ARTIFICIAL INTELLIGENCE: FACILITATING LEGAL ECO-SYSTEM IN COURTS IN INDIA

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Abstract—What are the potential benefits of having AI in courts in the true sense – as autonomous decision-making entities that can make the law more rational, convenient, efficient, quick, and reliable for us? Broadly speaking Artificial intelligence is making an enormous impact on people's lives and has proven to be an efficient tool in every sector. Nearly every action is performed with the help of some technology, be it commuting, communicating, transferring money, entertainment, keeping records, education etc. Artificial intelligence has eased many tasks and also automated a lot of repetitive activities. Various sectors are adoptingit to reduce their cost, time, effort, and increasing the efficiency of their organisation. In the legal sector there are colossal problems, which include pendency of cases, efficiency of the judiciary,making judgments available in the regional languages etc., where artificial intelligence can have answer to these problems; but the issue is adoption of this mechanism by the courts. There is a significant backlog of cases at the District and High Court levels. Artificial intelligence in the courtroom has the potential to provide substantial benefits in reducing the backlog of cases. There are other innumerable advantages of integrating AI with the legal sphere some of them are in areas such as due diligence, research, computation of compensations, recognizing urgency of matters, fixation of hearing dates et cetera. Thereupon, the Supreme Court has made some tools like SUPACE and SUVAS which are examples of AI and would help in the long run. This article looks at a few cases in the Indian

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legal system where artificial intelligence has recently been included. It also talks about challenges relating to the same in short term as well as in long term. Further it discusses some start-ups which are working on integrating the judicial system with AI and helping litigants. Some international examples of AI in judicial sphere are also described and in the conclusion the road ahead in making this transmission is discussed.

Keywords: Artificial Intelligence, Machine Learning, AI Concerns, Optimizing Delivery of Justice, AI Committee.

I. INTRODUCTION

AI is essentially the field of technology that takes into account the capabilities of machine learning, similar to human learning, and the ability to respond toward certain situation. AI is built with numerous algorithms that assist the system in determining the most likely solution, which effectively tells the system what to expect and how to function appropriately.[1] At its cornerstone, the marriage of 'AI and law' is needed to make justice more efficient, comprehensible, convenient, effective, accessible, and understandable. Artificial Intelligence if integrated with the Judicial system would result in spending less time on the administrative activities and would let the judicial officers focus more on the merits of the case. Moreover, Artificial intelligence can also help in intelligent analytics and research which would enhance the efficiency of the litigators. Further, computational value in a case can also be decided based on historical data and on other relevant aspects with the help of intelligent computational tools. Legal bots can help the litigants in deciding the legal issues and can assist in making an informed decision on the legal rights in a cost-effective way and without compromising on the quality of legal aid. However, on the flip-side, the intersection between law and artificial intelligence presents significant concerns. For instance, how do we ensure that AI models are trained with trusted data which is not tainted with inaccuracies or biases. In the courtroom, AI brings both potential and problems, henceforth, it's important going over the progress that's been taken place so far.

It is pertinent to mention that Justice DY Chandrachud, along the lines of adoption of AI opined that,

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[1] Preeti Ahluwalia, "Artificial Intelligence: A Friend or Foe for the Legal Industry?" (February 20, 2022, 10:00 AM), <https://www.livelaw.in/columns/artificial-intelligence-a-friend-or-foe-for-the-legal-industry157322?infinitescroll=l>. (Accessed on 22 February 2022).

"*Let there be no doubt that technology is now bringing focus on judges- How we conduct ourselves, how long we sit in court, the seriousness with which courts are handled and cases are conducted, the courtesy which judges show to the members of the bar and litigants, particularly those lawyers who are not in the higher echelons in the hierarchy of the bar*". He also stated that "*technology must be understood as the facilitator of change, but the driver of change has been and must be the human mind*".[2]

The system of e-courts,[3] virtual courts, online dispute resolution, online registry has become a daily routine. This adoption would have taken a lot of time in normal times but due to the pandemic, this shift was done rapidly in order to prevent miscarriage of justice and undue delay in the justice delivery system. Indian Judiciary is still at a very nascent stage as compared to Brazil, UK, USA, European Judiciary.[4]

II. SCOPE OF ARTIFICIAL INTELLIGENCE IN INDIAN LEGAL SYSTEM

According to certain estimations from a study,[5] a legal AI system took 26 seconds to finish a legal review, whereas the human lawyers spent an average of 92 minutes on completing the same task. This demonstrates the significance that AI can offer to the field of law.[6] The spectrum of the Artificial Intelligence (herewith 'AI') and Machine Learning (herewith 'ML') is wide and far reaching but to understand its potential use in the Indian Judicial System which can be said to be in a premature state with respect to its integration with AI and ML, some of the most basic areas of its use can be like in improving the administrative efficiency, improving the decision making. With the advent of pandemic, the discussion on AI has gained rigor and its integration has become just a matter of time and not a matter as to whether to integrate it with the Indian judiciary or not. Administration of legal process is a complicated and time-consuming process, for instance, Justice Chandrachud shared the NJDG (National Judicial Data Grid) statistics in year 2020 and stipulated that over

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2   Mehal Jain, *Technology Must Be Understood as the Facilitator of Change, But the Driver of Change has Been and Must Be the Human Mind: Justice DY Chandrachud*, (March 10, 2022, 11:00 AM), <https://www.livelaw.in/top-stories/justice-dy-chandrachud-e-inauguration-jus-tice-clock-and-e-court-fee-system-gujarat-hc-district-judiciary-189796>. (Accessed on 22 March 2022).

3   Justice D.Y. Chandrachud, *Future of Virtual Courts and Access to Justice in India*, Nyaya Forum, NALSAR Online Webinar, (May 24, 2020).

4   *Artificial Intelligence: Law and Policy Implications*, 22-35 (Purvi Pokhariyal, Amit K. Kashyap and Arun B. Prasad eds., 2020).

5   Monica Chin, "An AI Just Beat top Lawyers at their Own Game", (February 20, 2022, 22:00), <https://mashable.com/article/ai-beats-humans-at-contracts> (Accessed on 22 February 2022).

6   *Ibid*.

32.45 million Cases are pending in India and out of them over 10% comprise of more than 10 years old case. Such is the state of affairs in the courts which is adding to the huge pendency of cases.[7] AI and ML can play a huge roll in automating this process by preparing the cause-list according to the input given through the e-courts system. This would save time and energy of many people and would also reduce the human workload.

SUVAAS and *SUPACE* (Supreme Court Portal for Assistance in Court Efficiency) are the two existing AI and ML programs in the Supreme Court of India. SUVAAS is an automated natural language processor which translates Supreme Court's judicial orders and rulings in other languages of India. This would provide wider acceptance and compliance with the Supreme Court within the territory of India. This program is ML as it continues to learn from the past and delivers a better result the next time. SUPACE, it is an ML program which studies different processes of the court and gives the output in the way as to assist the court as to what all process can be automated which are mechanical.[8] There are several cases of AI being utilized to give bail or resolve a traffic challan and proving to be quite successful. For example, in *Loomis* v. *Wisconsin State,*[9] the Supreme Court of Wisconsin in the United States recognized the legitimacy of an AI-based bail recidivism tool (COMPAS). The Court stated that 'a circuits court's use of a COMPAS risk assessment at sentencing does not violate a defendant's right to due process if applied appropriately and with a grasp of the limits and warnings'.[10]

AI and ML can be utilized in improving the decision making. It is a tool to expedite legal analysis and research on the factual situations. An advocate and also a Judge needs to determine in every case as to what legal provisions are attracted in each case; assistance of this would be a marvellous contribution to the Judicial System as it would improve the efficiency in leaps and bounds. As in case of traffic-challans which are more or less automated through online payment mechanisms, even in Judicial Decisions, deep-learning MLs can be used to compute motor vehicle compensation as the variables to calculate are limited and well established. In the arena of dissemination of legal information, AI can be used as in the form of legal bots. Many sectors are adopting this technology like insurance, banking, e-commerce which is helping the public in taking legal decisions relating to rights, liabilities, compensations, fate

[7] Rushda Khan, "Big Data Revolution in The Supreme Court", (15 April 2022, 10:30 p.m.), <https://www.livelaw.in/columns/supreme-court-big-data-revolution-supace-covid-19-173867>. (Accessed on 12 May 2022).

[8] Tania Sourdin, *Judges, Technology and Artificial Intelligence: The Artificial Judge* 49-57(Edward Elgar Publishing, 2021).

[9] *State* v. *Loomis*, 881 NW 2d 749 (Wis. 2016).

[10] Harvard Law Review, *"Criminal Law - State v. Loomis Wisconsin Supreme Court Requires Warning Before Use of Algorithmic Risk Assessments in Sentencing"*, (February 10, 2022, 14:00 p.m.), <https://harvardlawreview.org/2017/03/state-v-loomis/>. (Accessed on 22 February 2022).

of the case, and gravity of the matter etcetera. For instance, many law firms in the United States leverage artificial intelligence to forecast court outcomes and determine which lawyers win in front of which judges. Moreover, in Europe, AI reached the same conclusion as European Court of Human Rights judges in almost four out of five instances involving torture, humiliating treatment, and invasion of privacy. Domestically, *Cyril Amarchand Mangaldas*, a Mumbai-based law firm, has also embraced the Canada-based machine learning legal system 'KIRA,' which has resulted in significant productivity advantages.[11]

As per the Harvard Business Review the adoption of AI has sky rocketed over the last 18 months with just about all, 86%, say that AI is becoming a "mainstream technology" at their company in 2021.[12] Ergo, the people would be able to take opinions from lawyers who are willing to work pro-bono[13] through this AI legal robot with minimum trouble relating to location and also the expense of the lawyer. Thus, the potential of AI and ML is huge which is going to be a reality sooner than ever before.

III. INITIATIVES UNDERTAKEN: THE AI PORTAL OF THE SUPREME COURT

Whatever the concern may be, the function of courts and judges is simply to process information; parties submit information to the court, the method development occurs during the pendency, and the conclusion is also information. All the facts preparing does not involve complex analysis. Standard judgments and pronouncements of refusal are fairly regularly instituted; and numerous concerns require only a generic assessment without a hearing, and some cases are settled.[14] Ergo, Artificial Intelligence and machine learning may be used to cope with massive amounts of case data. The basic work on the usage of AI has already begun in India. To investigate the use of AI in the judicial sector, the Supreme Court of India established an Artificial Intelligence Committee,[15] which has primarily discovered applications of AI technology in judicial document translation, legal research guide, and work flow automation.

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[11] Amit Paul Cahhudhary, "Cyril Amarchand Mangaldas becomes the First Law Firm in India to Adopt Artificial Intelligence", (April 8, 2022, 15:00), <https://analyticsindiamag.com/cyril-amarchand-mangaldas-becomes-first-law-firm-india-adopt-artificial-intelligence/>. (Accessed on 20 April 2022).

[12] Joe McKendrick, "AI Adoption Skyrocketed Over the Last 18 Months", (March 16, 2022, 16:00), <https://hbr.org/2021/09/ai-adoption-skyrocketed-over-the-last-18-months>. (Accessed on 20 March 2022).

[13] Partha P. Chakrabarti & Ameen Jauhar, "Bots in the Law", *Outlook India*, (15 March 2021).

[14] A.D. (Dory) Reiling, "Courts and Artificial Intelligence", Art. 8, International Journal for Court Administration, (2020).

[15] Sh. Kiren Rijiju, "Use of Advance Technology At Courts", (March 14, 2022, 10:00 AM), <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1814536>. (Accessed on 20 March 2022).

With the help of such addition, projects are becoming encouraging, while iden-tifying measures for scaling and acceptance of such technologies.

The Indian judiciary has made a giant step forward with its e-courts ini-tiative, fully using the capabilities of cutting-edge Artificial intelligence. The Supreme Court of India took a significant step forward by allowing E-Filing. Advocates and litigants can now file their cases online 24x7, with choices such as Case Filing, Vakalat nama, pleading, e-payments, applications, and case portfolio management. This connection may also help with tiny chores like intelligent filtering or prioritizing of cases, as well as notifications and case monitoring.

In addition, the Ministry of Law and Justice's Department of Legal Affairs (DoLA) created a web-based programme called LIMBS (Legal Information Management & Briefing System) earlier in 2016. The programme enables tracking cases from high courts and tribunals. The goal is to keep track of a case during its full life cycle. LIMBS is a web-based programme for more effective and transparent monitoring of cases involving the Indian govern-ment's central government. It is a project of the Ministry of Law and Justice's Department of Legal Affairs (DoLA) that intends to automate the legal process and track a case's complete life cycle.[16]

Furthermore, in November 2019, SUVAAS (Supreme Court Vidhik Anuvaad Software), an indigenously built neural translation tool, was unveiled by the Apex Court to translate judicial orders and judgements from English to ver-nacular languages faster and more efficiently. SUVASS, built by the Supreme Court's AI Committee, was a pioneer of such task-specific algorithms. It uses natural language processing (ML) to simplify and expedite the translation of judicial orders and judgements.[17]

Thereafter, in 2020, the Supreme Court with the help of its software, SCI-Interact turning all 17 of its benches paperless. This programme assists judges in accessing files, attaching annexures to petitions, and taking notes on computers.[18]

On April 6, 2021, the then Chief Justice of India S.A. Bobde launched the Supreme Court Portal for Assistance in Court's Efficiency (SUPACE). SUPACE, as an artificial intelligence gateway, is meant to provide relevant

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[16] Ajay Gupta, "How Technology Gave LIMBS to Indian Judiciary — An App to Monitor Government Cases", *The Print*, July 15, 2020.

[17] Ameen Jauhar & Ors, "Strategy Paper on Responsible Artificial Intelligence for the Indian Justice System", (2021).

[18] Ajmer Singh, "Supreme Court Develops Software to Make All its 17 Benches Paperless", (April 12, 2022, 15:00), <https://economictimes.indiatimes.com/news/politics-and-nation/supreme-court-develops-software-to-make-all-its-17-benches-paperless/articleshow/75989143.cms?from=mdr>. (Accessed on 20 April 2022).

facts and legislation available to a court based on the subject currently being considered. As a research tool for judges, its major objective is to presumably increase the Court's efficiency and, eventually, begin to help in the reduction of case pendency. SUPACE, according to CJI Bobde, would not be used to make court decisions. Its operation would be limited to data collecting and analysis. In a separate occasion, he emphasized that the employment of Artificial Intelligence (AI) by the Indian judiciary must be consistent with *constitutional morality*. On this subject, he stressed the need of ensuring that AI does not obstruct or undermine Indians' constitutional and legal rights.[19] CJI Bobde, also clarified that SUPACE will not be used in the arena of decision making as in a judicial system, machines cannot replace complex human decision-making.[20] Nevertheless, even a system that is limited to organizing and transmitting information that has no direct influence on decision making might have negative repercussions. The likelihood of prejudice is a key overriding worry when discussing AI-related judicial systems. Even if the algorithm's programmers did not purposefully design prejudice into the system, the data utilized to generate results frequently reflects systemic biases that already exist.[21]

In a more recent development, the Central Board of Direct Taxes (CBDT) in April 2022 has inducted Artificial Intelligence for assessment proceedings under Section 142 of the Income Tax Act, 1961. Also known as the Faceless Inquiry or Valuation Scheme, 2022, it essentially covers issuing notices, making inquiries, directing the assessee to get his accounts audited and estimating the value of any assets, property or investment by a valuation Officer.[22]

Albeit, while all of these initiatives seem phenomenal their potential is undeniable; the reality is far less stunning at the present, since not all case processing is simple and straight forward, and often the judiciary deals with are complex, contrasting trend setters. It cannot be overemphasized that the procedure, hence the requisite for information technology, in each scenario is not the alike.

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[19] Lydia Suzanne Thomas, "Use of Artificial Intelligence Should Align With Our Constitutional Morality: Chief Justice SA Bobde", (April 16, 2022, 18:00), <https://www.livelaw.in/top-stories/artificial-intelligence-constitutional-morality-chief-justice-bobde-vidhi-report-172879>. (Accessed on 20 April 2022).

[20] Neha Joshi, "Artificial Intelligence can Supplement but Not Supplant a Judge; Cannot be Allowed to Determine Outcome of Case: Chief Justice of India SA Bobde", (March 19, 2022, 10:00), <https://www.barandbench.com/news/litigation/artificial-intelligence-supplement-replace-judge-chief-justice-sa-bobde>. (Accessed on 20 March 2022).

[21] James Manyika and Brittany Presten, "What Do We Do About the Biases in AI?", (March 15, 2022, 19:00), <https://hbr.org/2019/10/what-do-we-do-about-the-biases-in-ai>. (Accessed on 20 March 2022).

[22] Tanushree, "Introduction of Artificial Intelligence For Assessment Proceedings: CBDT Notifies Faceless Inquiry or Valuation Scheme, 2022", (April 15, 2022, 16:00), <https://www.asialawoffices.com/8017-/introduction-of-artificial-intelligence-for-assessment-proceedings-cbdt-notifies-faceless-inquiry-or-valuation-scheme-2022/>. (Accessed on 24 April 2022).

IV. CHALLENGES IN ADOPTING AI

AI to be integrated in the Indian Judiciary needs to overcome some challenges as it is integrating in a system which is highly sensitive and ever evolving. There is existence of 'Black Box'[23] in AI. Essentially, the term Black Box in this reference to AI 'insinuates a sophisticated system or equipment with concealed or difficult-to-understand internal workings'. Specifically, Black Box is the lack of transparency because of mathematical codes or the algorithms behind the program which are not understood by the users of the technology and thus creates distrust. The level of acceptability cannot be increased unless public scrutiny of the product is done. Most of the products are developed by a private body and therefore not much of the information is revealed under the garb of trade secret. Studies done on various AI programs in the US have shown blacks to be twice the number as of whites in the likelihood of committing crimes. One such study of the program COMPAS was done by an NGO called ProPublica.[24] Thus explanation of the program needs to be made in order to get acceptability. Further, as these machines are made by humans therefore, they tend to replicate the same bias or social inequality which is prevalent in the society and could in fact become a tool to further this bias rather than curbing it. These machines take a large amount of data and therefore could give results which may be personal bias of the developer. Thus, questions can be raised in order to accept it in the judiciary. On a parallel track, Justice BN Srikrishna raises another concern about the necessity for ethical use of AI and access to data sets. He opined that the data required for AI's use in the judiciary would have to be gathered from the judiciary itself, and that many judges and courts were unwilling to give data,[25] thus, becoming another hindrance in adoption of AI.

Another important aspect which needs to be discussed at length before induction of AI in Judiciary is that whether to use is it as a supplement to 'Human judgment making' or whether to use it to reduce human effort. The particular reason for this conundrum is that if Judges rely heavily on the AI, then it may result in injustice and might not improve the adjudication level.[26]

The long-term challenges which AI/ML face if integrated in the Judicial System is sluggishness of law. If AI/ML gives similar judgments and same rulings then it could result in stagnation of law. Legal field is a dynamic field; the

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[23] Franciska Zsófia Gyuranecz & Bernadett Krausz, "The AI is Now in Session – The Impact of Digitalization on Courts", (February 15, 2022, 19:30), <www.ejtn.eu/PageFiles/17916/TEAM%20HUNGARY%20TH%202019%20D.pdf>.

[24] Juia Angwin and ors., "Machine Bias, ProPublica, 2016", (February 16, 2022, 18:00), <www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing>. (Accessed on 18 March 2022).

[25] *Supra* note *15*.

[26] Filippo Raso & Ors., "Artificial Intelligence & Human Rights: Opportunities & Risks", 2018-6, 25 Berkman Klein Center at Harvard University, (2018).

law continuously changes and evolves with the passage of time. If the changes are not rapid and any limitation is present which is provoking status quo in the society then it could lead to miscarriage of justice. The other major challenge which AI/ML faces is its role in constitutional matters. When there are matters relating to judicial overreach or legislative overreach or relating to violation of rights then can AI be relied on. AI would be willing to give judgments only on existing rights and would not be able to create more rights in order to safeguard the citizenry from the atrocities of the State. One may argue that the Artificial Intelligence Entity never sleeps or eats, is always perfectly composed, and is exceptionally competent at Job, but nonetheless these challenges will continue to instil the doubt about their absolute dependence.

V. CONCLUSION

The leading issues in adoption of AI in the courts are of privacy, reliability and questions relating to the ethics. In adoption of any of this technology, the existing processes are studied and then it has to be decided scientifically where AI solutions can be applied. Pendency of cases is not only harming the justice delivery system but also acting as a disastrous reason why people are losing faith in the justice delivery system. *"Justice delayed is justice denied"* as William Gold stone once said, and seldom quoted by prominent jurists aptly describes the court system in our country. The regulatory framework of the judicial system may have to be amended in order to infuse AI and invigorate it. The courts need to be efficient in order to gain the exquisite trust of the people. For this exact purpose of the Indian Supreme Court has formed an Artificial Intelligence Committee to investigate the application of AI in the judicial arena. The group has found applications for AI technology in judicial document translation, legal research help, and process automation. In addition, these unprecedented times of COVID have challenged the existing system and gave momentum to the adoption of technology. The incorporation of AI in the system is nearer than expected which was not a case a few years ago. Albeit, on the challenging side, using of AI has resulted in tangling of many regulations, including but not limited to criminal law, intellectual property, confidentiality and data protection. Not to be overlooked, artificial intelligence is also an important subset of cyber law. What remains to be seen is whether AI development in Indian Courts will be free of these intricate multi-tangle difficulties or will the development be just be a false start.