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EMBRACING THE FUTURE: CHALLENGES IN AI ADOPTION BY THE INDIAN JUDICIAL SYSTEM

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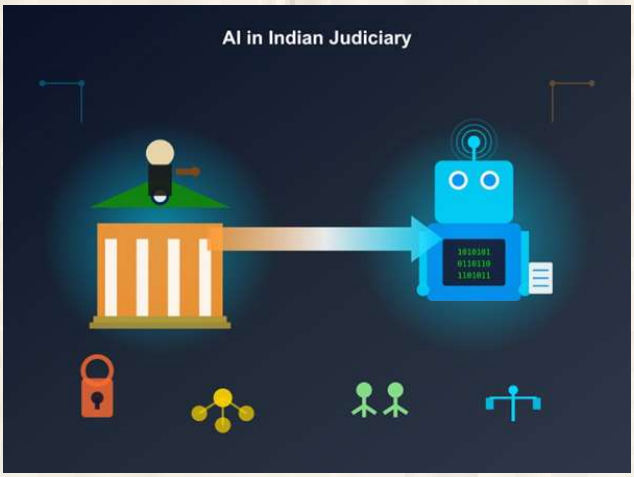
Abstract

The Indian judicial system, burdened by over 50 million pending cases and vast linguistic diversity, is turning to Artificial Intelligence (AI) to enhance efficiency, accessibility, and transparency in justice delivery. Tools like SUVAS (for judgment translation), SUPACE (for legal research), and the eSCR portal are pioneering steps by the Supreme Court to modernize legal processes while preserving judicial independence. These initiatives aim to reduce administrative workload, streamline case management, and bridge linguistic gaps, particularly for rural and underprivileged litigants. However, integration of AI raises critical concerns, including algorithmic bias, data privacy, ethical accountability, and the need for robust infrastructure in lower courts. The article underscores the necessity for balanced AI adoption—supporting innovation while upholding constitutional values of fairness, equity, and human oversight. Comparative insights from the EU, US, China, and others provide valuable frameworks, but India's path must be uniquely rooted in its socio-legal context.

1. Introduction: The Rise of AI in Judicial Systems

Artificial Intelligence (AI) is revolutionizing judicial systems worldwide, ushering in an era of unprecedented efficiency, accessibility, and innovation in justice delivery. From automating complex legal research to enabling real-time transcription of court proceedings and translating judgments into vernacular languages, AI is transforming how courts function, making justice more inclusive and responsive.

In India, a nation with a population of over 1.4 billion and a judiciary burdened by a staggering backlog of more than 50 million[1] cases across all courts, the integration of AI offers a beacon of hope to address systemic challenges. The Indian judicial system, deeply rooted in a constitutional framework that upholds fairness and equity, faces unique hurdles: prolonged case pendency, with the Supreme Court alone managing over 80,000[2] pending cases in 2024, limited judicial resources, and significant accessibility barriers for marginalized communities, particularly those constrained by linguistic diversity and economic disparities.



India's 22 official languages and hundreds of dialects exacerbate these challenges, as legal

1 https://njdg.ecourts.gov.in/njdg_v3/ (Last visited on August 19, 2025)
2 https://www.scobserver.in/journal/80221-cases-pending-in-the-supreme-court-in-january-2024/ (Last visited on August 19, 2025)

proceedings and judgments, primarily in English, remain inaccessible to millions of litigants, especially in rural areas. AI-driven tools, such as the Supreme Court Vidhik Anuvaad Software (SUVAS) for translating judgments into regional languages and the Supreme Court Portal for Assistance in Court's Efficiency (SUPACE) for streamlining legal research, represent pioneering efforts to bridge these gaps. Initiatives like the eSCR portal, which has facilitated the translation of 36,324 Supreme Court judgments into Hindi and 42,765 judgments have been translated into seventeen other regional languages, underscore India's commitment to leveraging technology for inclusive justice.[3] Additionally, AI is being piloted for transcribing Constitution Bench hearings and identifying defects in e-filings, with 200 Advocates-on-Record[4] testing these tools, signaling a proactive embrace of innovation.

However, integrating AI into a judiciary steeped in tradition and reliant on human judgment is not without complexities, such as inadequate technological infrastructure, particularly in lower courts, concerns over data privacy, the risk of algorithmic bias, and ethical dilemmas surrounding AI's role in judicial processes which demand careful navigation. The Supreme Court of India, as the apex judicial institution, stands at the forefront of this transformation, tasked with balancing technological advancements with the sacrosanct principles of justice, fairness, and equity. This article delves into the opportunities AI presents for revolutionizing India's judiciary, the Supreme Court's trailblazing initiatives, and the multifaceted challenges that must be addressed to ensure that technology serves as a tool for justice rather than a disruption to its core values.

2. Initiatives of the Supreme Court of India in AI Integration

The Supreme Court of India is integrating Artificial Intelligence (AI) and Machine Learning (ML) tools into various judicial processes, including case management. AI has also been deployed for transcribing oral arguments in Constitution Bench hearings. AI and ML are also being used to translate judgments from English into eighteen Indian languages via the eSCR portal of the Supreme Court of India.[5] Additionally, the Registry of the Supreme Court also uses AI tools for defect identification in e-filings, with prototypes currently being tested by 200 Advocates-on-Record.

The Supreme Court of India has been using AI for various tasks, including translation of judicial documents, enhancing legal research, and automating multiple processes. In order to oversee the translation of significant Supreme Court and High Court Judgments into vernacular languages, a committee led by an Hon'ble Judge of the Supreme Court was established as early as November 2024. The AI translation committees of the High Courts are actively monitoring the translation of Supreme Court and High Court judgments into regional languages. Currently, eight High Courts have already launched e-High Court Reports (e-HCR)[6], with others in the process of doing so.

Using AI, 36,324 Supreme Court judgments have been translated into Hindi, and 42,765

3 https://www.alec.co.in/show-blog-page/42000-regional-judgments-translated-ai-boosts-judicial accessibility#:~:text=On%20Friday%2C%20the%20Parliament%20was,(AI)%20in%20legal%20work (Last visited on August 19, 2025)

4 https://www.pib.gov.in/PressReleasePage.aspx?PRID=2148356 (Last visited on August 19, 2025)

5 https://www.pib.gov.in/PressReleasePage.aspx?PRID=2118241 (Last Visited on 19.08.2025)

6 https://www.pib.gov.in/PressReleasePage.aspx?PRID=2043476 (Last Visited on 19.08.2025)

judgments have been translated into 17 other regional languages," till December 2024.

Judiciary-Led AI Programs:

The Supreme Court Vidhik Anuvaad Software (SUVAS) is a machine-assisted translation tool powered by Artificial Intelligence, developed to make judicial content more accessible by translating court judgments into regional languages such as Hindi, Tamil, and Kannada. While it does not aim to replace human translators, SUVAS offers a scalable solution to help litigants, particularly those from rural areas, comprehend complex legal language.

To further promote the use of regional languages in judicial processes, the Supreme Court, with technical support from the Ministry of Electronics and Information Technology, created SUVAS specifically for the legal domain. The software is currently capable of translating English judicial documents, including orders and judgments, into ten Indian languages—Hindi, Kannada, Tamil, Telugu, Punjabi, Marathi, Gujarati, Malayalam, Bengali, and Urdu—and vice versa.

SUPACE (Supreme Court Portal for Assistance in Court's Efficiency) is an AI-powered tool launched by the Supreme Court of India in 2021 to support judges by streamlining legal research and enhancing judicial efficiency. It helps by automatically gathering and analyzing case-related information, such as facts, precedents, and legal provisions, without making any judicial decisions. Designed to assist rather than replace, SUPACE is particularly useful in handling complex cases with large volumes of data.

The introduction of AI-driven tools like SUPACE and SUVAS marks a transformative step in integrating technology into the Indian judicial system. These tools are designed to enhance efficiency, streamline legal research, and improve access to justice, particularly for those facing language or resource barriers. Crucially, while artificial intelligence aids in data analysis, translation, and information management, it does not interfere with the core function of judicial decision-making. Judges retain full discretion and independence in interpreting the law and delivering judgments. The use of AI in the judiciary, therefore, is not a shift in authority but a support mechanism aimed at reducing administrative burden and improving the speed and quality of justice delivery.

3. Benefits of AI Integration in the Apex Court

AI integration within the workings of the Apex Court represents a monumental step towards revolutionizing the judicial landscape, promising substantial improvements in efficiency, accuracy, and accessibility of justice. One of the primary benefits lies in streamlining judicial processes, which are notoriously time-consuming and resource-intensive. AI-powered tools can automate myriad administrative tasks, from initial case registration and meticulous document management to sophisticated scheduling and resource allocation. For instance, intelligent systems can analyse caseloads and judicial availability to optimize hearing schedules, drastically reducing the current manual effort and inherent delays.

Furthermore, AI's capability in predictive analytics offers a proactive approach to backlog reduction, identifying potential bottlenecks and allowing for early intervention. By analyzing historical data on similar cases and judicial patterns, AI can even forecast potential case durations,

enabling more effective resource planning and management.

Beyond administrative enhancements, AI profoundly impacts the very core of judicial function by revolutionizing legal research and analysis. Traditional legal research is a laborious process, requiring extensive manual review of countless precedents, statutes, and judgments. AI-driven platforms, however, can rapidly process and synthesize immense volumes of legal data, identifying relevant case law, dissenting opinions, and evolving legal interpretations with unparalleled speed and accuracy. This empowers judges and legal professionals with comprehensive, real-time insights, fostering more informed and consistent legal reasoning and decision-making. Technologies like Natural Language Processing (NLP) are instrumental here, enabling the digitization and intelligent analysis of vast archives of legal documents, transforming unstructured text into actionable insights and minimizing the risk of human error in data interpretation.

Moreover, AI holds immense potential in democratizing access to justice. Virtual legal assistants and AI-powered chatbots can provide immediate, 24/7 access to information regarding legal procedures, and even potential legal remedies, particularly for citizens who may lack the financial means for private legal counsel or who are unfamiliar with the complex intricacies of the legal system. This extends to simplifying the filing process through AI-assisted forms and guiding litigants through each step of their legal journey, thereby reducing intimidation and empowering individuals to navigate the judicial system more effectively.

Finally, AI's capacity for generating predictive insights into potential case outcomes, based on the meticulous analysis of historical judgments and similar factual scenarios, offers a valuable tool for judicial officers. While not replacing human judgment, these insights can serve as an additional layer of information, aiding in the formulation of more robust and equitable decisions. This comprehensive technological overhaul not only promises to significantly expedite case resolution and alleviate the immense workload on judges and court staff but also cultivates a more transparent, predictable, and user-friendly legal system, ultimately ensuring that justice is delivered more swiftly, efficiently, and equitably to all sections of society.

4. Challenges and Ethical Considerations

The integration of Artificial Intelligence (AI) into legal systems and practices introduces profound challenges and ethical questions. While AI promises enhanced efficiency and data-driven decision-making, its deployment in legal contexts must be approached with caution.

One of the foremost challenges is bias in AI algorithms. AI systems trained on historical legal data may inherit and perpetuate discriminatory patterns, particularly in areas such as sentencing, bail decisions, or

7 *2025 SCC OnLine SC 758*

predictive policing. The lack of transparency, commonly referred to as the *"black box"* problem, further complicates accountability. When an AI system makes a legal recommendation or generates a document, understanding its rationale is often difficult, raising serious concerns about due process and fairness.

A recent judicial observation highlights this growing issue. In *Annaya Kocha Shetty (Dead) through Legal Representatives Vs Laxmibai Narayan Satose since deceased through Legal Representatives*[7], a bench of the Hon'ble Supreme Court comprising Justice Pankaj Mittal and Justice S.V.N. Bhatti expressed dissatisfaction with excessively lengthy pleadings in civil trials. The Court noted that such verbosity often results in unnecessarily long judgments. More critically, the Court observed that AI-generated or machine-assisted pleadings are increasingly being submitted, raising concerns over the quality, relevance, and legal coherence of such documents.

Furthermore, Chief Justice B.R. Gavai recently cautioned against over-reliance on AI tools for legal research, specifically noting that platforms like ChatGPT have, on occasion, generated fake case citations. This phenomenon, often referred to as "AI hallucination," highlights the risks of using generative AI without human verification in the legal domain. While such tools can assist in streamlining research, Justice Gavai's remarks underscore the necessity of cross-checking all AI-generated content to maintain the integrity of judicial processes and avoid misleading submissions in court.

Privacy is another significant concern. AI applications in the legal field frequently involve the analysis of sensitive personal data, necessitating rigorous data protection standards. Informed consent, data anonymization, and secure data storage are ethical imperatives, especially when handling client-attorney privileged information or surveillance data.

Moreover, the erosion of professional responsibility is an emerging issue. As lawyers increasingly rely on AI tools, there is a risk of diminishing critical thinking and independent legal judgment. Ethical guidelines must clearly define the permissible scope of AI assistance to ensure that human professionals remain accountable for the final legal output.

Lastly, employment displacement in the legal profession presents an ethical dilemma. While AI can reduce costs and streamline operations, it may also displace roles such as paralegals or junior associates, potentially affecting career development pathways in the legal sector.

5. Comparative Global Perspective

A comparative global view reveals significant divergence in how jurisdictions approach AI's integration into legal systems, reflecting differing cultural values, regulatory priorities, and technological capacities.

The European Union (EU) has emerged as a leader in AI regulation, particularly through the AI Act, which classifies AI systems based on risk and imposes strict obligations on high-risk applications, including those in the legal domain. The EU's approach emphasizes

fundamental rights, such as the right to explanation and non-discrimination, positioning AI as a tool that must align with democratic principles and human dignity. For instance, the Netherlands has piloted an AI-based tool for case management in administrative courts, designed to streamline case prioritization while ensuring judges retain final decision-making authority. Similarly, France has experimented with AI systems in its Cour de Cassation to analyze patterns in judicial rulings, aiming to enhance consistency in legal interpretations while adhering to strict data privacy regulations.

In contrast, the United States has adopted a more fragmented and market-driven approach. While federal guidelines on AI ethics exist, most legal innovation and oversight occur at the state level or through private sector standards. The U.S. tends to prioritize innovation and economic competitiveness, which can sometimes come at the expense of comprehensive ethical regulation. For example, California courts have piloted AI-driven transcription and predictive analytics tools to assist judges in managing high caseloads, particularly in civil litigation. Additionally, some federal district courts have tested AI for e-discovery processes, automating document review to reduce costs and expedite trials, though concerns about algorithmic bias persist.

China, meanwhile, promotes AI as a strategic national priority and heavily integrates it into public administration and legal enforcement. Its use of AI in courts, including automated case handling and virtual judges, reflects a state-centric model. However, this model raises concerns about transparency, surveillance, and the independence of judicial processes.

Smaller jurisdictions such as Estonia have taken innovative steps by piloting AI-driven small claims resolution systems, offering a glimpse into how AI can democratize legal access if implemented with sufficient safeguards. Similarly, Canada has explored AI in its British Columbia court system, where a pilot project uses AI to assist with online dispute resolution for small claims and family law cases, aiming to improve access to justice while maintaining human oversight. The United Kingdom has also piloted AI tools in its Online Civil Money Claims system, enabling automated case triage and preliminary assessments to reduce judicial backlog, with safeguards to ensure fairness and transparency.

These global comparisons highlight the tension between innovation and regulation, and between efficiency and rights protection. They also underscore the importance of international cooperation in setting ethical and legal standards for AI in law, especially as cross-border legal issues and multinational AI systems become more prevalent.

6. Conclusion

The adoption of Artificial Intelligence (AI) in the Indian judicial system, led by the Supreme Court, represents a pivotal shift toward

modernizing justice delivery while grappling with significant challenges. With over 50 million pending cases and barriers like linguistic diversity and limited resources, AI tools such as SUVAS, SUPACE, and the eSCR portal offer promising solutions. By December 2024, 36,324 Supreme Court judgments were translated into Hindi and 42,765 into 17 regional languages, making legal content accessible to diverse communities. These efforts, alongside AI-driven transcription and e-filing defect identification, reduce administrative burdens, enabling judges to focus on core judicial tasks.

AI's benefits are substantial. SUVAS enhances access by translating judgments into languages like Tamil and Urdu, empowering rural litigants. SUPACE streamlines legal research, providing judges with rapid insights into precedents and case data. Predictive tools optimize court schedules, addressing delays. Virtual assistants guide citizens through legal processes, promoting inclusivity. These advancements align with India's constitutional vision of equitable justice, fostering a more efficient and transparent system.

However, AI's integration raises concerns that require careful consideration. Historical data used to train AI may carry biases related to caste, gender, or class, potentially entrenching inequalities. The lack of transparency in AI decision-making processes can undermine trust in judicial outcomes. Privacy risks, given the sensitive nature of legal data, demand stringent safeguards. The digital divide, particularly in lower courts, limits AI's reach, while excessive reliance on technology could weaken judicial discretion. Training for judges and advocates, alongside ethical guidelines, is essential to maintain human oversight.

Global perspectives offer insights. The EU's AI Act emphasizes rights, with projects in the Netherlands and France improving case management. The U.S. prioritizes innovation, using AI in California for transcription, but faces bias issues. Estonia and Canada enhance access through dispute resolution systems, while the UK reduces backlogs with automated triage. China's approach, however, highlights transparency risks. India must forge a balanced path, rooted in its constitutional values.

Both the potential and pitfalls of AI are evident. While it can transform justice delivery, unchecked adoption risks fairness and accountability. India's judiciary must invest in infrastructure, foster collaboration, and establish robust regulations to ensure AI serves justice without compromising its principles. By blending innovation with human judgment, the Supreme Court can shape a judicial system that is accessible, efficient, and just, setting a model for others to follow.