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# **ARTIFICIAL INTELLIGENCE IN THE INDIAN LEGAL SYSTEM: OPPORTUNITIES AND CHALLENGES**

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## **1. INTRODUCTION**

The legal profession is undergoing a paradigm shift with the advent of Artificial Intelligence (AI). From advanced legal research to automated contract drafting, AI technologies are revolutionizing how lawyers work. Similarly, legal education is evolving to incorporate AI tools and methodologies, equipping students with the skills necessary to navigate a rapidly changing landscape. In India, these developments hold the potential to bridge gaps in education and practice while addressing systemic inefficiencies. This paper examines the transformative impact of AI on legal education and practice in India, highlighting key opportunities and challenges. Major role of AI in three types of legal tasks – first and foremost is information processing, then tasks involving reasoning or judgement and future predictions. US based AI startup called Do Not Pay help their customers to prepare legal documents by selling the services of ‘robot lawyer’ that will argue a case by using the earpiece that to repeat the arguments made by it. This software is further termed as ‘AI Consumer Champion’. AI can be used in creating various types of legal applications for impressive demonstrations, but it needs to be evaluated after that. The generative AI has gained widespread attention improvements in legal reasoning ability. GPT 4 is capable of passing the bar exam, but this does not prove that it is as capable as lawyer because lawyers need not to answer the

questions of bar exam all day. AI is also helpful in predicting the outcomes of court cases which aid in effective decision making. As per the author, the AI can be used in the domain of law for three basic purposes viz. i) information processing, ii) reasoning or judgment and iii) future predictions. Under information processing, the legal information can be retrieved. The court cases or lengthy legal documents can be summarized. The document can also be translated from language to another redacting sensitive information. The evaluation of information processing tasks is more straightforward because it generates clear correct answer and there is high observability of the features required for decision making. In the second category of reasoning and judgement involves the tasks related to writing like preparing drafts of legal filings as well as tasks related to judgement like automated mediation and dispute resolution. AI can also make predictions of court outcomes using text from court proceedings which can help the lawyers in designing the strategy, can help in pre-trial detention and parole in criminal justice. Such applications are called Predictive AI. Some tools related to this task are COMPAS and PSA (Public Safety Assessment)<sup>1</sup>.

The use of Artificial Intelligence in legal systems enhances precision, efficiency and data handling with the help of some AI tools like ML, NLP and AI-driven DSS. With the help of NLP, the tasks like extracting the information from the legal documents can be automated which is otherwise very complex, time consuming and prone to errors. The extracted information can further be analyzed with the help of AI tools like contract analysis and evidence processing. The models of machine learning can be used for the predictive analytics like forecasting court outcomes such as case resolutions, risk assessments, bail settings, parole determinations and sentencing. AI driven decision support systems aid in legal settings by enhancing the capabilities of lawyers. It provides decision making support and thus improve

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<sup>1</sup>Kapoor, S., Henderson, P., & Narayanan, A. (2024). Promises and pitfalls of artificial intelligence for legal applications. *arXiv preprint arXiv:2402.01656*.

and streamline the decision-making process by generating insights and recommendations. DSS can help in predicting the success rate of different strategies, can estimate the duration of litigation or can evaluate the risks associated with legal actions. AI technologies improve the standards of legal practice by increasing accuracy, efficiency and accessibility<sup>2</sup>.

The operational efficiency has been enhanced significantly by integrating the Artificial Intelligence technologies into the legal sector like machine learning and advanced analytics, that has fundamentally transformed legal work. Use of such technologies in the previous labor-intensive manual work has not only accelerated various legal tasks like case preparation and management but has also increased the accuracy by reducing the chances of errors due to fatigue and oversight. With the help of AI, various routine tasks like document management and initial case evaluation have also been streamlined. With the reduction in such work, the legal professionals can devote more time in the in-depth analysis of the case, client meetings thereby improving the service delivery and overall effectiveness of their practice<sup>2</sup>.

The incorporation of Artificial intelligence is increasing in systems that are intended to assist legal experts in the decision making within the criminal justice system. For example, systems assisting judges in making determinations about the person in various circumstances like whether he should be released pending trial and the severity of the sentence, using 'pretrial risk assessment algorithms', that are helpful in determining the duration of the prison sentences, setting bail and contributing to decisions concerning guilt and innocence. The decisions made by such algorithms are based on the factors like gender, age, family status, family background, socio-economic status, neighbourhood crime and geography. All these factors are mathematically weighed in relation to each other in order to perform a behavioural profile of the accused. Another such system used by

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<sup>2</sup>Ejjami, R. (2024). AI-driven justice: Evaluating the impact of artificial intelligence on legal systems. *Int. J. Multidiscip. Res*, 6(3), 1-29.

the authorities of Netherlands is SyRI (System Risk Identification) to spy on entire neighbourhoods even though there was no prior suspicion on fraud being committed. This system collects data from various public databases concerning income, debts, family relations, benefits, house ownership, etc. weighted by the algorithm to calculate the score to find the factor for worth investigation<sup>3</sup>.

The artificial intelligence has proven useful in the area of legal research. Statutes and legal decisions provide data analysed by AI technologies. This helps legal experts to find the law accurately and more quickly. Some of the legal research tools gives output of natural language questions in the form of confidence level of how correct the answer is. And not only this, it also provides the list of sources on which the answer is based. The software can also be trained for continuous exploring the new material and providing 24/7 updates. Artificial Intelligence is also helpful in corporate settings with asset and contract management. Normally the latest multinational companies have vast quantities of assets of different kinds that range from office supplies to patents. <sup>4</sup>The same corporation also has big quantity of assets of different kinds with their customers and suppliers that involve different legal systems and different languages and their tendency to change or terminate in a very short notice becomes difficult for traditional human management whereas AI handles such situations very effectively<sup>5</sup>. In some cases where the legal experts are unable to provide the services in the price levels involved, the tools of artificial intelligence have replaced the lawyers in

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<sup>3</sup>Greenstein, S. Preserving the rule of law in the era of artificial intelligence (AI). *ArtifIntell Law* 30, 291–323 (2022). <https://doi.org/10.1007/s10506-021-09294-4>

<sup>4</sup>Chi, Yuv. (2024). Safeguarding the Future: Nurturing Safe, Secure, and Trustworthy Artificial Intelligence Ecosystems and the Role of Legal Frameworks. *International Journal of Scientific Research in Science Engineering and Technology*

<sup>5</sup>Campbell, R. W. (2023). Artificial intelligence in the courtroom: The delivery of justice in the age of machine learning. *RevistaForumulJudecatorilor*, 15.

settings. For example, the tool called Legal-Zoom used in United States, provides a big variety of legal forms ranging from ceases to wills to millions of customers. It can handle large volume of customers and large volume of transactions<sup>6</sup>.

Artificial Intelligence is not only helpful to lawyers and clients, but it is also helpful to judges. The services that it provides to lawyers can also provide to judges, like, AI can accelerate the legal research for judges, can draft routine documents, and matters like scheduling or show cause orders can be given to artificial intelligence without any big risk<sup>7</sup>. Artificial intelligence is also helpful in dealing with public. For example, in China, in some areas, AI robots welcome the visitors to court rooms and guide them to the appropriate location<sup>8</sup>. AI also helps litigants producing legal forms that are as per the requirement of the court and guide them the court process for case submission and its development. The AI Voice Recognition system is beneficial in creating real time transcripts of testimony court proceedings<sup>9</sup>. Though controversial, but AI also assist judges in determining the pretrial release of the prisoners and to decide the level for the bail setting<sup>10</sup>. The software COMPAS, which is the criminal risk

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<sup>6</sup>Amit Chowdhry, *How LegalZoom Provides Businesses With Affordable Legal Assistance*, FORBES (Oct. 9, 2017 12:30 PM), <https://www.forbes.com/sites/amitchowdhry/2017/10/09/how-legalzoom-provides-businesses-with-affordable-legal-assistance/#7dbae3c032de>.

<sup>7</sup>See Xin Wen, Robot Gives Guidance in Beijing Court, CHINA DAILY (Oct 13, 2017), [https://www.chinadaily.com.cn/china/2017-10/13/content\\_33188642.htm](https://www.chinadaily.com.cn/china/2017-10/13/content_33188642.htm)

<sup>8</sup>Monisha Pillai, *China Now Has AI-Powered Judges: Is AI Arbitration the Future?*, RADII: DAILY DRIP (Aug. 19, 2019), <https://radiichina.com/china-now-has-ai-powered-robot-judges/>

<sup>9</sup>Laura Stotler, Courtside Solution Uses AI to Automate Court Transcription, Future of Work News, October 24, 2019, <https://www.futureofworknews.com/topics/futureofwork/articles/443571-courtside-solution-uses-ai-automate-court-transcription.htm> (Last visited 30 March 2019)

<sup>10</sup>See Megan T. Stevenson & Christopher Slobogin, *Algorithmic Risk Assessments and the Double-edged Sword of Youth*, 96 WASH. U. L. REV. 681, 681 (2018).

assessment tool help in predicting person's recidivism with the help of algorithms<sup>11</sup>. AI is also helpful in comparing similar factual and legal situations from one court to another with the help of Same Type Case Reference System program to guide the trial court and those who review the actions of trial court.

## **2. OPPORTUNITIES OF AI IN THE INDIAN LEGAL SYSTEM**

1. **Enhanced Legal Research and Case Analysis:** AI-powered tools like LexisNexis and Manupatra offer faster and more accurate legal research by analyzing thousands of case laws and precedents in seconds. These tools use NLP to identify relevant judgments, saving time and effort for legal professionals. For example, tools like Jupiter Law and Case Mine have begun assisting Indian lawyers with automated research and case prediction.
2. **Reducing Case Backlogs:** India faces a staggering backlog of over 40 million cases. AI can assist in automating administrative tasks such as case scheduling and docket management, freeing up judicial resources for substantive legal work. For example, countries like Estonia have experimented with AI judges for minor disputes. Similar AI applications could expedite small claims courts in India.
3. **Improved Access to Justice:** AI-driven platforms such as chatbots can provide free legal assistance to underserved populations. Chatbots like DoNotPay have successfully assisted individuals in drafting legal documents and understanding basic legal rights. In India, similar tools could help bridge the justice gap in rural and underprivileged areas.
4. **Predictive Analytics for Decision-Making:** AI can predict the outcomes of legal disputes based on historical data, aiding lawyers in formulating better strategies.

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<sup>11</sup>Julia Dressel & Hany Farid, *The Accuracy, Fairness and Limits of Predicting Recidivism*, in SCIENCE ADVANCES 1 (2018).

Predictive models can also assist policymakers in identifying trends in judicial decisions.

5. **Streamlined Alternative Dispute Resolution (ADR):** AI-powered platforms can facilitate online dispute resolution by analyzing submissions and suggesting settlements. This can be particularly effective for commercial and consumer disputes.
6. **Personalized Learning:** AI-powered platforms can create personalized learning experiences for law students by identifying their strengths and weaknesses. Adaptive learning tools can help students master complex subjects at their own pace.
7. **Simulated Learning Environments:** AI-driven virtual simulations can mimic courtroom scenarios, helping students develop advocacy skills in a risk-free environment. Tools like Moot Court AI are gaining traction globally.
8. **Bridging Educational Gaps:** AI can democratize access to quality legal education by providing online courses, tutorials, and interactive learning modules to students in remote areas of India.

### 3. AI IN LEGAL PRACTICE

1. **Automating Repetitive Tasks:** AI technologies can handle routine legal tasks such as document review, contract analysis, and compliance checks, allowing lawyers to focus on higher-value activities.
2. **Predictive Analytics:** AI-powered predictive models can analyze case data to forecast litigation outcomes, enabling lawyers to develop better strategies for their clients as well as limiting the number of cases that will proceed to trial.
3. **Cost and Time Efficiency:** By automating processes, AI reduces costs and accelerates timelines, making legal services more accessible to clients.
4. **Enhanced Client Interaction:** AI-driven chatbots and virtual assistants can provide basic legal advice and

answer client queries, improving client satisfaction and engagement.

5. **Contract Analysis:** To solve the problem of contractual obligations, the Natural Language processing tool of AI can extract and contextualise the crucial information and can simplify the understanding of all parties of the firm's commercial commitments<sup>12</sup>.

#### 4. CHALLENGES IN ADOPTING AI IN INDIAN LEGAL SYSTEM

1. **Data Privacy and Security:** AI systems require large datasets for training, which often include sensitive personal information. India's lack of comprehensive data protection laws poses significant risks. Although the Digital Personal Data Protection Act, 2023 has been introduced, its enforcement mechanisms remain inadequate.
2. **Bias in AI Algorithms:** AI systems inherit biases present in training data. In India, where socio-economic disparities are prominent, biased AI algorithms could perpetuate discrimination in judicial outcomes.
3. **Lack of Infrastructure and Digital Literacy:** The integration of AI requires robust digital infrastructure and skilled professionals resulting in significant investment, which may not be feasible for all institutions and firms. Many courts in India still operate manually, and a significant proportion of legal professionals lack technical expertise.
4. **Ethical and Accountability Issues:** The use of AI raises ethical questions about bias, accountability, and the potential replacement of human judgment with machine-driven decisions. The lack of a clear legal framework

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<sup>12</sup>Nti, I. K., Boateng, S., Quarcoo, J. A., & Nimbe, P. (2024). Artificial Intelligence Application in Law: A Scientometric Review. In *Artificial Intelligence and Applications* (Vol. 2, No. 1, pp. 1-10).



- governing AI complicates the assignment of liability in cases of errors or biases in AI decisions.
5. **Resistance to Change:** Judges, lawyers, and other stakeholders may resist adopting AI due to a lack of trust in technology or fear of obsolescence. Training and awareness programs are essential to mitigate this resistance.
  6. **Regulatory Uncertainty:** India lacks a comprehensive legal framework for regulating AI in education and practice, creating uncertainty about its implementation.

#### 4. LEGAL AND POLICY IMPLICATIONS

The integration of AI into the Indian legal system necessitates a robust regulatory framework. The government must establish clear guidelines on data usage, AI ethics, and accountability. Initiatives such as the Supreme Court's e-Courts Project and the National Judicial Data Grid (NJDG) provide a foundation for AI adoption. However, a comprehensive national AI strategy for the legal sector is essential.

In case of information processing, Generative AI for legal experts is an evolution and not a revolution because already there exists automated tools for legal summarization tools. Though new tools are better in terms of accuracy and cost, but still, they cannot change legal information processing for experts drastically. Also, errors in the outputs of chatbots can be introduced in information processing tasks related to translation due to errors in machine translation when it accurately cannot infer the context. No doubt language models like GPT-4 are of great help in legal tasks but there some hurdles in their evaluation like contamination, lack of construct validity and prompt sensitivity. Predictive AI also suffers from some shortcomings like low accuracy of deployed documents and the problem of distribution shift when the training data differs from actual population data<sup>13</sup>.

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<sup>13</sup>Kapoor, S., Henderson, P., & Narayanan, A. (2024). Promises and pitfalls of artificial intelligence for legal applications. *arXiv preprint arXiv:2402.01656*.

The AI integration in legal systems has implication of affecting the major systematic changes in legal landscape, reshaping the delivery of legal services and the administration of justice that can lead to shift in legal job roles. The implementation of AI in the legal framework should be done in such a way that it not only promotes equity and efficiency but also ensure a balanced approach to technological advancement and justice<sup>14</sup>.

Despite the proficiency of Artificial intelligence in various legal tasks, it cannot conduct subjective assessments and interpret subtle nuances which is very important in legal decision making. Also, the careful check is required in the integration of AI into legal system to ensure that it does not compromises the ethical standards and foundational values of the profession. It is also important to establish the dedicated position to tackle the urgent challenges associated with the incorporation of the artificial intelligence, so that the successful utilization of this technology while upholding the fundamental skills of legal practitioners. For example, AILOO (Artificial Intelligence Legal Oversight Officer), whose job is to reduce the potential danger of overdependence on automated processes that can decrease crucial judging and lawyering abilities. Another such important positions are AILQAO (AI Legal Quality Assurance Officer) to enforce stringent quality control protocols; AILRO (AI Legal Risk Officer) for conducting various frequent audits to guarantee the dependability of AI applications in the legal system; AILCO (AI Legal Compliance Officer) for formulating ethical principles and maintaining the integrity and impartiality of the legal system; AILTO (AI Legal Transparency Officer) to provide comprehensive information on the results and operations of AI; AILEO (AI Legal Ethics Officer) to ensure ethical rules and standards in legal industry and many more<sup>15</sup>.

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<sup>14</sup>Ejjami, R. (2024). AI-driven justice: Evaluating the impact of artificial intelligence on legal systems. *Int. J. Multidiscip. Res*, 6(3), 1-29.

<sup>15</sup>Ejjami, R. (2024). AI-driven justice: Evaluating the impact of artificial intelligence on legal systems. *Int. J. Multidiscip. Res*, 6(3), 1-29.

The increased use of artificial intelligence in predicting the criminal behaviour is challenging some traditional legal notions like accused being treated as innocent until proven guilty. The harm of systems like SyRI are multiple, privacy, discrimination and stigmatization. The challenge of AI is how to reap the benefits of AI for society, protecting it from its harm, promoting innovation while at the same time balancing it against the interests of society<sup>16</sup>.

One of the studies compared the online research tools of artificial intelligence from different vendors and they found that the results vary significantly in the way the output is produced from the search query. In some cases, the outputs were relevant but different but in other cases, they were irrelevant and incorrect. AI is also helpful in providing the outcome prediction in case of litigation. The software predict the likelihood based on the analysis of previous similar cases, that the given judge will rule on behalf of which side on a given issue and also identify which venues are most likely to lead to success. The software seems more helpful in predicting the results in situations where outcomes are public but still sample size can be a factor to get statistical reliability. Artificial intelligence has also proven helpful in online dispute resolution resulting in negotiating tactics of human participants. It results in bargaining strategies of litigants. The main limitation of Artificial intelligence is that to train the system in machine learning, it requires large amount of data which is not always available. For example, China's one of the AI model that was designed to model intentional murder, failed in significant part because the adequate sample data could not be provided because of the less availability of such cases<sup>17</sup>. Also,

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<sup>16</sup>Greenstein, S. Preserving the rule of law in the era of artificial intelligence (AI). *ArtifIntell Law* 30, 291–323 (2022). <https://doi.org/10.1007/s10506-021-09294-4>

<sup>17</sup>Chi, Yuv. (2024). Safeguarding the Future: Nurturing Safe, Secure, and Trustworthy Artificial Intelligence Ecosystems and the Role of Legal Frameworks. *International Journal of Scientific Research in Science Engineering and Technology*

many judicial systems require balancing of interests and concerns and sometimes it is morally objectionable for artificial intelligence to make such decisions.

## **6. CONCLUSION**

Artificial intelligence is playing and will continue playing an important role in the judicial system. Various AI tools are very helpful in highly specialized tasks of the legal system that were earlier done manually and were time consuming, but the work of judge is highly generalized task and for that the artificial intelligence needs to develop general intelligence which may nor may not be achieved; and even if it becomes successful in achieving general intelligence, still it will be the alien intelligence that is different from the human intelligence and not subject to experiences that apply to humans in the judicial system. But whether the public will have the necessary respect and reverence for this algorithmic system that they have for judicial system where courts represent the majesty and power of the state. And will society delegate fundamental rule making powers and state's legitimacy to non-human entities? Depending on this, the gap between the artificial intelligence and human judges may shrink or increase. Thus, it is necessary to frame a sound policy structure that specifies the legal liability of this intelligent system.