APPLICATION OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING IN THE INDIAN LEGAL SYSTEM: USE CASES FOR JUDICIARY, LAW FIRMS, AND LAWYERS

Suvigya Awasthy, Associate Partner, PSL Advocates and Solicitors, New Delhi, India

Pintu Babu, Innovation & Knowledge Associate, PSL Advocates and Solicitors, New Delhi, India

Shubhangi Singh, 5th year, B.A LL.B., Symbiosis Law School, NOIDA, Uttar Pradesh, India

ABSTRACT

Artificial Intelligence ('AI') is a broad branch of computer science that deals with building machines and systems for performing tasks that typically require human intelligence. The pervasion of AI in diverse fields and its varied application is ubiquitous and continues to expand its reach to newer terrains. The application of AI to the legal and justice delivery system is steadily gaining momentum and recent times have witnessed a flurry of discussions around the ethical/ technological development and deployment of AI to enhance the efficiency of the administration of justice in India. The Indian legal system, especially in the wake of the corvid-19 pandemic, is showing a positive response in embracing Machine Learning ('ML') and AI's potential in transforming the Indian Judiciary under the visionary e-Court project of the Supreme Court of India's AI Committee. As such, it is slowly becoming apparent that the usage of AI in the field of law is not a far-fetched proposition.

This paper aims to investigate pragmatic solutions and innovative applications of AI in Asia's leading legal system, India, while exploring the comparative landscape of the deployment of AI in other jurisdictions- at both law firms and court practices. In addition to this, the paper discusses various potential virtues of the deployment of AI in the legal system and provides a roadmap for its robust implementation. Furthermore, the paper elucidates the critical challenges posed by the implementation of AI in the short and long term.

1. Introduction

AI appears to be attracting the attention of a huge number of individuals, owing to the almost limitless possibilities it provides. It embraces, contributes as well as poses challenges to almost all disciplines including philosophy, cognitive science, economics, and social sciences, and the judicial system is no exception to it. Given the human capacity for cognition, judgment, and intention, AI reacts to stimuli in a way that is comparable to how humans typically react. The technology has advanced to a more complex final product with human-like cognition, from obeying (executing) pre-designed and pre-configured codes.

This is what makes it so powerful in terms of changing justice systems around the world. There are several areas in the legal system where AI can have a significant impact. It can reduce the pendency of cases and drastically increase the efficiency of the judiciary. According to the National Judicial Data Grid ('**NJDG**'), 4,30,31,788 cases are pending at the district and taluka levels,[1] and 59,56,341 cases at the high courts are yet to be resolved.[2] Such pending cases have a knock-on effect that undermines the effectiveness of the judiciary and, as a result, restricts people's access to justice. In particular, the pandemic has prompted the rethinking of modern ways and means for various justice-delivery systems across the globe. Given Covid-19's impact on justice delivery, it's encouraging to see how the judiciary has explored and embraced technological solutions. Supreme Court's Committee has recently introduced the Phase 3 Vision. It is the third phase of the e-Court Project initiative of the apex court of India to undertake suggestions and insights from stakeholders, common citizens, law students, technical experts, etc. to refine the visionary e-Court project. In light of the same, while the committee's Phase 3 Vision is transformative, the judiciary's approach to non-intrusive inclusions based on AI and ML is also forward-thinking.[3] Building on the success of courts in facilitating virtual hearings and the adoption of e-filing during the pandemic, investigating how AI can assist courts is also forward-thinking. AI-based tools could assist manage cash flow more efficiently, unclog processes that impede justice, and, in many situations, make administrative tasks easier. Importantly, the use of AI in courts does not intend to replace judges' intelligence, expertise, or objectivity in reaching decisions.

[1]National Judicial Data Grid', Welcome to NJDG- National Judicial Data Grid for District and Taluka Courts, November 2022, https://njdg.ecourts.gov.in/njdgnew/?p=main/pend_dashboard

[2]National Judicial Data Grid', Welcome to NJDG - National Judicial Data Grid for High Courts of India (ecourts.gov.in), November 2022, https://njdg.ecourts.gov.in/hcnjdgnew/

[3]PIB Delhi, E-Committee Supreme Court Of India Calls For Comments Suggestions And Inputs On The Draft Vision Document For Its 3Rd Phase Of Ecourts Project' (*Ministry of Law and Justice*, 4 March 2009) https://pib.gov.in/PressReleasePage.aspx?PRID=1709477

Automation will not be able to replace human reasoning, logic, or intellect in the judiciary in the foreseeable future. However, there are many features of technology that can be integrated with instant effect, as evidenced by the recent acts of the Supreme Court as discussed above. Former Chief Justice S.A. Bobde launched the beta version of a neural translation tool named Supreme Court Vidhik Anuvaad Software ('**SUVAS**') on November 26, 2019, National Constitution Day, formally marking the beginning of AI in Indian courts.[4]SUVAS is an AI system that can assist in the translation of judgments into regional languages. His interest is not alone; last year, Supreme Court AI Committee Chair Justice L. Nageswara Rao asserted that AI would be used for administrative functions and to expedite the justice process.[5] Additionally, Justice BN Srikrishna in his book 'India 2030: Rise of a Rajasic Nation' discussed that "AI will not only help organize cases, it will also bring references into the judgment at a speed not seen so far. Technology will ensure that those who do not have access to justice due to distance will not be excluded anymore."

2. History and evolution of AI in the Indian landscape and the other jurisdiction

2.1. Global Landscape

The origins of AI can be traced back to the 1950s when mathematician Alan Turing proposed the idea of creating machines that can think.[6] It was John McCarthy who coined the term AI in 1956 at a conference in Dartmouth, defining it as "the science and engineering of making intelligent machines."[7] ELIZA, a chatbot similar to ALEXA, was created in 1961.[8] The following years witnessed several accomplishments and achievements of AI, like defeating the world champions in different arenas, ahead of its time.

Though Professor H.N. Mahabala initiated the first AI program in India during the 1960s,[9] research in AI in a sense took off in 1986 when the Indian government started the Knowledge-Based Computing Systems ('**KBCS**') initiative in collaboration with the UN

[4]Supreme Court of India, 'Press Release', 25 November 2019, press release for law day celebratoin.pdf (sci.gov.in)

[5]' Hon'ble Mr. Justice L. Nageswara Rao' , Artificial Intelligence and the Law- (*Online webinar of Shyam Padman Associates*, 6 August 2020, "Artificial Intelligence and the Law" | Hon'ble Mr. Justice L.Nageswara Rao - YouTube"

[6]Alan Turing, *Alan Turing: His Work and Impact* (1st edn, Waltham: Elsevier 2013).

[7]Andrew Myers, 'Stanford's John Mccarthy, Seminal Figure Of Artificial Intelligence, Dies At 84', *Stanford University*, 2011, Stanford's John McCarthy, seminal figure of artificial intelligence, dies at 84.

[8]Anjali Joli and Kajal, *Artificial Intelligence and Conflict Resolution*, Satyam Law International, 2021.

[9]Deepak Khemani, Worldwide AI Magazine, 'A Perspective On AI Research In India' , 2012, 2356-Article Text-3850-1-10-20120514.pdf.

Development Program.[10] Since then, Indian scientists have undertaken several projects based on AI.

AI in the legal business, specifically in law firms, made its debut with ROSS, an IBM Watson-powered robot that resolved research queries by mining data and recognizing patterns and trends.[11] The aim of technology, as Ross Intelligence has created, is to assist lawyers to identify cases and secondary materials through Natural Language Processing ('**NLP**'). It enables the user to raise a query in simple English and receive appropriate citations and cases from its database in return. On the other hand, Case Text's CARA asserts that it enables attorneys to anticipate the arguments of an opposing counsel by locating prior legal opinions used by lawyers.[12]

The acceptance and usage of AI are still in the stage of infancy in India and the world. Law firms have begun to use AI to filter and structure judicial data and information. Cyril Amarchand Mangaldas became the first Indian law firm to use KIRA, a software that uses AI to accurately recognize, examine, and segregate provisions and other relevant information from legal documents in 2017.[13] KIRA Systems AI was founded was an M&A Lawyer Noah Waisberg to perform more accurate due diligence contracts by searching, highlighting, and extracting relevant content for analysis, which is often overlooked in cases of manual due diligence. Another cloud-based AI named LEVERTON was launched by the German Institute for Artificial intelligence. Apart from due diligence, it also can extract information on maintenance costs, payable rent and expiration dates, etc., from thousands of Agreements and then organize it on a spreadsheet in only a few seconds. Similarly, eBrevia, a due diligence AI claims to review documents 30-90% faster than with manual review. [14]Famous companies like JPMorgan developed an in-house AI named COIN that can extract as many as 150 attributes from 12,000 commercial contracts within a few

[10]Patrick Saint-Dizier, 'The Knowledge-Based Computer System Development Program of India- A Review' ,1991, 12(2) AIM, https://ojs.aaai.org//index.php/aimagazine/article/view/898/0
[11]'World's First Robot Lawyer ROSS Hired By US Law Firm', 2016, World's first robot lawyer ROSS hired by US law firm | Mint (livemint.com).

[12]*Casetext*, 16 May 2016, Casetext: Best Legal Research Software | #1 Rated.
[13]Shreeja Sen, 'Cyril Amarchand Mangaldas In Pact With Software Solutions Firm Kira Systems', 31 January 2017, Cyril Amarchand Mangaldas in pact with software solutions firm Kira Systems | Mint (livemint.com).
[14] Products & Solutions, eBrevia, *DFIN*, 30 September 2021, eBrevia | AI Powered Contract Review Software | DFIN (dfinsolutions.com)

seconds and saves up to 36,000 hours of legal work.[15] Likewise, many other AIs such as ThoughtRiver, LawGeex, Brainspace Discovery, and Legal Robot are also been developed to perform functions of efficient Contract review and documents due diligence.[16]

There are many other software and applications available which combines ML and AI to assist lawyers with legal research and argument formations through predictive technology. Everlaw is one such AI that uses its prediction model's results to assist users in classifying relevant and irrelevant documents. Similarly DISCO, another AI also employs prediction technology to suggest relevant documents at a faster speed. Catalyst is an Automated Redaction AI which identifies sensitive and confidential information on documents. Whitsun, a law firm made by AI has the capability of performing e-Discovery tasks of lawyers at a 95% cost savings. [17]Another AI, named Ravel Law claims to predict outcomes based on relevant case laws, judge rulings, and referred languages from more than 400 courts.[18] An AI called LexMachina offers numerous functions that can help lawyers with their legal strategy. For instance, its Timing Analytics function aids in estimating the length of a case's trial before a particular judge.[19]

AI is gaining a lot of traction right now because its utility has skyrocketed in a variety of fields. Increased client pressures, work volume, and, of course, Covid-19 have all accelerated digital adoption and the need to improve organizational efficiency. AI is changing the meaning of providing legal services in six primary areas: litigation review, expertise automation, legal research, contract and litigation document generation, predictive analytics, and, most importantly, contract analytics, which has received a lot of attention recently in the law firm and enterprise space. [20]

---

[15]Hugh Son, 'JP Morgan Software does in seconds what took lawyers 36,000 hours', *Bloomberg*, 28 February 2017, https://www.bloomberg.com/news/articles/2017-02-28/jpmorgan-marshals-an-army-of-developers-to-automate-high-finance#xj4y7vzkg.

[16]'AI In Law And Legal Practice -A Comprehensive View Of 35 Current Applications' , *Emerj Artificial Intelligence Research*, 2021, https://emerj.com/ai-sector-overviews/ai-in-law-legal-practice-current-applications/

[17]'Exterro Revolutionizes E-Discovery Market With Robotic E-Discovery, Fusion Whatsun - Exterro', *Exterro*, 2020, https://www.exterro.com/about/news-events/exterro-revolutionizes-e-discovery-market-with-robotic-e-discovery-fusion-whatsun.

[18]Danial Lewis, Interview, 21 August 2015, Ravel Law: A Silicon Valley Approach To The Law Industry | Daniel Lewis - YouTube>

[19]Ibid 16.

[20]Christophe Frèrebeau, 'The Evolution Of AI In Law And Why The Contract Analysis Market Calls For The Next Step' (*Lawyer Monthly, Legal News Magazine*, 2021, https://www.lawyer-monthly.com/2021/07/the-evolution-of-ai-in-law-and-why-the-contract-analysis-market-calls-for-the-next-step/.

AI interventions are currently being explored and investigated in several parts of the world, including the EU, the UK, and the USA. For instance, the Estonian Ministry of Justice has created an 'AI judge to decide minor claims lawsuits that are less than €7,000 (about $8,000). The verdict of the 'AI judge' may also be appealed to a human judge. [21]The US employs the Correctional Offender Management Profiling for Alternative Sanctions ('**COMPAS**') tool to assess recidivism risk and notify parole and sentencing decisions. [22]The UK has used a similar tool called the Harm Assessment Risk Tool ('**HART**') to predict which criminals are most likely to re-offend and suggest what kind of prison supervision a defendant should receive.[23] In Brazil, an AI program named VICTOR is being utilized to undertake preliminary case analysis to lessen the court's workload.[24] Furthermore, it can identify urgent cases in large volumes of data in just 2 minutes, whereas a human would take 96 days to do so.[25] In Argentina and Columbia, the Public Prosecutor's Office of Buenos Aires and the Constitutional Court of Columbia, respectively, have employed a technology called Promethea to anticipate the outcome of trials. Its most significant achievement is predicting the outcome of a court case in less than 20 seconds, with a 96 percent accuracy rate.[26] In nations such as Russia, China, and Mexico, robots are offering services such as legal advice to residents and assisting courts in determining whether pensions should be granted. casement, Manupatra, SCCOnline, LexisNexis, and NearLaw are some of the start-ups attempting to reinvent legal research by utilizing visual search and case ranking algorithms to quickly display the most appropriate and relevant cases. The system organizes and ranks over 300,000 records of cases from over 20 Courts and Tribunals to provide the top fifty instances. This novel method elegantly recognizes the 0.01 percent of cases that are most important to the user.

2.2. India

[21]Joshua Park, 'Your Honor, AI.' , *Harvard International Review*, 2020, Your Honor, AI. (harvard.edu)

[22] Helen Fair and Roy Walmsley,'World Prison Population List', *ICPR*, December 2021, world_prison_population_list_13th_edition.pdf (prisonstudies.org).

[23]Matt Burgess, 'UK Police are using AI to inform Custodial Decisions – But It could be discriminating against the Poor' , *WIRED UK*, 2018, https://www.wired.co.uk/article/police-ai-uk-durham-hart-checkpoint-algorithm-edit

[24]Isabela Ferrari and Daniel Becker, 'Artificial Intelligence And The Supreme Court Of Brazil – Beauty Or A Beast?', *Sifocc.org*, 2020, Artificial Intelligence and the Supreme Court of Brazil – Beauty or a Beast? | Standing International Forum of Commercial Courts (sifocc.org).

[25]Juan Corvalán and Enzo Cervini, 'Prometea Experience. Using AI To Optimize Public Institutions', *CERIDAP*, 2020, https://ceridap.eu/prometea-experience-using-ai-to-optimize-public-institutions/?lng=en.

[26]Federico Ast, 'Prometea, Artificial Intelligence In The Judicial System Of Argentina', *Medium*, 2020, https://medium.com/astec/prometea-artificial-intelligence-in-the-judicial-system-of-argentina-4dfbde079c40.

In the context of India, our nation received 3rd rank in The Global Vibrancy Ranking 2021, according to the recent AI Index Report 2022 published by Stanford University.[27] As we are well aware, the world came to a halt in 2020 owing to the Coronavirus outbreak. However, given the number of cases pending in the court, the Supreme Court of India could not afford to dismiss all of its services and henceforth, established two softwares-the Jitsi Meet and Cisco WebEx for virtual hearings. In the same year, the Supreme Court, therefore, established a portal called SCI-Interact to render all 17 benches paperless.[28] Another web-based application, called Legal Information Management and Briefing System ('**LIMBS**'), was also implemented, which aimed to streamline the monitoring of cases.[29] Furthermore, the Supreme Court of India introduced its first site based on AI - theSupreme Court Portal for Assistance in Court's Efficiency ('**SUPACE**'), on April 6, 2021.[30] It is expected to reduce the workload of judges. The Supreme Court has experimented extensively to make things simple and easy to use. In addition, the SPACE portal has been introduced as a prototype in the Bombay and Delhi high courts dealing with criminal cases. A committee is also looking into how AI may be utilized to deal with the Motor Accident Claims Tribunal. [31]Moreover, National Company Law Tribunal ('**NCLT**') President Justice Ramalingam Sudhakar, while addressing a national-level colloquium of NCLT suggested that technologies such as AI could be implemented for early resolution of matters, especially in the admission of cases.[32] Similarly, Justice Chandrachud recently whole addressing 'Navigating AI and Technology Disputes via Arbitration' in Dubai said that "AI and technology are slowly penetrating various walks of life. Robot-driven cars, robot helpers, and robot adjudicators are considered essential in this modern, fast-paced world."

Apart from the government bodies, a private 'legal tech firm named Riverushas formulated an ML platform that peruses multiple cases, interprets them, and accordingly segregates

[27]Stanford University, Who is leading the global AI race?, 2022, https://aiindex.stanford.edu/vibrancy/
[28]Ajmer Singh, 'Supreme Court Develops Software To Make All Its 17 Benches Paperless' *The Economic Times*, 2020, Supreme Court develops software to make all its 17 benches paperless - The Economic Times (indiatimes.com)
[29]Bibek Debroy, 'LIMBS: The Right Legwork For Efficient Govt Litigation', *Financialexpress*, 2018, https://www.financialexpress.com/opinion/the-right-legwork-for-efficient-govt-litigation/1205367/
[30]'CJI S.A. Bobde Welcomes AI System to Assist Judges in Legal Research', *mint*, 2021, CJI S A Bobde welcomes AI system to assist judges in legal research | Mint (livemint.com)
[31]ibid 30.
[32]'Artificial Intelligence Could Be Used For Early Resolution Of Matters, Says NCLT President', *The Economic Times*, 2022, https://economictimes.indiatimes.com/news/india/artificial-intelligence-could-be-used-for-early-resolution-of-matters-says-nclt president/articleshow/90464442.cms

cases that are similar in nature just like a human expert would do. [33]Similarly, the Chandigarh-based start-up named Jupitice Justice Technology Private Limited has introduced a digital global Alternate Dispute Resolution ('**ADR**') Court wherein business individuals, Governments, etc., can resolve their disputes online by performing end-to-end Dispute Resolution Process through Online Arbitration, Conciliation, Mediation, etc. on a single platform. [34]Inspired by the same mechanism, the Haryana Real Estate Regulatory Authority has signed a Memorandum of Association with Jupitice Justice Technologies for the digitalization of the complaint redress system and develop a digital Real Estate Regulatory Authority ('**RERA**') Court to enable all its stakeholders to execute and perform end-to-end Dispute Resolution Mechanism for quicker resolution of disputes between homebuyers and the developers.[35]

3. Potential Virtues of AI in Law

The Indian judiciary is on the verge of a revolution in the practice of law led by the introduction of AI computers. Uses of AI in the legal industry have proved to be of exceptional help across all jurisdictions, and not only limited to in-house lawyers but in conventional legal practice as well. With that in mind, the discussion here majorly focuses on the list of potential virtues of the use of AI in legal practice.

3.1 Organizing information and Intelligent processing

Recognizing patterns in text documents and files can prove to be beneficial in diverse situations, like sorting large numbers of court cases or in difficult cases which have a lot of precedences. Intelligent document processing, retrieval of cases and statutes, automated text interpretation, smart document assembly systems, hypertext, and semantic markup of judicial documents can all benefit from AI. eDiscovery built in the US is an example of automated analysis of electronic information which is used for discovery before the start of a court procedure. E-Discovery takes the advantage of ML, which learns the optimal method for extracting useful sections from a vast amount of data through training on datasets. The search terms and code are agreed upon by both parties. The judge evaluates the agreement

[33]Jacob Koshy and Sandeep Phukan, 'Can Artificial Intelligence, Machine Learning put Judiciary on The Fast Track?', *The Hindu*, 2022, https://www.thehindu.com/news/national/ai-ml-are-a-long-way-from-becoming-a-judicial-decision-making-tool/article65193656.ece.

[34]'Introducing The World's First "Digital Global ADR Court" For Private Justice System Powered by AI & Block Chain' , *Jupitice.com*, n.d.,https://jupitice.com.

[35]Jaswant Singh, 'Soon RERA To Kick Off Digital Court for Redress of Disputes', *Times of India*, 2022, https://timesofindia.indiatimes.com/city/gurgaon/soon-rera-to-kick-off-digital-court-for-redress-of-disputes/articleshow/89027375.cms.

and confirms it. The courts in the US recognized this methodology as legally valid for the first time in the case of *Anti-Monopoly Inc. v. Hasbro, Inc*[36]. Similarly, the UK has also recognized this approach of document analysis in the High Court of Justice Chancery Division, U.K (2016) in the case of *Pyrrho Investments Ltd v. MWB Property Ltd*. [37]This approach is more efficient and precise than manual file research.[38]

3.2 Advice

Parties in a court case who are searching for a solution to their issues but are yet clueless can benefit from advisory AI. Even Legal practitioners can benefit from advisory AI. AI not only searches for relevant information but also returns answers to questions. The user then decides whether or not to follow the advice. This counseling feature can assist people in resolving their difficulties by themselves, thereby avoiding disputes or court cases. If the recommendations are insufficient, one can use assistance in finding a resolution. Aid in the forging of a solution that necessitates judicial review, such as a request or a summon, can ensure that the judge's assessment becomes common to a great extent. The Civil Resolution Tribunal ('**CRT**') in British Columbia, Canada, is a practical example of this role.[39] CRT presents the Solution Explorer, which provides public legal information and calculating tools 24 hours a day, seven days a week for no charge. It has guided pathways, interactive questions and answers, dispute resolution, and CRT preparation. An expert system specifically built for this purpose lies beneath, which is updated once in a calendar quarter. Human professionals continue to update the system based on user feedback and analytical data. As a result, this is not yet 'real' AI.

In India, a vast backlog of cases appears to be clogging the Indian legal system, which currently has a backlog reaching an all-time high of about 4 crores.[40] According to a recent Supreme Court of India announcement, the main reason for this is a large number of inconsequential, miscellaneous cases that have barred the top court from judging the ones that genuinely matter to individuals who are waiting for final rulings on long pending

[36]*Anti-Monopoly Inc v Hasbro, Inc* (1995) 3 19955 WL 649934.
[37]*Pyrrho Investments Ltd. v MWB Property Ltd* (2016) EWHC 256.
[38]A. D. (Dory) Reiling, 'Courts and Artificial Intelligence '(2020) 11 IJCA 10.
[39]British Columbia Civil Resolution Tribunal, *The Civil Resolution Tribunal*, 2019, Home - Civil Resolution Tribunal (civilresolutionbc.ca)

[40]ibid 1.

disputes. [41]Advisory AI can be extremely beneficial to the Indian judiciary because it can drastically reduce the number of minor cases submitted before a court of law.

3.3 Small pecuniary matters and other matters

AI can be used to make decisions in civil matters involving small sums. Aside from delivering judgments, there are other matters in court that AI can be used to decide, such as joinder of parties, misjoinder, deciding the territorial jurisdiction of the matter, bail, parole, and probation matters, and so on, where it can be used to decide these cases by feeding information about the specifications or essentials of these matters. All of these take an exuberant amount of time for judges. Furthermore, another major reason for the tremendous backlog in Indian courts is the extreme scarcity of judges across the three tiers of the judiciary and the infrastructure which should be at their disposal.[42]AI such as Prometea[43]can be used to forecast answers in cases of a motor vehicle or small monetary concerns when the application of the law is not complex and does not require much human intellect. As a result of the development of online payment methods, we have already observed some process automation in cases involving traffic challans. [44]Furthermore, a committee is also investigating how AI can be utilized to deal with Motor Accident Claims Tribunal.[45]

3.4 Administration

With increased judicial responsibilities, judges are also responsible for administrative matters such as receiving and sending official communications, directing and controlling court ministerial staff, planning and organizing various types of trials, and informing litigants about their legal rights. In certain situations, an AI-powered machine can be used to perform monotonous tasks, allowing the judge to focus on more important judicial tasks.

4. Challenges and strategies that must be put in place to facilitate the transformation in India

4.1 Short-Term Challenges

[41]Kanu Sarda, 'Staff Shortage: Case Backlog In Courts Touching All-Time High Of Four Crores', *The New Indian Express*, 2021, https://www.newindianexpress.com/thesundaystandard/2021/aug/08/staff-shortage-case-backlog-in-courts-touching-all-time-high-of-fourcrores-2341700.html.
[42]ibid 28.
[43]ibid 19.
[44]'Ministry of Road Transport and Highways, 'E-Challan – Digital Traffic/Transport Enforcement Solutions', n.d., Ministry of Road Transport and Highways (parivahan.gov.in).
[45]ibid 23.

Making sure that the use of AI and ML is in line with the fundamental constitutional principles and legal rights of a democratic republic like India is critical. [46]Pertinently, transparency and explainability are the most important requirements for facilitating this shift in India. This issue of transparency pilots a related issue of explainability. For instance, the algorithms that underpin AI are not accessible to the creator, owing to trade secrets, but even if they were, the vast majority of users are not trained to understand them and their roles. As a result, there is an information asymmetry between AI solution creators and AI solution users. This restricts the capacity of a user to inspect or question them.[47]

The two issues of explainability and transparency are much more detrimental to the legal system. Finding potential biases that may have an impact on a case's outcome as a result of the usage of AI is essential in the context of transparency. The occurrence of such opacity in the context of explainability runs counter to the legal standard of reasoned directives. Moreover, this limits the individual's ability to comprehend and oppose any choices that are made against them. To promote openness and explainability, it is desirable to achieve the twin goals of ensuring disclosure and allowing external audits. Increased transparency and disclosure, on the other hand, raise their own set of issues. Greater transparency, for example, can expose algorithms to hacking, expose AI to attacks, and expose firms to lawsuits and regulatory action. As a result, deploying AI technology solutions creates a 'transparency dilemma'.[48]

The second immediate issue is that these AI-enabled decision support systems must complement human judgment rather than take its place. Former Chief Justice of India S.A. Bobde recently stated that technology should never be permitted to make judgments and that the power should be left to the judges only. It would be devastating if AI were allowed to make decisions in circumstances involving human concerns when the human discussion is of the utmost significance.[49] Further to that, because AI technology innovation is still in its

[46]Anna Roy, Rohit Satish and Tanay Maindru, 'Responsible AI: Approach document for India - part I principles for responsible AI', *NITI Aayog*, February 2021, Responsible AI: Part 1 - Principles for Responsible AI (indiaai.gov.in).

[47]Sejuti Das, 'Trust Issues: Is AI Black Box Creating A Black Future?', *Analytics India Magazine*, 19 December 2019, Trust Issues: Is AI Black Box Creating A Black Future? (analyticsindiamag.com)

[48]Andrew Burt, 'The AI Transparency Paradox', *Harvard Business Review*, 13 December 2019, The AI Transparency Paradox (hbr.org)

[49]ibid 23.

infancy in India, the judges must have substantial liberty to diverge from the algorithm's result without difficulty.[50]

Excessive dependence on AI and ML may indirectly result in judicial matters being decided by computer systems, under the illusion that all principles of the human adjudicating process are complied with. Consequently, AI-powered systems can change the way we identify legal processes forever. These technologies risk becoming prescriptive by concealing case-specific reasoning and limiting judicial decisions to statistical and computational conclusions.

4.2 Long-Term Challenges

The first concern is preventing legal value lock-in or stagnation, which results in a halt in legal and jurisprudential advancement. Value lock-in is when tight adherence to precedents makes the status quo of the law permanent and unchangeable, preventing the necessary modifications in legal disposition to reflect shifting societal values and viewpoints. For instance, the Indian Constitution is a 'living document' that adapts to shifts in social dynamics, values, and beliefs. In an AI-centric judiciary, encouraging stare decisis in the interest of uniformity runs the risk of making precedents obsolete. For example, after over three decades of conflicting jurisprudence, the right to privacy has been included in Article 21 of the Indian Constitution. [51]If the same case had been decided by an AI adjudicatory tool developed and trained on the same competing jurisprudence, the same principle and legal conclusion would have been strengthened.

As a result, it is vital to keep humans in the loop as AI becomes more integrated into the legal system to assist in judicial decision-making. Human monitoring and discretion are necessary to maximize the performance of intelligent decision-making systems and minimize negative value lock-ins.

5. Suggestions

The Supreme Court's AI committee must first determine the short, medium, and long-term applications of AI; otherwise, the ambiguous stationing of AI would result in nothing less than pandemonium. This effort must lay the groundwork for explicit ethical principles

[50]Filippo Santoni de Sio and Jeroen van den Hoven, 'Meaningful Human Control over Autonomous Systems: A Philosophical Account', *Frontiers*, 28February 2018, Frontiers | Meaningful Human Control over Autonomous Systems: A Philosophical Account | Robotics and AI (frontiersin.org)
[51]*Justice K.S. Puttaswamy v Union of India* [2017] 10 SCC 1 (SC).

responsible for the design and deployment of AI. Simultaneously, it must determine the judiciary's logistical capabilities to integrate such technologies (for instance, how can judicial data be archived and made more openly accessible). The conceptualization stage must include, among other things, the following: Adopting a governing charter, stating key guidelines for upholding due process, and legal rights, and addressing issues with bias, lack of accountability, and transparency in AI-powered systems. An ethical Charter for the use of AI in various legal systems has been produced, for instance, by the European Commission for the Efficiency of Justice ('**CEPEJ**').[52]

Second, considering the hard cases filed in court about AI, the current governing laws must recognize the existence of AI within the periphery of their bounds. A complaint was recently filed in the United States District Court for the Eastern District of Virginia arguing that DABUS (AI) is the inventor of two items and thus must be declared as the inventor for a Patent. The US Court ruled that DABUS could not be certified as the inventor since the definition of 'Inventor' under the America Invents Act, 2011, states that an inventor can only be a natural person.[53] While everyone intended for AI to be granted inventor status, such occurrences will never occur unless the statutes are altered to include AI within their reach.

Furthermore, it is vital to support research on AI governance for the justice system and train employees to resolve the critical challenges that AI poses. There is a requirement for high-quality, interdisciplinary research findings, as well as user and recipient training, which can help policymakers make more informed decisions about integrating and utilizing such emerging technology. With a focus on the Indian context and grassroots realities, the AI Committee may encourage and commission independent research initiatives using this strategy. There is some international literature on related subjects, but because of India's highly subjective social and cultural landscape, local research is required.

To oversee the incorporation of AI into the justice system, it is also important to expand the AI Committee. Preferably, a core group of current or former Supreme Court or High Court judges should be a part of this extended AI Committee. It should be led by a sitting Supreme Court Justice, as it is now. Professional members such as technologists (with specialization

[52]'European ethical Charter on the use of Artificial Intelligence in judicial systems and their environment', *CEPEJ*,4 December 2018, ES250132_PREMS 005419 GBR 2013 charteethique CEPEJ WEB A5.pdf (coe.int).
[53]*Thaler v Hirsfiled* [2021] 20 CV 903.

in AI design and innovation), ethicists, policy researchers, and academics must also be inducted. Though some of these people are still on the committee, they are neither multifaceted nor completely involved. The goal is to establish a permanent institution that works solely on the task of AI integration, rather than a body that meets regularly to discuss this agenda.

To determine what works and what doesn't, frameworks for effective evaluation and feedback loop development must be created. They are essential for improving first-generation AI interventions in the legal system and ensuring that pilots and later generations are independently examined. While the AI committee is in charge of the impact assessment, it must be carried out by experienced technology auditors. Additionally, rather than being a one-time occurrence, such examination must be ongoing to guarantee that the quality of technology deployed corresponds to the best ethical principles as they emerge and develop within the larger discourse on AI governance.

6. Conclusion

Given the increased interest of governments and public institutions around the world in harnessing the revolutionary possibilities of AI, its application and governance have emerged as critical discussion points. The incorporation of AI-driven technology into the Indian judicial system requires a thorough regulatory, legal, and ethical structure to foster trust in these technologies.

Apart from that, it can be safely concluded from the preceding discussion concerning the current and potential use of AI in the judicial system to aid lawyers and judges that AI and ML can help the entire judicial system to reduce the time taken in copious tasks at varying stages of a trial, specifically the judges by assisting them in decision-making steps Aside from this concern, it is undeniable that saving time would surely result in improved efficiencies in the disposition of matters, which would eventually help in reducing pendency in the Indian Judicial System. When this is accomplished, the lofty goal of securing effective and long-term justice for the masses will be realized.