

ARTIFICIAL INTELLIGENCE IN INDIAN JUDICIARY: ENHANCING JUSTICE DELIVERY AND ALLEVIATING THE BURDEN ON COURTS

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Abstract

The integration of Artificial Intelligence into the Indian Judiciary has a potential to revolutionise the justice system innately; it can facilitate justice delivery in a speedy and efficient manner. The authors examine international approaches and compare different AI powered systems across the globe and explore the scope of their compatibility in the diverse and dynamic Indian legal environment. It discusses the likely challenges alongside recommendations to consider while integrating AI in Judiciary. It addresses the subtle ethical considerations in decision-making powers of an AI and how with manual supervision it can be eliminated. This study aims to contribute to an on-going discussion on harnessing efficient use of AI for speedy justice delivery and upholding integrity and dignity of the Indian Judiciary. With the aid of existing literature, the authors have followed a doctrinal research approach while taking the assistance of qualitative data collected through interviews of legal professionals to gain insight into the research question, which dwelled on understanding the implications of Artificial Intelligence in addressing the pendency of cases, caused especially due the lapse of limitations period in Indian Judiciary.

Keywords: Artificial Intelligence, Case pendency, Dashboard, Judiciary, Justice delivery, Limitations period.

1. Introduction

In the up-roaring world of technological advancement, Artificial Intelligence (AI) is the latest addition that stimulates human intelligence processed by machines. In simple terms, it gathers a large amount of training and factual data and analyses a correlation between them to generate sensible outputs. In the recent years, there has been a notable demand to incorporate these advancements in the Indian Legal System, aiming to enhance efficiency, improve decision-making, and ensure access to justice for all citizens [1].

Many initiatives have been introduced by Indian Supreme Court and the Ministry of Law to implement AI-based programs, one of which is the E-Courts program aimed at integrating Artificial Intelligence [2]. Since courts in India are already undergoing a transformative transition by turning digital, the growing area of science known as 'Artificial Intelligence' or 'AI' may aid in unexpected ways to enhance our justice delivery mechanisms and reduce the backlog of ongoing cases. The judiciary in nations such as the United States and Canada, has already used AI technologies to aid judges in making decisions such as bail granting and parole release [3]. Similarly, in India, judicial tasks may be recognised and hastened with the aid of AI.

These duties can range from tasks such as service of summons, to evidence review. This will not only save the time of the courts, leading to better use of resources but may also reduce the impact of the judge's personal biases in decision-making. Goes without saying that a trained machine, however intelligent, can never replace the intelligence and reasoning of a human judge. However, it may aid judges in their decision-making by offering calculated, relevant and unbiased opinions, ensuring that justice is supported even amidst the challenges of dealing with a large set of cases [4]. AI could enhance the efficiency of the justice system by automating tasks, analysing large legal datasets, and providing insights on case management.

AI, such as aiding in predicting case outcomes, prioritizing cases based on urgency, and generating initial legal opinions. By improving efficiency and reducing case backlogs, it can help courts make faster decisions, ultimately enhancing the effectiveness of India's justice system. [5]. This paper suggests that incorporating AI into the Indian legal system could be a groundbreaking way to decrease the backlog of cases in India and highlight the country as a leader in implementing technology in a large and varied population. The goal of this integration is to prove a justice delivery system that is both efficient and sustainable.

2. Navigating a Challenge: Tackling Case Pendency in the Indian Judiciary amid Limitation Delays

In the field of civil litigation, the Limitation bar is a mechanism for prompt resolution and disposal of disputes. On the face of it, The Limitation Act of 1963 puts a bar after a certain period on applications, appeals and petition to make justice more reasonable and approachable with calculated time restriction [6]. It is done with the intention of limiting litigation. This is done to give effect to the maxim '*interest reipublicae ut sit finis litium*' which puts a responsibility on State to limit the litigation keeping in mind that the controversies are there for a limited time, one's inaction should not be other's torture for indefinite years [7].

The act is more of a preventive measure than a statutory bar on justice. In the words of P. Jaganmohan Reddy it was observed by the Supreme Court that "*the*

object of the Statutes of Limitations is to compel a person to exercise his rights of action within a reasonable time as also to discourage and suppress stale, fake or fraudulent claims” [8].

Although the intention to pass the Limitation Act was to put an end to litigation (morally) or at least restrain people from taking unnecessary legal actions or trivial legal battles, people have discovered advanced and more wicked loopholes in the system to seek vengeance in a legal manner. It is legally required to follow the delayed condonation processes after the statute of limitations has passed. Unfortunately, some litigants occasionally take unfair use of this provision in an attempt to prevent their opponents from receiving prompt justice. Contrary to popular belief, individuals frequently take advantage of these loopholes to the point that it has a long-lasting psychological effect on both the victim and the judiciary as a whole.

India is a diverse nation with a distinct quasi-federal structure that governs its laws and administration. There are slight variations in how different jurisdictions function because of the regulations that have been put in place by several jurisdictions to ensure the prompt and efficient handling of court matters that are most proper for those locations. However, the public faces significant challenges when judges are moved between jurisdictions or when litigants are unfamiliar with the laws and customs of the courts they are appointed to.

This contradiction could hinder legal access and cause misconceptions. The communication challenges brought on by India's enormous cultural and geographical diversity further muddle legal proceedings. The effective sharing of legal information might be hampered by misunderstandings brought on by linguistic, cultural, and geographical differences. Geographical restrictions and administrative shortcomings also often lead to delayed paperwork and occasionally, non-attendance at hearings. The courts are faced with a substantial backlog of unresolved cases, mostly because of late submission of pertinent paperwork, applications, or important evidence. In addition to slowing down the legal system, this backlog makes it more difficult to get justice swiftly.

The courts from lower to apex level, time and time again have affirmed the importance of fundamental rights and more importantly the mechanism to seek redressal in case of infringement of these moral rights. The recent judgement, Nipun Praveen Singhvi v. Union of India, affirmed that the right to speedy justice is enshrined under Article 21 of the Indian Constitution [9]. It is important to note that the Article 21 of Indian Constitution has been given multiple and elaborative interpretations by the courts deals with safeguarding life and personal liberty [10].

It was also observed in the case of Akhtari Bi v. State of Madhya Pradesh that *“to have speedy justice is a fundamental right which flows from Article 21 of the Constitution”* [11]. Hence, it is to conclude that seeking justice at reasonable tenure is not an exceptional demand by any stakeholder of this country. It is as basic as seeking personal rights, privacy or basic human dignity. Significant importance is given to speedy trial as it involves human dignity but to a large extent speedy trial becomes an integrated part to speedy justice.

The case of Noor Mohammed v. Jethanand, affirmed *“access to speedy justice as a human right which is deeply rooted in the foundational principle of democracy and such a right is not merely a creation of human rights but also a natural right”* [12]. Now it is an established principle that speedy justice is not just a fundamental

right secured under the Indian Constitution but also a person's natural right as described by the court above.

In accordance with the ruling in the case of *Hussainara Khatoon and Ors. (I) v. Home Secretary, State of Bihar*, “Article 21 confers a Fundamental Right upon every person not to be deprived of his life or liberty, except according to procedure established by law: that such procedure is not some semblance of a procedure, but the procedure should be reasonable, fair and just”; and therefrom flows, without doubt, the right to speedy trial. The Court also observed that “no procedure which does not ensure a reasonably quick trial can be regarded as ‘reasonable, fair or just’ and it would fall foul of Article 21” [13].

As technological advancements continue to reshape various sectors, the judicial framework must also adapt to remain effective. AI could complement existing legal frameworks like The Limitation Act of 1963; thereby enhancing the timely resolution of disputes while upholding the principles of justice. As we explore the synergy between advanced technologies and established legal statutes, we stand at the cusp of a more efficient justice delivery mechanism.

3. Understanding Artificial Intelligence in the Indian Legal Context

The Ministry of Electronics and Information Technology (MeitY) acts as the key governmental body overseeing the development of AI strategies in the country. It has established four committees with the aim of creating a comprehensive policy framework to guide AI implementation [14]. However, AI's legal concerns are generally covered under broader laws related to technology, data protection, intellectual property rights, cybersecurity and more.

The Niti Aayog has formulated a series of seven principles focused on the ethical use of AI [15]. These principles emphasise the importance of safety and reliability, champion equality, inclusivity, and non-discrimination and underscore the need for privacy and security measures. They also advocate for transparency, hold AI systems accountable, and stress the importance of upholding and promoting positive human values.

Diving into specifics, the case of *Jaswinder Singh vs. State of Punjab*, highlighted how technology is shaping the current legal system; herein a Judge of Punjab and Haryana High Court while dealing with a bail petition in a fatal assault case, sought insights from ChatGPT, to broaden his perspective regarding bail in cases marked by allegations of severe cruelty [16].

This is a clear indication of the evolution in the legal field, where the benefits are not only experienced by practitioners, but also the improved access to justice through swift and informed decision making.

4. Leveraging Artificial Intelligence to Address Case Pendency Due to Limitations Periods

A matter of significant concern that is facing the Indian Judiciary is navigating the changing contemporary legal scenario, which is more often than not, exacerbated by limitations periods that essentially provide specific time frames within which stipulated actions need to be initiated [17]. Having to tackle heavy caseloads, courts are presently encountering difficulties in ensuring an efficient justice delivery

mechanism, which further leads to an undermined faith of the public in the justice delivery system.

However, AI is a promising intervention, and it can streamline and expedite legal research, contributing efficient case management. It is pertinent to note that conventional approaches to legal research, especially through case laws, statutory provisions and legal commentaries, consume painstaking hours of manual labour and are highly prone to human error; herein AI interventions can automate and enhance said research by the use of Machine Learning (ML) Algorithms [18].

These refer to a subset of AI that enables systems from data patterns and learns over time. The implications for this in the legal domain can be seen through predictive analysis; by anticipating the outcomes of legal cases, analysing past judgement patterns, and identifying the likelihood of success in litigation. This predictive capability not only aids legal strategy but also streamlines case prioritisation and resource allocation [19].

Further Natural Language processing (NLP) helps in navigating data faster, and more efficiently. NLP works by understanding and processing natural language, and thereby significantly reduces the time required for legal professionals to peruse extensive legal texts and documents. The ability to interpret unstructured data makes NLP invaluable in extracting relevant information and insights from legal documents, case laws and legislation [20].

These mechanisms ensure critical aspects of the case are not overlooked, and with a reduced research time, more time could be devoted to strategic aspects of the case, refining the quality of legal representation. This helps mitigate the risk of deadlines imposed by the limitation periods, this is especially helpful in jurisdictions where limitations periods are strictly enforced, as it reduces the risk of cases being dismissed due to procedural non-compliance [21].

The Indian Legal System has long faced criticism for its inability to provide expedited justice, which is often attributed to a slow pace, and a significant backlog of cases. Manual procedures undertaken to manage procedural aspects are the primary contributors to this inefficiency, as they demand time and resources. AI integration, which can aid in speeding up justice and lowering case backlogs, holds the prospect to greatly reduce administrative burdens, which are a key cause of case stagnation.

AI has the power to automate organisation and retrieval of legal documents, revolutionising the management and presentation of evidence; due to which clerical work is likely to be less consuming, enabling legal professionals to direct their focus towards more pressing aspects of any given case. Furthermore, AI equipped with Natural Language Processing abilities, can evaluate cases in a preliminary capacity, providing judges with a summary of relevant facts, key data, and possible inferences based on precedent, facilitating quicker decision-making and reduced backlogs.

The traditional courtroom is undergoing a technological revolution by virtue of employing AI and other modern technologies [22]. This shift promises to encompass prompt and precise transcriptions, high-quality video conferencing for trials, and linguistic aids to ensure that a geographical limitation does not hinder the delivery of justice. By offering venues for online hearings, and automatic reminders for filing documents and court dates and appearances, AI can improve communication between the parties.

AI powered platforms can transform the interactions among the stakeholders of a judicial proceedings, and the allied documentation processes. The deployment of such systems ensures timely and accurate communication to concerned stakeholders through an integrated communication channel can expedite the hearing process and aid the accessibility to justice for those who find it challenging to be present for court appearances, which can further aid in mitigating the lapse of deadlines when it comes to the limitations period.

In addition to enhancing operational efficacy and diminishing backlogs, AI integration offers economic benefits, as opposed to conventional legal processes that can be costly due to the substantial costs of labour that are involved in managing cases and conducting in-depth research [23]. AI automates repetitive operations and optimises workflows, which enables courts to utilise their resources more efficiently, reducing the need for a large workforce.

For the litigants, this means fewer billable hours and operating costs, given the diminished time spent on administrative tasks. This will aid in improving case outcomes, and cut the costs associated with drawn out litigation procedures. Overall, the integration of AI not only enhances the delivery of justice but also makes it more economically viable for all stakeholders involved.

5. A Revolutionary Judicial Aide: A Centrally Integrated Dashboard

Considering the intricacies and the challenges prevailing in the current judicial setup, a highly advanced and sophisticated AI dashboard would serve the purpose of circumventing these impediments. Herein, we propose a centrally integrated, AI driven dashboards for all the judicial officers. The recommended dashboard would add to the effectiveness and the potential of the officers through simpler, yet effective, algorithms, allowing the user to see and understand key data briefly.

Centralised case database, instant access to case laws, legal provisions, and relevant commentaries and predictive analytics module for insights into an outcome of a case would cater to the necessity of the current scenario and would assure rapid disposal of cases. The user-friendly case management tool, powered by AI would facilitate the judges to review substantial legal texts to excerpt the crucial information without exhaustive reviewing, alongside enabling them to track case statuses, deadlines and procedural timelines, with automated reminders ensuring compliance with legal protocols.

Furthermore, the digital courtroom integration offers real-time access to hearing schedules and video conferencing, facilitating seamless communication during court proceedings. A secure, integrated communication system enhances interactions among judges, legal representatives and court clerks, reducing miscommunication. Finally, the performance analytics feature of the dashboard provides judges with embedded analytics to review case outcomes and operational efficiency metrics, supporting continuous improvement in case handling standards.

Examining the international context, an automated document management system has been deployed in Austria, where an automated document management system aids in routing of all incoming documents, with little to no manual intervention by the administrative staff of the courts [24]. An AI system analyses the input documents and extracts metadata with an identification so that the data in question can be distributed to related files, with later recognition of the procedure

type. Concerning incoming documents without a file number, particularly in new cases, the system can create a new file, categorise, and add the document to it.

Furthermore, ROSS Intelligence, a legal research platform that uses AI in the United States. ROSS employs NLP and ML to understand natural language queries, providing precise legal references and case law recommendations. In the United Kingdom, Ravn ACE, an AI platform, automates the extraction and analysis of relevant information from documents [25].

The amalgamation of artificial intelligence into the legal system holds significant promise for addressing delays related to limitations periods and time bound restrictions. Ultimately, this technological advancement not only improves efficiency but also bolsters the overall integrity of the legal process, ensuring that justice is delivered without lapses of limitations periods, and subsequent delays. Key issues in the judicial system and how the same can be resolved through the proposed centrally integrated, AI driven dashboard highlighting its benefits as shown in Table 1.

Table 1. Key issues in the judicial system and how the same can be resolved through the proposed centrally integrated, AI driven dashboard highlighting its benefits.

Key Issues	Solutions	Benefits
Legal Research Inefficiencies	<ol style="list-style-type: none"> 1. Implementation of a centralised case database with advanced ML algorithms streamline research. 2. Development of natural language processing tools to facilitate quick parsing of legal texts. 	<ol style="list-style-type: none"> 1. Enhances accuracy in legal research, reduces time spent on case preparation. 2. Saves judges' time, allowing for more judicious decision-making.
Administrative Complexities	<ol style="list-style-type: none"> 1. Design and use of a case management system to track statuses, deadlines, and procedural timelines effectively. 2. Automated reminders to ensure compliance with legal protocols and procedural requirements. 	<ol style="list-style-type: none"> 1. Increases efficiency in administrative processes, reduces case backlog. 2. Minimises risks of missed deadlines, leading to smoother case progression.
Communication Barriers	<ol style="list-style-type: none"> 1. Establishment of a secure, integrated communication system among judges, legal representatives, and court clerks. 2. Utilisation of digital courtroom integration for real-time access to hearing schedules and video conferencing, and translation tools which enable back and forth translations in English, Hindi, and Regional Languages 	<ol style="list-style-type: none"> 1. Reduces misunderstandings and enhances the quality of legal communications. 2. Facilitates seamless communication during proceedings, promoting efficiency.
Resource Strain and Bottlenecks	<ol style="list-style-type: none"> 1. Deployment of AI tools to do time-consuming manual tasks which are prone to human error 2. Deployment of predictive analytics to offer insights into probable case outcomes, assisting in case prioritisation. 3. Implementation of performance analytics to review outcomes and efficiency in case handling 	<ol style="list-style-type: none"> 1. Cost saving, and less room for human error 2. Optimises resource allocation, allowing for better handling of cases. 3. Supports continuous improvement efforts, ensuring better service quality within the judiciary.

6. Interviews with legal experts

Interview with Advocate Pradeep Karveekar. In an interview with Adv Kareveekar, he discussed the potential of AI to track and manage court case deadlines more effectively. He underlined that AI systems could be used to effectively automate case deadline notifications and reminders for court case deadlines, thereby preventing delays in the legal procedures. The integration of AI into deadline tracking helps in efficiently monitoring case hearing schedules and case filing dates. It also minimises the potential for human errors and missed deadlines by automating the deadline management procedures and ensuring its compliance with the procedural requirements. Additionally, he also suggested that the AI systems can tailor the reminders about upcoming hearings and deadlines to individual cases to ensure that all the stakeholders are well-informed of their responsibilities.

Interview with Advocate X (name kept confidential). In an interview with Adv X, she discussed AI's role in streamlining the case management process by determining whether the cases are past their deadline or nearing it, thereby reducing the pendency of backlog cases. AI can also be used to assist and expedite administrative tasks of document management, saving considerable time of judges, lawyers and court staff to expedite the resolution of backlog cases. Furthermore, AI can be used to identify cases that need to be prioritised owing to significant public interest or urgent issues

Interview with Justice Y (name kept confidential). In an interview with Justice Y, he discussed how AI can aid in expediting case processing and increasing the overall efficiency of the judicial system through document and case management by prioritising cases based on urgency. Furthermore, he acknowledged that although AI has many benefits, its successful integration depends on resolving issues such as system interoperability and data security. He suggested that if these challenges are handled appropriately, AI could help in enhancing the administration of justice while alleviating the burden on the Indian judiciary.

The interviews of practising lawyers and judges provide valuable insights on AI integration into the judicial system. It is suggested that AI tools should support and improve the efficiency and efficacy of judicial procedures rather than take over the role of humans in decision-making. Additionally, they offer a better understanding of how AI might impact the backlog of cases in the Indian legal system, emphasising potential benefits, case prioritisation tools and overall improvements in judicial procedures.

7. Conclusion

The advent of artificial intelligence in the judiciary heralds a transformation enriched with promise. AI's potential to streamline processes, cut-down backlogs enhance the accuracy of legal research, and facilitate case management, and decision-making undeniably sets the stage for a more efficient and accessible judicial system. Drawing from the examples in the international context, such as United States' ROSS Intelligence for legal research, and the Austrian automated document management system, and their adaptation with tools like the Indian SUVAS (Supreme Court Vidhik Anuvaad Software) [26], which translates legal documents back and forth between English and various regional languages; can have a potentially transformative effect on the Indian Legal System.

Balancing the innovative capabilities of AI with the imperative to safeguard fundamental human rights and ensure justice is paramount. As we stand on the cusp of this technological revolution, it is imperative for policymakers, legal professionals and technologists to collaborate closely, ensuring AI serves as a tool for enhancing justice, not as a replacement for the human judgement upon which the legal system relies.

However, the concerns surrounding data privacy, biases, accountability and competition necessitate a thoughtful approach to integration. These challenges underscore the importance of establishing robust ethical and legal frameworks to guide the deployment of AI within the judiciary. This cautious yet optimistic approach towards integrating AI into the judiciary could redefine the landscape of legal practice and justice administration, making it more efficient, inclusive and equitable for all.

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