



Research Article

# Artificial Intelligence and Judicial Governance in India: A Management-Oriented Analysis of Digital Justice Systems

## Article History

### Name of Authors:

Rishabh Aryan<sup>1</sup>, Deepa Singh<sup>2</sup>,  
Anushree Mukte<sup>3</sup>, Lavita D. Souza<sup>4</sup>,  
Priyanka Puri<sup>5</sup> and Shreyas Rajan<sup>6</sup>

### Affiliation:

<sup>1</sup>MTech (Artificial Intelligence and Data Science), Department of Computer Science and Engineering, Institute of Information Technology, Bhagalpur (Bihar), Indian

<sup>2</sup>Assistant Professor, School of Law, Prestige institute of management and research, deemed to be University, Indian

<sup>3</sup>Assistant Professor, Symbiosis Law School Nagpur, SIU Pune, Indian

<sup>4</sup>Assistant Professor, Mangalore University, Indian

<sup>5</sup>Associate Professor and HOD, University School of Law, Rayat Bahra Professional University, Hoshiarpur, Indian

<sup>6</sup>Doctoral Student and AI Specialist, Sikkim Sardar Patel University, Indian

### Corresponding Author

Dr. Rishabh Aryan  
rishabh.250201011@iitbh.ac.in

### How to cite this article:

Aryan, Rishabh *et al.* Artificial Intelligence and Judicial Governance in India: A Management-Oriented Analysis of Digital Justice Systems. J. Int. Commer Law Technol., 2026;7(1): 1584-1589,

**Received:** 02-06-2026

**Revised:** 18-06-2026

**Accepted:** 21-07-2026

**Published:** 25-08-2026

Doi: 10.61336/jiclt/20267104

©2026 the Author(s). This is an open access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>)

**Abstract:** Artificial Intelligence (AI) has become increasingly being redefined judicial governance in India by allowing transition from the traditional judicial administration to digitally empowered and data-reflecting systems. AI is proving instrumental in conducting legal research, tracking legal matters, translation and administrative tasks, among others, in initiatives like the e-Courts Mission Mode Project, SUPACE (Supreme Court Portal for Assistance in Court Efficiency), SUVAS (Supreme Court Vidhi Anuva ad Software) and National Judicial Data Grid (NJDG). This paper seeks to use an analytical lens steeped in management studies to explore the ways in which AI can support and boost efficiency, transparency and accountability in the Indian judiciary and to identify and challenge current structural issues, including the difficulty of processing case numbers, the slow court process, and the lack of resources. By critically examining the governance challenges that arise with the use of AI, such as concerns about algorithmic bias, data quality and integrity, and moral responsibility in judicial proceedings, it aims to drive fairer, more effective, and clear decision-making. Its focus is on the governance challenges associated with the deployment of AI, including algorithmic bias, data integrity, and ethical responsibilities in judicial processes, fostering more equitable, efficient, and transparent decision making. The recent judicial developments, such as the Supreme Court's worries about fake citations created by AI tools and hallucinations in legal writing serve as reminders of the dangers of the unchecked use of AI in courtrooms. The research also underscores the necessity of a delicate balance between technology and human oversight, as AI is not merely a decision-making aid but also demands careful management by judges. Lastly, it advocates for an accountability-based framework for governance of AI systems rooted in transparency, auditability, and constitutional/legal adherence to prevent, mitigate, and bolster judicial integrity in India through digital justice systems.

**Keywords:** Artificial Intelligence (AI), Judicial Governance, Digital Justice, Legal Technology (Legal Tech), Judicial Administration, Algorithmic Governance

## INTRODUCTION

The Indian judiciary at present is facing deep and structural problems which impact its own ability delivery speedy and substantial justice. Among these factors are the significant amounts of accumulated cases, inefficiency in the judiciary processes and administrative delays in different levels of the judiciary. The workload for judges and court personnel has become disproportionately high with estimated 40–50 million cases pending in various

courts throughout the country, thereby highlighting the need for judicial reforms with regard to judicial management and infrastructure. In the face of these challenges, the Government of India and the judiciary have been adopting measures that embrace technology, such as the Electronic Courts Mission Mode Project, aiming to digitize court-related documents, facilitate motion papers to be filed electronically and enhance the tracking of court processes. The adoption of digital case

management systems and the use of data-driven platforms like the National Judicial Data Grid (NJDG) marks a paradigm change from the inefficient and fragmented court administration era to a more streamlined and technologically empowered judicial governance era. In recent years, the slow integration of artificial intelligence (AI) technologies has also contributed to this reimagining, providing tools like predictive analysis, transcription and notification support. But there are also important questions of accountability, transparency, data security, and algorithmic bias that need to be considered in the shift. Given the potential for AI systems to be deployed in judicial processes, it is crucial to implement robust AI regulations that safeguard the accuracy, privacy, independence, and fairness of the justice delivery system in India without compromising on technological efficiency [1].

### Evolution of Digital Justice Systems in India

From being paper-based with manual operations, Indian judicial systems have taken steps towards digitization, implementing modern governance mechanisms powered by artificial intelligence and technology. Navigating the traditional paper-based courts required extensive documentation, manual filing processes, and person-to-person case management, leading to delays, inefficiencies, and challenges with access to documents. The paper-based court environment was characterized by significant delays, inefficiencies, and access to records, which relied heavily on physical documents, manual filing, and in-person court proceedings. To solve these problems, the e-Courts Phase I project was designed to provide for digitization of the infrastructure – mainly computerization of courts, installation of hardware, and the use of basic digital database for case records [2].

This development gave way to e-Courts Phase II which previously launched a more progressive system and put in place a centralized platform to connect the courts of all states of India, for instance the National Judicial Data Grid (NJDG) for real-time tracking of case status and transparencies in judicial administration. The current e-Courts Phase III is a more rigorous phase of transformation, focusing on intelligent automation, leveraging data and enhancing interoperability among judicial actors. The next phase in the use of artificial intelligence for judicial support is at this level. The use of AI tools, including SUPACE (for legal research and case summaries), SUVAS (for multilingual translation of judgments), legal Chatbots and automated transcription systems, is encouraging to improve the efficiency. AI assisted tools, like SUPACE (legal legislative research and case summarization), SUVAS (multilingual case translation), Chatbots, and automatic transcription systems, are suggested to bring efficiency and ease into administration. Altogether these phases convey a decided

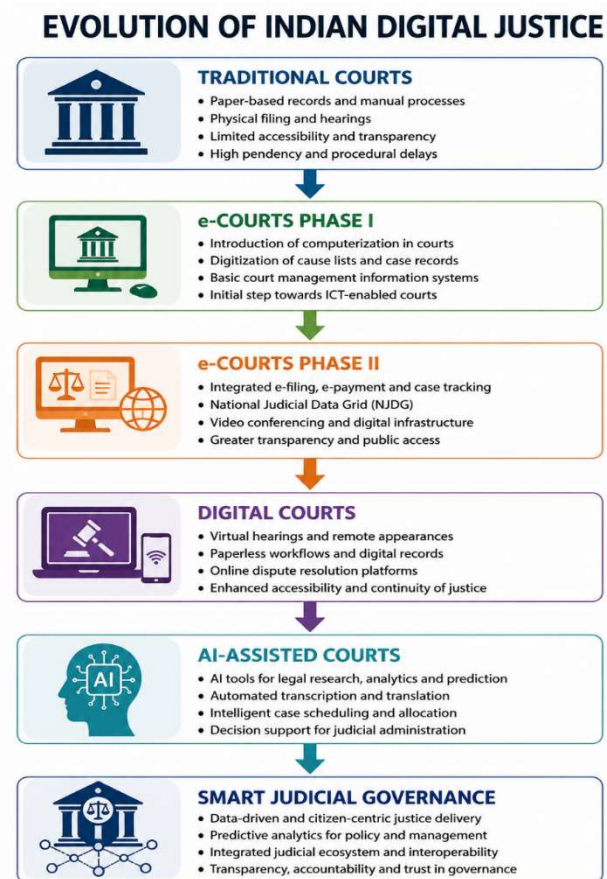


Figure 1: Evaluation of Indian Digital Justice

transition from mere digitalization to smart rule administration systems that include machine aiding, natural language processing and anticipating analytics (Figure 1). The shift represents beyond the modernization of the technology, it also reflects change in structure of judicial administration in India wherein the judicial administration becomes more responsive, data driven and technology enabled [3].

### Conceptual Framework: AI and Judicial Governance

The conceptual framework around Artificial Intelligence (AI) as applied to judicial governance in India is built on the foundations of creating a cohesive and conducive combination of technology systems and institutional decision-making structures that ultimately increase efficiency, transparency, and accountability in delivering justice. Judicial governance is essentially the administrative and procedural strategies used to administer and allocate cases, resources and to ensure that they are resolved in time by courts. With AI integrated into this system, it should be seen as a multilayered system of support and not as a replacement for human judgment. The first layer involves the data infrastructure layer, where digitalized case records along

with judiciary databases and platforms like National Judicial Data Grid (NJDG) serve as the foundation for AI analysis [4]. The first layer is the data infrastructure layer, which encompasses the collection of digitized case records, judiciary databases, and platforms such as the National Judicial Data Grid (NJDG). The second layer is the analytical and processing layer, which involves using machine learning algorithms and natural language processing (NLP) to help with legal research, document classification, and case summarization. The third layer involves the decision support layer, where AI systems like SUPACE and predictive analytics play a crucial role in guiding judges through precedent research, case flow management, and more efficient case scheduling. The last but not least layer is the governance and oversight layer that makes sure proper ethical practices, transparency and rules of law (including fairness and equality before the law) are adhered. The framework highlights the role of AI as an assistive technology in judicial processes, reinforcing and complementing human decision-making, while enhancing administrative efficiency. It also underscores the importance of the protection of the data under regulation and the need to address threats like algorithmic bias, misuse of the data, and dependence on automated processes in judicial procedures (Table 1).

### **Management-Oriented Approach to Judicial AI**

In terms of public administration and management, the implementation of Artificial Intelligence (AI) in judicial governance marks a major step towards enhancing the efficiency of the judiciary and streamlining court administration. AI-powered systems play a significant role in improving case allocation efficiency, as they facilitate the automation and organization of case categorization by content, urgency, and complexity, minimizing the arbitrary case distribution, ensuring workload distribution, and optimizing the allocation of cases. In judicial workload management, AI can be used to prioritize cases, schedule hearings, and identify delays in the current processes to streamline the workflow and ensure judges manage their time effectively. Another essential improvement that AI can bring is resource optimization, allowing for more efficient use of court premises, staff, and equipment [5].

By making better use of resources, AI can reduce administrative waste and enhance the overall productivity of court resources. AI, moreover, positively influences reduction of procedural delays by facilitating documentation procedures, giving automate repetitive clerical tasks and even enabling faster eras of legal records using digitized databases. The progressive monitoring mechanism like the National Judicial Data Grid (NJDG) further promotes the transparency in administration and enables stakeholders to monitor the movement of a case and the inefficiencies in the judicial system in real-time.

While AI can offer such a management benefit, its potential for misuse or mismanagement in the context of judicial governance is high. As reliance on the automated systems increases, they may ultimately take the place of human discretion in judicial procedures, which undermines the principle of judicial independence. Additionally, there is the danger that outputs of algorithms are not checked adequately and that therefore legal procedure may be incorrect or have implicit negative consequences on the parts of the data subjects. Also, the judicial staff's lack of technological skills may lead to misusing or misunderstanding the insights provided by AI. Other governance issues include concerns about data integrity, artful algorithmic design and cyber security. Despite the transformative promise of AI to improve judicial administration, cautious regulation will be crucial, with human-in-the-loop strategies, strong ethical guidelines, and ongoing judicial monitoring needed to make sure technology doesn't impact the balance of fairness, accountability, and constitutional principles in the justice system of India.

### **Key AI Tools in Indian Judiciary**

The Indian judiciary has embraced numerous Artificial Intelligence (AI) and digital instruments to enhance the efficiency, access, and transparency of the justice delivery process. The judiciary in India has taken strides to adopt various AI and digital instruments to streamline justice delivery processes, making them more efficient, accessible, and transparent. One of the most important innovations is the development of SUPACE (Supreme Court Portal for Assistance in Court Efficiency), which aims to help judges in legal research, case summarization and identification of relevant precedents, mitigating the recurrence of repetitive analytical activities.

One of the other key tools is SUVAS (Supreme Court Vidhi Anuva ad Software) that aids in converting judicial documents and judgements into various regional languages to make the justice sector more accessible and inclusive. The National Judicial Data Grid (NJDG) is a comprehensive data portal which has real time data regarding pendency, disposal etc. and judicial performance of courts in India for data-centric judicial administration and policy making. Moreover, AI technology like TERES court transcription helps automate analytical transcription of court proceedings, improving the accuracy of the court record and minimizing manual mistakes [6].

The possibilities of AI-powered legal research assistants and Retrieval-Augmented Generation (RAG) systems are being explored to assist lawyers and judges in swiftly fetching case laws and legislative provisions. Some High Courts have also used chatbots to provide fundamental case information and procedural guidance to litigants, with some High Courts even experimenting

with such solutions. Together these tools act as a transition towards what the technology-enabled judiciary can well be called, and pave the way for machine learning, natural language processing and data analysis to work their way into the core judicial processes. The implementation of such innovations does not merely benefit in making administrative tasks more efficient and user-friendly, but it also requires a robust governance system to guarantee both the accuracy and the security of data and the ethical use of these innovations in judicial decision-making processes (Table 2).

### Recent Case Laws and Judicial Developments (2024–2026)

In India, the judiciary in recent years, spanning from 2024 to 2026, has exhibited a restrained approach towards AI in judicial proceedings. Over the past few years (2024–2026), Indian courts have taken a moderate stance on AI

in the legal arena. The Supreme Court has been particularly pointing out that AI tools can only be used as a “facilitator,” and not as a “replacement,” for judicial reasoning. Courts also pointed to examples of reliance on fraudulently cited, AI-generated hallucinations when filing documents, marking another occurrence where the legal AI use was not adequately monitored. In a notable finding, courts singled out instances where the legal AI use was not monitored and relied on the documents' AI-generated hallucination citations. Additionally, the judiciary has issued warnings on data reliability, algorithmic bias and the morality of using AI. Together those developments reflect a transitioning period in which courts are trying to strike a balance between the innovation of technology and constitutional protections, not sacrificing judicial independence, nor judicial inaccuracy in the digital marketplace of justice [7] (Table 3).

Table 1: Core Concepts of AI and Judicial Governance

| Concept                  | Description                                                                                            | Judicial Application                                                                    | Management Implication                                                                     |
|--------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| AI Governance            | Framework ensuring ethical, transparent, and accountable use of AI systems in public institutions      | Decision support in legal research, case analysis, and administrative assistance        | Ensures responsible deployment, reduces bias, and strengthens trust in judicial AI systems |
| Judicial Governance      | Institutional mechanisms for managing court operations, judicial conduct, and justice delivery systems | Court administration, case allocation, workload distribution, and procedural regulation | Improves efficiency, accountability, and institutional performance of courts               |
| Digital Justice          | Integration of digital technologies into traditional justice delivery mechanisms                       | e-Filing systems, virtual hearings, online case tracking, and digital record management | Enhances accessibility, reduces delays, and promotes paperless court systems               |
| Predictive Analytics     | Use of data-driven AI models to forecast legal outcomes, case duration, and workload trends            | Case backlog estimation, scheduling optimization, and judicial resource planning        | Supports evidence-based judicial administration and strategic planning                     |
| Decision Support Systems | AI-based tools that assist judges and legal professionals in research and analysis                     | Legal research automation, precedent identification, and judgment summarization         | Reduces cognitive workload and improves accuracy in judicial reasoning processes           |

Table 2: Key AI Tools in the Indian Judiciary

| AI Tool                                       | Full Form / Type                                        | Functionality                                                                | Judicial Application                                                                          | Key Benefit                                                           |
|-----------------------------------------------|---------------------------------------------------------|------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|
| SUPACE                                        | Supreme Court Portal for Assistance in Court Efficiency | AI-enabled legal research and case summarization tool                        | Assists judges in reviewing case files, extracting relevant facts, and identifying precedents | Reduces judicial workload and improves efficiency in case preparation |
| SUVAS                                         | Supreme Court Vidhi Anuva ad Software                   | AI-based natural language processing translation system                      | Translates judgments and legal documents into multiple regional languages                     | Enhances accessibility and multilingual delivery of justice           |
| NJDG                                          | National Judicial Data Grid                             | Centralized judicial database system                                         | Tracks pendency, disposal rates, and case status across courts                                | Improves transparency, monitoring, and data-driven governance         |
| TERES                                         | Transcription and Recording of Evidence System          | AI-based speech-to-text transcription tool                                   | Converts court proceedings and oral arguments into written digital records                    | Ensures accurate documentation and reduces manual errors              |
| Legal Research Assistants (RAG-based systems) | Retrieval-Augmented Generation systems                  | AI models for intelligent legal search and contextual retrieval of case laws | Supports judges and lawyers in fast and accurate legal research                               | Enhances precision, speed, and depth of legal analysis                |

Table 3: Recent Case Laws and Judicial Developments

| Case / Development                                   | Year    | Key Principle                                   |
|------------------------------------------------------|---------|-------------------------------------------------|
| AI-generated fake citation issue in tribunal rulings | 2024–25 | Courts must verify AI-assisted legal references |
| Supreme Court advisory on AI use in courts           | 2025    | AI is assistive, not decision-making            |
| Draft judicial AI guidelines                         | 2026    | Regulates ethical and limited use of AI         |
| High Court digital justice advisories                | 2024–26 | Emphasis on transparency and data security      |

## **Management Challenges in AI-Driven Judicial Governance**

There are certain management and administrative challenges that need to be tackled, with the goal of blending Artificial Intelligence (AI) into judicial governance in India to showcase its effectiveness and ensure it is implemented in an ethical and responsible manner. A key challenge is algorithmic bias, where existing systemic inequalities in how past court decisions have been influenced by written words can be perpetuated in legal AI systems, impacting fairness in legal processes. Data fragmentation is another major issue because court records are not uniform, not all have the same number of separate entries, or they lack internal consistency and structure, making it hard to identify correlations with other data sets.

The risks of cybersecurity and data privacy are also a considerable threat considering the possibility of sensitive judicial information and the increasing move towards centralization of the digital platform. Moreover, the absence of unified legal data sources and databases makes it difficult to create accurate AI programs for the Indian legal system. There is further resistance to the digitization of the courts within institutions, obviously because of the differences of judicial officers and court staff in adopting the technology. Poor training of many of the stakeholders has led to either underutilization or misuse of AI tools. The reliance on the proprietary AI systems of private vendors also leaves them room to worry about transparency, accountability and sustainability. Moreover, ethical considerations are introduced into the development of AI as a tool to assist, but not make, decisions in the judicial process. These challenges necessitate robust governance measures, capacity-building programs, and regular monitoring to foster trust and uphold the integrity of India's judicial system without being compromised by AI [8].

## **Opportunities and Strategic Benefits**

The introduction of AI into judicial governance in India offers substantial potential opportunities and strategic advantages in improving the overall efficiency and efficiency of judicial governance. The biggest benefits include increased case turnover, as AI tools can help classify cases, prioritize, and schedule them, which also saves the court time and streamline workflows. Judges and lawyers benefit from AI by having access to important precedents, statutes, and case summaries with the assistance of sophisticated AI technology, making legal research more precise and efficient. Multilingual justice delivery is another key advantage, for example, through the translations of judgments into regional languages, through SUVAS, which make them more accessible and inclusive for litigants from various linguistic backgrounds. Predictive analytics also aids in the judicial administration process, by helping to determine the

complexity levels of cases, to predict case completion time and to optimize court resources. Moreover, AI helps improve access to justice by streamlining procedures and creating a digital platform to keep litigants updated and supported throughout their cases. Governance-wise, AI aids in data-driven policymaking and enables us to uncover systemic inefficiencies and devise specific judicial reforms. Furthermore, smart court technologies promote transparency and accountability within court actions. These strategic advantages suggest that AI possesses the power to revolutionize India's judicial system, making it more accessible, timely, and citizen-friendly, as long as it is implemented properly and accompanied by adequate safeguards and ethical protocols [9].

## **Proposed Governance Model for AI in Judiciary**

The suggested conducting governance of artificial intelligence in the Indian judiciary aims to strike a balance between technological innovation and uphold constitutional principles like the rule of law, transparency, and judicial independence. The main premise of this approach is the creation of a "human-in-the-loop" mechanism that relies on AI for decision-making support but leaves adjudicative decisions to the judges. This is to make sure that the algorithm does not prevail over the judgment of the trial judge. It also suggests creating specific audit committees comprising the High Courts and Supreme Court to regularly test judicial AI systems for their performance, accuracy, and ethical grounding. Ensure that transparency and explainability principles are mandatory, thus making all AI-driven recommendations subject to judicial review and understandable [10].

Furthermore, a regulatory 'sandbox' for legal AI technologies could promote experimentation and innovation while reducing to a minimum the systemic risks. Effective data governance policies, secure handling of judicial data, standardization of legal data, and cyber security protection are also highlighted. It is also crucial to provide capacity-building efforts through trainings or resources for judges, legal personnel, and court staff to support the effective implementation of AI tools. All deployments of AI systems in court should be conducted in accordance with ethical guidelines based on the constitutional principles. In summary, this governance framework seeks to establish a framework for responsible, accountable, and transparent AI, fostering the effective and efficient delivery of justice while safeguarding the integrity of India's legal system [11, 12].

## **CONCLUSION**

The advent of Artificial Intelligence (AI) into the governance of judicial system in India is a paradigm shift from the traditional, paper driven architecture of judicial delivery to digitally enabled and data centric judicial

system. The study has shown that, with a proper institutional framework of governance, AI can be a powerful tool to improve the efficiency of the judiciary, alleviate case load pressures, and enhance government transparency. The e-Courts Mission Mode project, SUPACE, SUVAS and National Judicial Data Grid (NJDG) are all initiatives that demonstrate India's intellectually forward and progressive steps toward smart judicial administration with the aid of automation, machine learning, and natural language processing.

These systems have helped to speed up case processing, enhance legal research tools, and increase access to justice with multilingual support and live tracking of legal data. The report also points out that the use of AI in the judiciary is not without significant obstacles, however. Algorithmic bias, fragmentation of data, the cybersecurity risks faced by judicial actors, the absence of legally datasets, and the limited technical capacity of judicial actors also pose significant risks to judicial processes' integrity.

In recent times, the issue of "hallucinated" citations produced by AI has drawn attention from courts and raised additional worries about the potential risks and need for oversight. The progress made in this area signals that AI could serve as a useful assistive technology but should not replace the inherent human aspects of judicial reasoning, judgment and constitutional interpretation. A management-first approach means that to effectively leverage AI in judicial affairs, robust institutional structures must be put in place to achieve accountability, transparency, and ethical standards. To achieve an equilibrium between innovation and judicial independence, a human-in-the-loop model backed by AI audit mechanisms, regulatory sandboxes and uniform rules on data governance is vital. Capacity building efforts should also include judges, court personnel, and legal practitioners to support the effective and responsible use of AI systems [13].

In conclusion, the application of AI in the Indian judiciary could revolutionize the system, making it more efficient, responsive, and citizen-friendly. It should be noted, however, that its use needs to be carefully framed, with a view to preserving constitutional values and public confidence. The future of the judicial governance in India will be of such hybrid nature which will be based on AI system in tandem with human judicial intelligence, that it reinforces and not upsets the value of justice, fairness and rule of law.

## REFERENCE

1. Government of India, e-Committee, Supreme Court of India. *e-Courts Mission Mode Project Reports*. Department of Justice, 2022–2025.
2. Supreme Court of India. *SUPACE: AI-Based Judicial Assistance System – Concept Note and Implementation Framework*. Supreme Court of India, 2023.
3. Supreme Court of India. *SUVAS (Supreme Court Vidh Anuvaad Software): Multilingual Translation Initiative in Judiciary*. Supreme Court of India, 2022.
4. National Informatics Centre (NIC). *National Judicial Data Grid (NJDG): Dashboard and Analytics Report*. Ministry of Electronics and IT, Government of India, 2024.
5. e-Committee, Supreme Court of India. *Digital Courts and Artificial Intelligence Integration in Indian Judiciary*. Supreme Court of India, 2024.
6. Ministry of Law and Justice, Government of India. *Digital Justice Transformation and Court Modernization Strategy*. Government of India, 2023.
7. Press Information Bureau (PIB). *AI-Enabled Court Transcription and Record Digitization Initiatives in India*. Government of India, 2024.
8. Supreme Court of India. *Advisory on Use of Artificial Intelligence Tools in Judicial Proceedings*. Supreme Court of India, 2025.
9. High Court of Delhi. *E-Courts and Digital Case Management System Guidelines*. High Court of Delhi, 2024.
10. High Court of Kerala. *Judicial Use of AI and Digital Technologies: Administrative Report*. High Court of Kerala, 2023.
11. Sarkar, S. "Artificial intelligence and access to justice in India." *Indian Law Review*, vol. 8, no. 2, 2024, pp. 145–167.
12. Reddy, V. "Algorithmic governance in courts: ethical and constitutional challenges." *Journal of Indian Legal Studies*, vol. 12, no. 1, 2025, pp. 88–112.
13. Gupta, A. and R. Sharma. "AI-assisted legal systems and judicial efficiency in India." *Journal of Law and Technology*, vol. 19, no. 3, 2024, pp. 201–220.