Role of Artificial Intelligence (AI) to ensure sustainable justice delivery and reduce the backlog of pending cases.

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ABSTRACT

The Indian judiciary currently faces an overwhelming backlog of cases, resulting in prolonged wait times and delayed resolutions. This backlog can be attributed to various factors, including the increasing number of litigations, outdated court processes, and a shortage of judges and resources. Such delays hinder the efficient administration of justice and adversely impact the lives of litigants. The huge pendency of court cases in India poses a significant challenge to the justice delivery system. However, the integration of artificial intelligence offers potential solutions to mitigate this problem. Since courts in India are already undergoing a transformational change by going digital, the emerging domain of science called 'Artificial Intelligence' or 'AI' may help in surprising ways to ensure sustainable justice delivery and reduce the backlog of pending cases. Judiciary in some parts of developed countries like U.S.A and Canada has already deployed AI systems to assist the judges on taking a call on matters like granting of bail and release of offenders on parole. Likewise, in India too, court tasks can be identified which can be expedited through the use of intelligent machines. By leveraging AI-powered tools for legal research, case prediction, document review, and due diligence, the Indian judiciary can expedite the resolution of pending cases and enhance access to justice. Ensuring ethical and transparent implementation of AI is vital to maintain the integrity of the justice system. Moreover, AI-powered virtual assistants can provide support to individuals who cannot afford legal representation. These virtual assistants can guide individuals through legal procedures, offer basic legal advice, and help in document preparation. This democratization of legal information empowers individuals, reduces the burden on the justice system, and improves access to justice. However, the adoption of AI in the justice system raises ethical and legal concerns. Transparency, accountability, and the protection of individual rights and privacy must be carefully addressed. Additionally, biases in AI algorithms and potential job displacement of certain legal tasks need to be considered. AI holds tremendous potential to ensure sustainable justice delivery and alleviate the backlog of pending cases. By automating routine tasks, enhancing legal research, predicting case outcomes, and providing support to individuals, AI can streamline the justice system, improve efficiency, and promote access to justice for all. However, careful implementation and monitoring are necessary to address ethical, legal, and societal implications.

Keywords: Artificial Intelligence, Sustainable, Pendency, Backlog, Justice

The Indian justice delivery system is an integral part of the country's legal framework, designed to uphold the rule of law, protect individual rights, and ensure justice for all. It is based on a combination of statutory laws, constitutional provisions, and judicial precedents that guide the functioning of courts and the administration of justice.

The Indian justice system is structured hierarchically, with the Supreme Court at the top, followed by High Courts in each state and subordinate courts at the district level. The Supreme Court of India is the highest judicial authority, responsible for interpreting the Constitution and resolving legal disputes of national importance. The High Courts have jurisdiction over their respective states and handle both civil and criminal cases. Subordinate courts, such as district courts and lower courts, deal with matters falling within their territorial jurisdiction.

The Indian justice system follows an adversarial process, where opposing parties present their arguments before an impartial judge or magistrate. Legal proceedings involve the examination and cross-examination of witnesses, submission of evidence, and legal arguments by the counsels representing the parties. The judge or magistrate evaluates the evidence and applies relevant laws to deliver a judgment or verdict.

In India, there are separate civil and criminal courts to handle different types of cases. Civil courts primarily deal with disputes between individuals, organizations, or the government, while criminal courts handle cases related to criminal offenses. Specialized tribunals and commissions have also been established to address specific areas of law, such as labor disputes, consumer grievances, and administrative matters.

The Indian justice system is governed by the principles of natural justice, which include the right to a fair trial, equality before the law, and the presumption of innocence until proven guilty. These principles aim to ensure that justice is delivered impartially, without discrimination or bias. The judiciary plays a crucial role in upholding these principles and safeguarding the rights and liberties of individuals.

However, like any legal system, the Indian justice delivery system faces challenges such as backlogs of cases, delays in proceedings, and limited access to justice, especially for marginalized and underprivileged sections of society. Efforts are being made to address these challenges through legal reforms, modernization of courts, alternative dispute resolution mechanisms, and initiatives to enhance legal awareness and literacy.

Justice delivery system in India and Artificial Intelligence (AI)

The Indian justice delivery system is undergoing advancements with the integration of artificial intelligence (AI), which has the potential to enhance efficiency, transparency, and access to justice.

Artificial intelligence offers potential solutions to expedite the resolution of pending cases. Firstly, AI-powered tools can assist in automating and expediting legal research. By analyzing vast amounts of case law, statutes, and legal literature, AI algorithms can quickly identify relevant precedents and extract

key information. This empowers lawyers and judges to access comprehensive legal insights and aids in making informed decisions, thereby reducing the time spent on research.

Because law has language at its core, researchers have long been exploring how to bring AI research to bear on the legal domain, and the cognitive domain of judges and lawyers. Earlier logic-based approaches to AI were used to develop systems for searching legal databases as early as the 1960s-70s, and the advent of Legal Expert Systems (LES) contributed to a swell of optimism for using AI to compliment, extend, and potentially replace the work of human lawyers and judges in the 1970-80s.[1]

Additionally, AI can be applied to predict case outcomes and assess risks. By analyzing historical case data, AI algorithms can identify patterns and similarities, helping lawyers evaluate the strength of their arguments and estimate potential outcomes. This predictive analysis enables litigants to make informed decisions regarding the pursuit or settlement of their cases, potentially reducing the burden on the courts and expediting the resolution process.

Furthermore, AI-powered document review and due diligence tools can streamline the analysis of legal documents, contracts, and agreements. Natural language processing algorithms can efficiently categorize documents, flag inconsistencies, and highlight critical clauses, facilitating a faster review process. This automation not only saves time for legal professionals but also minimizes the risk of errors and plagiarism in the documentation.

To ensure the effective implementation of AI in mitigating case pendency, it is crucial to address potential challenges. Ethical considerations and transparency in AI algorithms must be prioritized to avoid any bias or unfair practices.

Artificial Intelligence in Judiciary

Recently, Kiren Rijiju, the Law Minister has said that for implementing phase two of the e-Courts project, there is a need to adopt new, cutting edge technologies of Machine Learning (ML) and Artificial Intelligence (AI) to increase the efficiency of the justice delivery system. Also, to explore the use of AI in the judicial domain, the Supreme Court of India has constituted an Artificial Intelligence Committee. The committee has identified application of AI technology in Translation of judicial documents, Legal research assistance and Process automation.[2]

The e-Court project was conceptualized with a vision to transform the Indian Judiciary by ICT (Information and Communication Technology) enablement of Courts. It is a pan-India Project, monitored and funded by the Department of Justice, Ministry of Law and Justice, Govt. of India for all the District Courts across the country.

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[1] R Susskind, Expert Systems in Law (Oxford University Press 1987); P Leith, 'The Rise and Fall of the Legal Expert System' (2010) European Journal of Law and Technology.

[2] https://www.indiatimes.com/explainers/news/artificial-intelligence-and-indias-judicial-system-565113.html accessed on 7th July 2023

The very objectives of the project was to provide efficient & time-bound citizen-centric services delivery, to develop, install & implement decision support systems in courts, to automate the processes to provide transparency and accessibility of information to its stakeholders and to enhance judicial productivity, both qualitatively & quantitatively, to make the justice delivery system affordable, accessible, cost-effective, predictable, reliable and transparent.

The Need of Technology in Judiciary

So far as the Pendency of Cases are concerned the recent National Judicial Data Grid (NJDG) shows that 44149337 cases are pending at the District and Taluka levels[3] and 6090494 are still unresolved at the High Courts.[4] Such pendency has a spin-off effect that takes a toll on the efficiency of the judiciary, and ultimately reduces peoples' faith on judiciary.[5]

Use of Technology/Artificial Intelligence (AI) in Judiciary

Over the course of the Covid-19 pandemic, the use of technology for e-filing and virtual hearings has seen a dramatic rise. The Supreme Court, High Courts as well as the Districts Courts have already applied the virtual hearing.

On 26 November 2019, the national Constitution Day, the then Chief Justice of India, Justice Sharad Arvind Bobde launched the beta version of a neural translation tool called SUVAAS, which formally marked the advent of AI within Indian courts.[6] SUVAAS or the Supreme Court Vidhik Anuvaad Software is a neural translation tool which has been trained using machine-learning processes. It has the capability of translating English judgments and daily orders into nine vernacular scripts, and vice-versa. This is another landmark digital effort to increase access to justice.

The Supreme Court on 6th April 2021 unveiled its Artificial Intelligence (AI) portal SUPACE, designed to make research easier for judges, thereby easing their workload. A pet project of Chief Justice of India S A Bobde, the Supreme Court Portal for Assistance in Court's Efficiency (SUPACE) is a tool that collects relevant facts and laws and makes them available to a judge.

Launching the portal, CJI Bobde said though some interpret AI as automated decision making, the Supreme Court's system is not designed to take decisions, but only to process facts and to make them available to judges looking for an input for a decision. The CJI said that AI is to the intellect, what muscle memory is to the mind.[7]

SUPACE is designed to first understand judicial processes that require automation, it then assists the Court in improving efficiency and reducing pendency by encapsulating judicial processes that have the capability of being automated through AI.[8]

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[3] https://njdg.ecourts.gov.in/njdgnew/index.php
[4] <https://njdg.ecourts.gov.in/hcnjdgnew/> accessed on 5th July 2023
[5] https://indianexpress.com/article/opinion/artificial-intelligence-in-the-courts-7399436/ accessed on 7th July 2023
[6] See the Supreme Court of India's press release for information on SUVAAS. Supreme Court of India, 'Press Release' (25 November 2019) https://main.sci.gov.in/pdf/Press/press%20release%20for%20law%20day%20celebratoin.pdf accessed on 6th July 2023
[7] https://indianexpress.com/article/india/cji-launches-top-courts-ai-driven-research-portal-7261821/ accessed on 7th July 2023
[8] <https://www.drishtiias.com/printpdf/artificial-intelligence-in-judiciary> accessed on 5th July 2023

'Technology is here to stay for the future, forever' stated CJI D.Y. Chandrachud while hearing a plea seeking virtual hearings to be declared as a fundamental right earlier this month. The CJI's words paint an ambitious picture of his attempt to modernize the Indian legal landscape with technology'.[9]

On February 21st, 2023, CJI Chandrachud introduced his most recent Artificial Intelligence (AI) aided initiative live transcription of Constitution Bench proceedings. The transcriptions project follows other AI-aided initiatives such as SUPACE (2021) and SUVAAS (2019).[10]

Use of Technology/ Artificial Intelligence (AI) Globally

India is not alone in embracing technology to develop a more efficient legal system. Other countries have also introduced novel ways of using AI within their Courts.[11] The Artificial intelligence (AI) has also been introduced globally so as to render efficient justice to the stake holder. Global Initiatives to work with AI based software is gradually spreading it wings in almost all the countries around the globe. Globally, there have been many attempts to use algorithms and machine learning (ML) technologies in an attempt to improve procedural efficiency, aid decision-making processes, and even predict outcomes consistent with past precedent. Predictive justice tools[12] are perhaps the most advanced deployment of intelligent machines within the formal justice system, and aim to limit arbitrariness in human decision-making and judgment within the larger justice system.[13]

From Research to Predictive Analysis: USA

The United States has implemented several initiatives that utilize AI for a host of purposes geared towards optimizing the delivery of justice. In addition to research tools, some Courts in the US use AI to help judges make fair and unbiased decisions. AI algorithms analyze data and predict the outcome of a case.

AI-powered tools such as COMPAS (Correctional Offender Management Profiling for Alternative Solutions) also assist judges in risk assessment. These tools use machine learning algorithms to analyze various factors, such as criminal history, social and economic background, and mental health and predict the likelihood of recidivism. Moreover, the US Sentencing Commission uses AI to develop and implement sentencing guidelines to help judges determine fair and consistent punishment for different crimes.

The US Court System has also developed chatbots that provide information to the public. These virtual assistants can answer common questions about court procedures, schedules, and other topics, reducing the workload of court staff and improving access to information for the public.[14]

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[9] https://www.scobserver.in/journal/ai-and-the-law-a-new-era-in-the-justice-system/ accessed on 7th July 2023

[10] *Ibid*

[11] *Ibid*

[12] Ronsin, Lampos & Maitrepierre, 'In depth study on the use of AI in judicial systems, notably AI applications processing judicial decisions and data' (Appendix I to the CEPEJ ethical charter on the use of AI in the judicial systems and their environment, European Commission for the Efficiency of Justice, 2018) < > accessed on 6th July 2023

[13] Markou & Deakin, 'Ex machina lex: The limits of legal computability' (21 June 2019) <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3407856> accessed on 6th July 2023

[14] *Ibid*

The 'Smart Court' System: China

China has been working on integrating AI into its courtrooms since 1990. The finest example of this is the *'Smart Court system'*. The Smart Court system connects to the desktop of every working judge in China and uses AI to help them with case analysis and decision-making. The internal system can analyze data from past cases to help judges identify relevant laws and precedents, and even suggest sentences based on similar cases.

In addition to the Smart Court system, Chinese courts also use AI to help with legal research. For example, the Supreme People's Court of China has developed an AI-powered legal research platform called *'China Judgments Online'* that allows judges to quickly search for and access relevant legal documents.[15]

The Digital Case System: UK

The 'Digital Case System' (DCS) is an electronic platform that the United Kingdom's Ministry of Justice introduced in 2020 to manage cases in the Crown Court. Designed to improve the efficiency and effectiveness of the criminal justice system in England and Wales, the DCS enables judges, lawyers, and other court staff to manage cases digitally, from start to finish.

The DCS serves two primary functions: it allows cases filed to be accessed and updated in real-time, and it enables remote participation in court proceedings. Additionally, the system allows parties to submit evidence and documents digitally, reducing the amount of paper used in court proceedings. The Ethics Committee of the UK Bar Council issues guidelines from time to time in order to help practicing criminal law barristers across the country to access the online portal.[16]

The ChatGPT Judgement: Colombia

Recently, Justice Juan Manuel Padilla, a Columbian judge, used the AI application ChatGPT to deliver a Judgment. He was dealing with a case concerning insurance claims for an autistic child. In his Judgment, Justice Padilla included his conversation where he asked the ChatGPT bot *'is an autistic minor exonerated from paying fees for their therapies?'* and the AI gave him an answer he agreed with. He, therefore, passed the Judgment that according to the laws of Colombia, an autistic child was exempted from paying fees for their therapies. Judge Padilla also stated that the use of AI does not replace judges as thinking beings.[17]

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[15] *Ibid*

[16] *Ibid*

[17] *Ibid*

AI in the Legal Space: Is It Here To Stay?

The use of AI in legal courts around the world has been expanding exponentially, with newer developments emerging on a daily basis. So much so that UNESCO has launched an entire course on 'AI and the Rule of Law' designed to educate lawyers, policymakers, academics, and students about the latest digital AI trends and the adoption practices in justice systems.

On the other hand, the use of AI in the legal space is not without opposition. For instance, earlier this year, Joshua Browder, the founder of the DoNotPay application, was forced to halt the project introducing the world's first AI lawyer, which could take on human clients and argue in court. Browder alleged that he received multiple threats from different prosecutors over the legality of the project.

Nonetheless, with all these developments happening globally, it will be exciting to see how the interplay between law and AI will take shape.[18]

Some other AI based software and Technologies used globally are as under:

Estonia: Robot judge for adjudicating small claims.

Malaysia: Supporting sentencing decisions.

Austria: Sophisticated document management.

Argentina/Colombia: Prometea (Identifying urgent cases within minutes).

Singapore: Transcribing court hearings in real-time.

Potential use of AI in the Indian courts to ensure sustainable Justice Delivery

AI in a justice system can be directed towards improving administrative efficiency in courts, and aiding in decision making processes for lawyers, judges and litigants. Its actual integration will require an understanding of the role AI is actually playing in different judicial systems and addressing key legal and ethical challenges that arise in this regard.[19]

Artificial intelligence (AI) can be a useful tool to acquire skills and deliver efficient results. It has enabled breakthrough in different fields and has potential to give remarkable contribution to the legal industry in justice delivery system. It is no doubt that it will definitely be a blessing to ensure sustainable and speedy justice delivery system. Therefore, use of Artificial Intelligence in decision making in courts is a viable solution for bringing down the pendency of cases in India.

One of the primary benefits of using AI in justice delivery is the improvement in access to justice. AI-powered tools can help bridge the justice gap by providing legal information, advice, and guidance to individuals who may not have access to legal resources. Virtual assistants and chatbots can offer basic legal

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[18] *Ibid*

[19] European Commission For the Efficiency of Justice (CEPEJ), 'European ethical Charter on the use of Artificial Intelligence in judicial systems and their environment' (3-4 December 2018) <https://rm.coe.int/ethical-charter-en-for-publication-4-december-2018/16808f699c> accessed on 6th July 2023

support, helping people understand their rights and navigate the legal system. This empowers individuals and promotes fairness, especially for disadvantaged communities.

Additionally, AI can expedite legal processes and reduce the burden on the judiciary. Intelligent algorithms can analyze vast amounts of legal data, enabling faster case management, document review, and legal research. This efficiency allows courts and legal professionals to handle larger caseloads effectively, reducing delays and backlogs in the justice system. By automating routine tasks, AI frees up valuable human resources, enabling legal professionals to focus on more complex and critical aspects of their work.

Furthermore, AI can contribute to the attainment of sustainable justice by promoting fairness and impartiality. Machine learning algorithms can be trained on vast datasets, helping identify patterns and potential biases in decision-making processes. By analyzing historical case data, AI systems can flag instances of disparate treatment, leading to greater awareness and corrective actions. Moreover, AI can aid judges in making more informed decisions by providing relevant precedents, legal research, and comprehensive analysis, thus reducing the likelihood of subjective biases.

AI technologies can be applied in various aspects of the Indian justice system.AI can assist legal professionals in conducting extensive legal research by analyzing vast amounts of case law, statutes, and legal literature. AI-powered tools can quickly identify relevant precedents, extract key information, and provide comprehensive legal analysis. This aids lawyers and judges in preparing their arguments and decisions.

Another field which can be best addressed by AI is Case Prediction and Analytics. AI algorithms can be trained on historical case data to predict case outcomes, assess risks, and provide insights. By analyzing patterns and similarities with past cases, AI can assist lawyers and litigants in evaluating the strength of their arguments, estimating possible outcomes, and making informed decisions. It's important to ensure that AI models are trained on diverse and unbiased data to avoid replicating plagiarized or discriminatory judgments.

Document Review and Due Diligence can also be performed by Artificial Intelligence. AI can streamline the document review process in legal proceedings by automating the analysis of contracts, agreements, and legal documents. Natural language processing algorithms can help identify relevant clauses, flag inconsistencies or potential risks, and categorize documents efficiently. This allows legal professionals to review documents more effectively and avoid plagiarism.

AI-powered chatbots and virtual assistants can provide preliminary legal information and guidance to individuals seeking legal advice. These systems can answer common legal queries; explain legal procedures, and direct users to relevant resources. It's essential to ensure that the information provided is accurate, up-to-date, and free from plagiarism.

The next area which can be effectuated Case Management and Workflow Automation: AI can assist in the management of court cases by automating administrative tasks, such as scheduling, document management, and data entry. By reducing manual workloads, AI helps in optimizing court processes, improving efficiency, and minimizing errors, without the risk of plagiarism.

Access to Legal Aid and Services: AI technologies can facilitate access to justice by providing online legal platforms, self-help tools, and automated legal document generation services. These platforms can empower individuals to understand their legal rights, access legal information, and prepare legal documents without plagiarizing someone else's work.

It's important to note that while AI can bring significant benefits to the Indian justice delivery system, proper oversight, accountability, and ethical considerations are necessary. Measures should be taken to ensure transparency in AI algorithms, prevent bias, and address potential ethical concerns. Additionally, AI systems should be developed and deployed in collaboration with legal experts to maintain the integrity of the justice delivery system.

Artificial Intelligence will save judicial time of the courts leading to better utilization of public money. It would prevent undue delay in delivery of justice and will ensure timely justice delivery. Artificial Intelligence is expected to rationalize the decision-making process by summarizing all relevant information in a more efficient way than the human brain is able to do. Artificial Intelligence in the field of justice is the ability of algorithms to reduce discretion. Artificial Intelligence provided by a software program is supposed to be perceived as more reliable, scientific, and legitimate than other sources of information, including one's emotionality about the case.[20]

CONCLUSION

In conclusion, the integration of artificial intelligence (AI) in the justice delivery system has the potential to significantly contribute to sustainable and efficient outcomes while ensuring fairness and transparency. By leveraging AI technologies, we can enhance access to justice, streamline legal processes, and promote equal treatment under the law. However, it is essential to implement AI systems with careful consideration to ethical standards, human oversight, and the protection of fundamental rights.

However, it is crucial to address potential challenges and risks associated with AI in the justice system. Ethical considerations, such as data privacy, algorithmic transparency, and accountability, must be at the forefront of AI implementation. Ensuring that AI systems are unbiased, explainable, and auditable is vital to maintain public trust and uphold the principles of justice. Human oversight and intervention should always be incorporated to prevent any undue reliance on AI and preserve the integrity of the legal process.

In conclusion, the integration of AI in the justice delivery system offers tremendous potential for sustainable justice. By leveraging AI technologies responsibly, we can enhance access to justice, improve efficiency, and promote fairness and equality. However, it is essential to strike the right balance between

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[20] https://www.indialawoffices.com/legal-articles/role-artificial-intelligence-justice-delivery-system Accessed on 6th July 2023

technological advancements and human-centric values, ensuring that AI systems serve as tools to assist and augment human decision-making rather than replace it. By embracing AI responsibly, we can create a justice system that is more accessible, efficient, and equitable for all.

Artificial Intelligence in different fields and also its potential use in the courts of law would assist judges and lawyers, who are considered as pivotal pillars in justice delivery system, by shortening the time taken in various tasks at different stages of a trial as also the judges by assisting them in stages of decision making process and thereby can ultimately help in reducing the length of time ordinarily taken in a trial. Saving time would inevitably mean better efficiencies in disposing of cases which would ultimately contribute to the cause of bringing down pendency in the courts of law. When this is done, the noble cause of ensuring effective and sustainable justice to the masses shall be achieved. But in the end, it is stated that no doubt AI would be used as a technique to achieve success in speedy and effective Justice Delivery system, but at the same hand it should be used as a caution and responsibilities should not be delegated to machine.[21]

After a thorough discussion on the use of Artificial Intelligence in different fields and also its potential use in the courts of law to assist judges and lawyers, it is safely concluded that Artificial Intelligence powered machines can help lawyers to shorten the time taken in various tasks at different stages of a trial as also the judges by assisting them in stages of decision making process and thereby can ultimately help in reducing the length of time ordinarily taken in a trial. Saving time would inevitably mean better efficiencies in disposing of cases which would ultimately contribute to the cause of bringing down pendency in the courts of law. When this is done, the noble cause of ensuring effective and sustainable justice to the masses shall be achieved.[22]

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[21] https://www.indialawoffices.com/legal-articles/role-artificial-intelligence-justice-delivery-system Accessed on 6th July 2023
[22] Parth Jain: Artificial Intelligence for sustainable and effective justice delivery in India