of these risks, even if solutions remain incomplete.

What distinguishes India's approach is its insistence, at least in principle, that AI must serve public welfare rather than narrow commercial or political interests. This is evident in policy documents that emphasize "AI for All" rather than AI supremacy. Of course, slogans alone do not guarantee ethical outcomes. Still, the underlying intent matters, particularly in global forums where norms are still being negotiated.

Ethical AI: Normative Ambition and Practical Limits

Ethics has become a fashionable term in AI governance discussions. Almost every country now claims to support ethical AI. The real question is what those ethics actually mean in practice. Here, India's position is both ambitious and constrained.

India's ethical framework draws from multiple sources. Constitutional values such as equality, dignity, and privacy play a role. So does India's long-standing emphasis on social justice and inclusion. As envisioned by the honourable Prime Minister Shri Narendra Modi, the vision of AI for All is something, which integrates scale with inclusion, sustainability, as well as resilience, AI must facilitate inclusive development across all societal strata (PIB, 2025a).

There is also, perhaps implicitly, a civilizational ethos that values restraint and responsibility. These elements combine to produce a vision of AI that avoids extreme surveillance while still enabling governance efficiency.

However, ethical intent does not automatically translate into ethical outcomes. Implementation remains uneven. Regulatory capacity is limited. Private technology firms, many of them foreign, continue to shape AI deployment. Moreover, India's legal framework on data protection is still evolving, leaving gaps in enforcement.

Critics often point out that ethical governance without strong enforcement risks becoming symbolic. This criticism is not entirely misplaced. Yet it overlooks an important reality. Ethical norms often emerge gradually, through debate, contestation, and incremental reform. India's contribution lies less in perfect execution and more in offering a credible alternative to authoritarian or market-driven extremes.

Inclusivity and the Question of the Digital Divide

According to Anand (2025), AI has the potential to improve democratic discussion by making knowledge more generally understandable and available, which could lead to greater equality. However, there are significant concerns (Anand, 2025).

Internationally, India's growing recognition further situates it as a consequential actor in global AI governance debates. Credible global rankings like Stanford AI Index consistently place India among the top four countries worldwide in terms of AI skills, capabilities, and policy frameworks. The country is also the second-largest contributor to AI projects on GitHub, a telling indicator of the strength and openness of its developer community. Supported by a large STEM workforce, an expanding research ecosystem, and rapidly improving digital infrastructure, India is increasingly positioning itself not merely as an AI adopter but as a norm-conscious innovator. In this broader context, AI becomes integral to India's long-term developmental vision, including the goal of Viksit Bharat by 2047 (PIB, 2025b).

One cannot discuss AI governance in India without confronting the issue of inclusion. India's digital revolution is impressive, but it is uneven. Access to data, devices, and digital literacy varies sharply across regions, classes, and genders. AI systems trained on skewed datasets risk reinforcing these inequalities rather than correcting them.

Indian policymakers are acutely aware of this danger. Hence the repeated emphasis on inclusivity in official discourse. AI applications in agriculture, education, and healthcare are often framed as tools for empowerment rather than efficiency alone. For instance, AI-based crop advisory systems aim to assist small farmers, not replace them. Similarly, AI-supported diagnostics seek to compensate for shortages of medical professionals in rural areas.

Still, inclusivity remains fragile. Algorithms do not automatically understand social complexity. Bias can creep in quietly, embedded in code rather than ideology. Addressing this requires constant oversight, interdisciplinary collaboration, and perhaps most importantly, humility. India's governance model acknowledges this uncertainty more openly than many others. That, in itself, is noteworthy.

Sustainability and the Circular AI Economy
Sustainability is often discussed in environmental terms, but AI introduces a new dimension. Training large AI models consumes enormous energy. Data centers leave a substantial carbon footprint. Hardware production relies on scarce minerals and global supply chains.

India's emphasis on a circular AI economy reflects growing awareness of these challenges. The idea is simple, though implementation is not. AI systems should be designed for efficiency, reuse, and long-term viability rather than rapid obsolescence. Energy-efficient data centers, responsible hardware recycling, and sustainable procurement practices are part of this vision.

China, by contrast, has prioritized scale over sustainability. The United States focuses on innovation first, regulation later. India's attempt to integrate sustainability into AI governance may seem idealistic, but it aligns well with global climate commitments and the concerns of the Global South. In the long run, sustainability may prove to be a strategic asset rather than a constraint.

AI, Information Warfare, and Regional Security

AI will change some people's perspectives and have unpredictable effects, in part because it can take multiple forms and has a wide range of applications. It will have an impact on commercial connections, diplomatic relations, and the conduct of warfare, but these consequences are probably not going to be significant enough to alter how humans live or think (Schwarz, 2024).

AI's impact on security extends beyond conventional warfare. Information manipulation, deepfakes, cyber espionage, and psychological operations now occupy center stage. In South Asia, where historical tensions persist, these tools acquire particular significance.

India's experience with cross-border misinformation campaigns, particularly in the context of Indo-Pak relations, underscores the urgency of AI governance. Deepfake videos, automated troll networks, and algorithmic amplification of false narratives pose serious risks to social stability. Traditional deterrence models offer limited guidance here.

India's response has been cautious rather than aggressive. Rather than weaponizing AI information warfare, it has emphasized resilience, media literacy, and platform accountability. This approach may appear restrained, perhaps even slow. Yet it reflects a strategic choice. Escalation in the information domain carries unpredictable consequences, especially in nuclearized regions.

Global AI Governance and India's Normative Role

At the global level, AI governance remains fragmented. There is no comprehensive international treaty, only guidelines, principles, and competing visions. The United States promotes voluntary standards. China favors state sovereignty over data. Europe emphasizes regulation and rights.

India positions itself as a bridge. It speaks the language of development, democracy, and digital inclusion. In forums such as the G20, India has consistently argued that AI governance must reflect the concerns of developing countries, not just advanced economies. This advocacy may not always translate into immediate policy change, but it shapes the discourse. India's real strength lies in its credibility. It does not seek to dominate AI governance. Nor does it dismiss legitimate concerns about innovation and growth. Instead, it argues for balance. In a polarized world, balance is rare. That alone gives India a distinct voice.

Responsibility, Accountability, and the Question of AI Errors

One of the most uncomfortable questions in AI governance concerns responsibility. When an AI system fails, who is accountable? The programmer, the user, the institution, or the state? There are no easy answers.

India's legal system, with its emphasis on due process and accountability, offers some guidance. Yet AI challenges traditional liability frameworks. Autonomous systems blur lines of intent and causality. Policymakers acknowledge this uncertainty, often cautiously, sometimes reluctantly.

Rather than rushing to rigid solutions, India has adopted a gradualist approach. Regulatory sandboxes, pilot projects, and iterative policy design characterize its strategy. Critics may see

this as indecision. Another interpretation is prudence. Governing AI errors requires learning from failure, not denying it.

CONCLUSION

AI is reshaping global politics, but governance remains an unfinished project. Power, ethics, and uncertainty coexist uneasily in this domain. India's vision of AI governance reflects these tensions. It is ambitious but cautious, normative but pragmatic, aspirational but aware of its limits.

A techno-legal framework backed by voluntary actions and Digital Public Infrastructure (DPI) highlights India's pragmatic approach to AI governance. India's ability to lead this transformation in the future rests on our capacity to set an example by managing this technology with vision and making sure it continues to be safe, inclusive, and a force for good in the world (PIB, 2025a).

Chehoudi (2025) asserts that there has been much discussion on how the advancement of artificial intelligence (AI) and democracy interact. Some academics contend that AI poses a serious threat to democratic ideals, while others contend that its growth can improve public services, provide economic opportunities, and build citizen trust (Chehoudi, 2025).

India does not claim to have solved the AI governance puzzle. Perhaps no country has. What it offers instead is a model rooted in democratic values, developmental needs, and ethical reflection. In a world increasingly divided between technological dominance and digital authoritarianism, this middle path matters.

Whether India can sustain this vision will depend on institutional capacity, political will, and global cooperation. The outcome is uncertain. Yet uncertainty, after all, is not a weakness. In the governance of AI, it may well be the starting point of wisdom.

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Conflict of Interest

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