INTERNATIONAL JOURNAL OF ADVANCED LEGAL RESEARCH

AI INTEGRATION AND RESHAPING OF INDIAN JUDICIAL SYSTEM

- Anjali Singh & Drishti Kochar[1]

INTRODUCTION

The significant advancement of technology, especially artificial intelligence, has emerged as a crucial subject in our contemporary society, and the field of Law is no exception to this ongoing transformation. With the advent of pioneering developments in artificial intelligence, a shift has been seen in the administration of legal proceedings with the integration of Artificial Intelligence(AI) in the judicial system worldwide. Nowadays, AI is used to enhance administrative efficiency in the courts and support the decision-making process of litigants or judges. Such a change in the justice system is integral to our society; therefore, this article aims to highlight the role of AI in the judicial system while addressing legal and ethical issues that are raised by its stakeholders.

WHAT IS ARTIFICIAL INTELLIGENCE(AI)?

As the name suggests, 'Artificial Intelligence', a technology that mimics human intelligence, which is human-made, claims to have a human-like thinking power. AI is a science and a set of computational technologies that are inspired by the way people use their nervous system, body, and senses and how they learn, reason, and take action.[2]

The two main program designs of AI are MACHINE LEARNING and DEEP LEARNING.

---

[1]Student at Law Centre 2, faculty of Law, University of Delhi
[2]*B.J. GROSZ, C. RUSS, A. ERIC, H.A. MACKWORTH, T. MITCHELL, D. MULLIGAN, Y. SHOHAM, Artificial Intelligence and life in 2030, 1 September 2016*

Machine Learning enables a machine to automatically learn from data, improve performance from experiences, and predict things without being explicitly programmed.[3] It deals with a lot of data; it is said to bring the world of Statistics and Computer Science together. How does it work? Well, the system is provided with past data, which it explores and builds logical models which further predict the output when reimbursed with new data.

Its uses include- self-driving cars, face recognition technology, friends' suggestions on social media, and many more.

Deep Learning, which is a young subset of machine learning, is based on artificial neural networks. It differs from ML in the way it learns from the data and the method it uses for such learning.[4] It has networks capable of learning unsupervised from data that is unstructured or unlabeled.

AI IN THE JUDICIAL SYSTEM

To begin with, the possible application of AI in reshaping the judicial system can be administered along the lines of the three ways laid down by Tania Sourdin in her paper, *Justice and Technological Innovation,* which is as follows:

- **Supportive technology**- The first level, as its name reflects, provides primary support, assistance, or advice to the people involved. Owing to the supportive innovation, many people can now find justice services online and learn about the justice system, and over the past few years, it has led to the growth of such online firms providing legal services.

- **Replacement Technology**- The second level replaces the functions and activities previously carried out by humans. It can be found in the form of the adaptation of online court processes for the resolution of certain types of disputes.

- **Disruptive technology-** The final level leads to the reformation of the ways of justice provided to the extent of replacing human decision-making.[5]

[3]*Artificial Intelligence vs. Machine Learning vs. Deep Learning: What's the difference? Built In. Available at: https://builtin.com/artificial-intelligence/ai-vs-machine-learning(Accessed: 11 June 2023).*

[4] *What is deep learning? IBM. Available at: https://www.ibm.com/topics/deep-learning(Accessed: 12 June 2023).*

[5]*The impact of artificial intelligence on Justice Systems - Biodiritto. Available at: https://www.biodiritto.org/ocmultibinary/download/3879/45815/2/f075ebb40b0edec59574dd6d4f9ca2cc/file/paper+25.pdf (Accessed: 13 June 2023).*

In today's world, however, in judicial reforms, there is only integration of first and second-level technology. Some of the technical programs are curated to encourage the development and number of options for solving disputes in contrary to producing one outcome on the basis of traditional rational decision-making approaches.[6]

WORLD VIEW

The wave of digital transformation is affecting courts across the globe unevenly. Some Countries use extremely advanced approaches with concrete applications in terms of legal support, such as Estonia, which employs a robot judge for adjudicating small claims(replacement technology), and Singapore, which utilizes AI for transcribing court hearings in real-time.The US has COMPAS (Correctional Offender Management Profiling for Alternative Sanctions) to evaluate an individual's risk assessment, while in the UK, you can come across HART (Harm Assessment Risk Tool). AI such as Rechtwitjerz is employed in the Netherlands, an advanced ADR program, to assist a couple in the divorce or separation process.[7]

Many countries have integrated AI as a supportive technology; for instance, China/Mexico/Russia use AI to give legal advice and approve pensions. AI is used for sophisticated document management in Austria and to identify urgent cases within minutes in Argentina/Colombia. Malaysia employs AI to support sentencing decisions. This adoption of multiple approaches by different countries in AI integration plays a significant factor in reshaping the judicial system.

AI AND INDIAN JUDICIARY

With the world adapting to the new concept of Artificial Intelligence, India is no less trying its hand at the same. By leveraging AI algorithms and data analytics, Indian courts aim to streamline case management, automate routine tasks, and expedite the resolution of disputes. This adoption of AI reflects the commitment of Indian courts to harness technological

---

[6]*Id.*

[7]*Responsible artificial justice system - vidhicentre for legal policy. Available at: https://vidhilegalpolicy.in/wp-content/uploads/2021/04/Responsible-AI-in-the-Indian-Justice-System-A-Strategy-Paper.pdf (Accessed: 13 June 2023).*

advancements for the benefit of the judicial system and the citizens it serves. With its commitment to fast-track justice deliverance, India has launched many programs to accomplish the same-

E-COURTS PROJECT-

To enhance judicial productivity, qualitatively and quantitatively, the E-court project came to be through the "National Policy and Action Plan for Implementation of Information and Communication Technology (ICT) in the Indian Judiciary - 2005"[8] by the e-committee, Supreme Court of India.

Phase 1- launched in 2007, this phase was the baby step towards digitization of the subordinate courts. District and Taluka Courts were computerized with the installation of hardware, LAN, and Case Information Software (CIS) for litigants' and lawyers' ease. In addition to that, District Court also launched its website, and judicial officers, along with the court staff, were trained to operate the case information software.

Phase 2- launched in 2015, lays significance to litigants, lawyers, and other stakeholders. In this, the already covered courts under phase 1 were equipped with additional hardware with a (1+3) system and newly established and uncovered courts with a (2+6) hardware installation system.

Phase 3- The vision entails a judicial system that is readily available regardless of geographical location and improves accessibility, efficiency, and fairness for all individuals seeking justice.

AI AND COURTS

Indian courts have embraced the integration of artificial intelligence (AI) into their operations and decision-making processes. They have recognized the potential of AI technology to enhance efficiency, accuracy, and accessibility in the administration of justice.

AI PORTAL SUPACE- stands for "Supreme Court Portal for Assistance in Court's Efficiency". Launched in April 2021, this portal makes legal research easier for the judge. It is not designed

---

[8]*ECourts mission mode project.eCourts Mission Mode Project | Department of Justice | India. Available at:https://doj.gov.in/ecourts-mission-mode-project-2/(Accessed: 12 June 2023).*

to make decisions but only to process facts and to make them available to judges looking for input for a decision.

SUVAS- which stands for "Supreme Court VidhikAnuvaad Software," is dedicated open-source judicial domain software for the translation of judgments of Courts in vernacular languages and vice-versa.

In addition to aiding in legal research and translating judicial documents, the Supreme Court committee has contemplated the use of artificial intelligence (AI) to track cases, especially those from the past.

AI FOR LEGAL PRACTITIONERS-[9]

1. LEGAL RESEARCH- AI-powered tools are being used to streamline legal research. These tools can quickly analyze the bulk of legal information, including case law, statutes, and legal precedents, and provide relevant and comprehensive results.
2. DRAFTING MATTERS- be it a contract or any other agreement, AI bots are used by lawyers to draft their matters. This, on the one hand, provides astonishing results or may even make the pleader land in trouble.

Humans tend to become emotionally unstable at times, considering the large amount of work they do and the data they consume, especially in the judiciary. AI without such emotional factor deliver the requisite function efficiently.

AI FOR DISPUTANTS-

The disputants can assess their problems by entering information into an online system, which will classify their concerns, offer information regarding their rights and privileges, and propose potential solutions to resolve the dispute.

AI AND CRIMINAL JUSTICE SYSTEM

---

[9]*Melissaann.evans It and ai: New challenges for judiciaries, IT and AI: New Challenges for Judiciaries. Available at:https://www.unodc.org/dohadeclaration/en/news/2020/12/it-and-ai-new-challenges-for-judiciaries.html(Accessed: 13 June 2023).*

The digital culture has brought a transition in the criminal justice system, especially in the procedure of crime prevention, detection, and investigation of criminals and their prosecution, thereby transforming the landscape of law enforcement. AI technologies can enhance various aspects of the legal process, from law enforcement to case management, risk assessment, and sentencing. Because of AI's predictive nature, it has become increasingly popular in criminology.

Ai risk assessment algorithms such as HART (Harm Assessment Risk Tool) integrated into UK Criminal Justice System foresees which criminal is likely to re-offend and at the same time also provides assistance towards necessary supervision as and when required towards defendants.As far as the Indian Criminal Justice System is concerned, it also employs Predictive Analytics and AI for predetermining criminal behavior, identification of potential offenders, and informing the authorities, which also leads to the identification of high-risk areas for targeted patrols.AI-powered facial recognition systems have improved the speed and accuracy of suspect identification.[10]

Furthermore, Artificial Intelligence is utilized as a tool that analyses court decisions and aids in the identification of precedents, thereby also contributing towards streamlining case management and analysis within CJS. With the help of algorithmssuch as the NLP (Natural Language Processing) algorithm, it can analyze the bulk of legal documents, including statutes, precedents, and any other relevant document for legal research. As mentioned earlier, countries like Malaysia even employ it to support sentencing decisions.

Therefore, in today's world, AI has brought a momentous change in the functioning of CJS. However, its implementation must be done under careful supervision, and additional safeguards must be put in order to ensure that justice is realized without perpetuating biases or eroding human judgment and in line with ethical considerations such as privacy and transparency, and accountability.

---

[10]Sneha Mahawar *et al.* (2022) *Ai and Indian Criminal Justice System*, *iPleaders*. Available at: https://blog.ipleaders.in/ai-and-indian-criminal-justice-system/(Accessed: 13 June 2023).

AI AND JUDGES

Can AI really replace the judges?

This is a sixty-four-dollarquestion. Whether the AI will be so influential and handy that it will replace the judges in the court and start delivering verdicts. While this perception is unambiguously correct that judges, since they are humans too, tend to carry a preconceived notion with them that somehow affects their decision. AI comes here for the rescue; it can, without any emotional bias, uniformly deliver justice.

However,there is much more a judge delivers to society than just a piece of judgment. A judge influence and impacts society in many ways.[11]

AI and judges can be put in as a supportive technology rather than a replacement one. Judges can enjoy the various features offered by AI, like for deciding the sentence or punishment or for bail matters, etc.

OTHER PROS AND CONS-

India's social and cultural contexts are so diverse and nuanced that it requires research inputs that are specific to its own unique characteristics.

- AI can be immensely convenient for pre-trial mediation; this can even reduce the registration of cases
- AI has clear benefits in that it saves time and energy, and when used diligently, it can resolve the long-standing problem of pending litigations.[12] Having said that, it does carry serious issues with itself, which are mentioned below.
- A judgment comprises one Ratio Decidendi - the rationale/reasoning behind a judgment and an Obiter Dicta- which is the opinion of the Bench. Undoubtedly, AI can bring

---

[11]*The impact of artificial intelligence on Justice Systems - Biodiritto. Available at: https://www.biodiritto.org/ocmultibinary/download/3879/45815/2/f075ebb40b0edec59574dd6d4f9ca2cc/file/paper+25.pdf(Accessed: 13 June 2023).*

[12] *Khan, A. Ai-powered Indian judiciary: A step forward or cause for concern?, Bar and Bench - Indian LegalAvailableat:https://www.barandbench.com/columns/litigation-columns/ai-powered-indian-judiciary-a-step-forward-cause-concern(Accessed: 13 June 2023).*

efficiency to the court and the justice system, but what would it offer in terms of transparency and accountability of the decisions it took or verdict it delivered? How the algorithm is to be understood by the masses or justified by the Judicial system stands as an obvious and valid question ahead of AI innovation and its widespread promotion as well as acceptance.

- AI, at the end of the day, is a human-made science and will need humans to control or upgrade them at a certain point in time.

- Data tampering- A situation can arise when the data itself, maliciously or otherwise tampered with, will lead to false information to a miscarriage of the justice system.

AI VS HUMANS

Despite AI's impressive capabilities, human intelligence remains unparalleled. Human cognition includes a wide range of complex abilities and attributes, such as creativity, emotional intelligence, intuition, and moral reasoning. As humans, we adapt, learn from experience and incorporate common sense, which AI frequently struggles to emulate. Human intelligence is also profoundly embedded in empathy and ethics, all of which are important in fields such as law, medicine, and governance.

One of the major drawbacks of a possible future AI-driven judicial system is the dearth of employment opportunities, especially in clerk's work or court staff work, in a country like India, whereby a huge population is employed in this profession. Hence, In India, stakeholders are assured by Digital Future Lab, a multidisciplinary research network that examines the complex interactions between technology and society,that the AI integration in the judicial system will not reach the third level i.e., "disruptive technology" that replaces the human-decision making. Human involvement assures that justice is served in humanity's best interest.[13]

WAY FORWARD

---

[13] Khan, A. (2023) *Ai-powered Indian judiciary: A step forward or cause for concern?*,*Bar and Bench - Indian Legal news*. Available at: https://www.barandbench.com/columns/litigation-columns/ai-powered-indian-judiciary-a-step-forward-cause-concern (Accessed: 17 June 2023).

In December 2018, the European Commission for the Efficiency of Justice established ethical principles for the utilization of Artificial Intelligence (AI) in a Charter. This Charter outlines fundamental principles that can assist judicial professionals in navigating the fast-paced advancement of AI in their national judicial processes. Specifically, the Commission has outlined five principles that must be upheld in the realm of AI and justice.

1. Principle of Respect of Fundamental Rights
2. Principle of non-discrimination
3. Principle of quality and security
4. Principles of transparency, impartiality, and fairness
5. Principle of 'under user control'.

The utilization of Artificial Intelligence (AI) in a legal procedure should have restrictions and adhere to fundamental principles, including the right to a fair trial, the principle of non-discrimination, the right to equal treatment, and the preservation of human dignity. The best mode of incorporating AI in the judiciary is by continuously providing judicial officers and court staff with technicaltraining.[14] AI should be incorporated into Police Services since they form a significant part of the judicial system. In addition to that, legal aid cells and even jails can be well organised with the use of AI.

CONCLUSION

In today's world, Al is not something magical, nor is it something more intelligent than the human-cognitive sense. But it still holds an indomitable position in the society. From simple online transactions to the use of advanced technology to make our job easier, the world revolves around the "digital age." Similarly, our judicial system could not escape the clutches of this digital transformation and gradually accepted the integration of AI in reshaping the judicial system. It is even more prevalent in the formation of E-courts. Many foreign courts have also

---

[14] *Responsible artificial justice system - vidhicentre for legal policy. Available at: https://vidhilegalpolicy.in/wp-content/uploads/2021/04/Responsible-AI-in-the-Indian-Justice-System-A-Strategy-Paper.pdf(Accessed: 13 June 2023).*

implemented AI in different ways i.e., from analysing legal documents to the integration of AI robot judges.

However, as discussed above, every coin has two sides. If AI has helped achieve better efficiency and transparency in the administration of justice, at the same time, it is leading toward the replacement of human decision-making, though it is still a remote outcome. Precisely, current AI has its own limitations that need to be tackled. Furthermore, one needs to take safeguards to ensure that the use of artificial intelligence must adhere to basic principles and not violate human rights, particularly in the treatment of basic complex cases such as criminal ones. Particularly in the criminal justice system, where individuals' rights are restricted.

Comprehending the strengths and limitations of current Al technology is thereby vital for Al implementation under the law. We can achieve more from the implementation of Al in the judiciary now that we have begun our journey down the path of digital India. India is the world's most populous country, and the number of pending cases across all states has surpassed an indomitable number. The human mind can tolerate a certain amount of workload and stress; in this case, allowing Al to assist in reducing that workload and providing efficient justice to litigants will positively affect the judiciary and our country.[15]

---

[15]Tripaksha Litigation (2023) *Artificial Intelligence in judiciary*, *Tripaksha Litigation*. Available at: https://tripakshalitigation.com/artificial-intelligence-in-judiciary/ (Accessed: 17 June 2023).