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“ROLE OF AI IN INDIAN JUDICIARY”

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Abstract

The integration of Artificial Intelligence (AI) in the judiciary holds immense potential for transforming legal systems by enhancing efficiency, accessibility and fairness. Courts are able to enhance the speed and accuracy of case resolutions, reduce backlogs and expedite processes by utilizing AI technologies. Artificial Intelligence lowers human error by automating basic administrative processes, therefore freeing valuable time for more difficult court responsibilities.

Nevertheless, there are a number of difficulties and possible disadvantages to the use of Artificial Intelligence in the legal system. The possibility of algorithmic bias is among the biggest worries since Artificial Intelligence systems could be biased by the programmers who created them or by past legal data.

This paper highlights the positive as well as negatives aspects that Artificial Intelligence may make to judicial procedures and investigations.

Keywords - Artificial Intelligence, Judiciary, Technological interventions.

“Technology will integrate police, forensics, jails, and courts, and will speed up their work as well. We are moving towards a justice system that will be fully future-ready.”¹

- Prime Minister, Shri Narendra Modi

WHAT IS ARTIFICIAL INTELLIGENCE?

Artificial Intelligence is the replication of human cognitive abilities in devices that are designed to understand, learn, and solve problems similarly to how humans do is known as artificial intelligence (AI). The objective is to develop systems that are capable of carrying out operations that normally demand for human intellect, such as language comprehension, pattern recognition, decision-making, and even environmental perception. The idea of artificial intelligence has been proposed as a way to increase the effectiveness and productiveness of the Indian Judiciary. Numerous trends in digitalisation indicate that the study of "Artificial Intelligence" may be contributing to a decreased quantity of open cases.

In the mid1950s, John McCarthy, who has been credited as the father of AI, defined it as “the science and engineering of making intelligent machines” (“A Brief History of Artificial Intelligence”).²

AI has the potential to substantially reshape the Indian judicial system in a variety of ways, tackling persistent issues such as complications, inefficiencies, and constrained access to justice.

According to the Supreme Court of India's "**Subordinate Judiciary-Access to Justice 2016**" research, capacity limitations are the main reason for the high level of pendency.

Research Methodology:

A qualitative analysis of secondary data served as the foundation for this investigation. It makes use of reports from governments, white papers, scholarly journal articles, and legal commentary. The report primarily focuses on India's AI ambitions in the court and includes a comparative evaluation of international practices. The nature of the study is descriptive and exploratory. It seeks to examine the state of artificial intelligence (AI) in legal systems today, outline its many uses, and assess how it affects judicial effectiveness, openness, and equal access to justice. In order to reach conclusions and suggestions, the research evaluates and synthesizes the available data rather than gathering primary data through surveys or interviews.

All of the secondary data sources used in this study are as follows:

¹<https://pib.gov.in/PressReleasePage.aspx?PRID=2106239#:~:text=AI%2DAssisted%20Filing%20and%20Court,error%20in%20the%20documentation%20process>

² Exploring the Role and Impact of Artificial Intelligence in the Judiciary Dr. Talat Anjum VOL.05 ISSUE 01

- Scholarly publications and academic journals from databases including ResearchGate, SSRN, Google Scholar, and JSTOR.
- White papers and government reports, such the Supreme Court's SUPACE notifications and NITI Aayog's responsible Artificial Intelligence for All discussion paper.
- AI adoption in nations including the US, Estonia, China, South Korea and the UK is covered in global case studies and legal articles.
- Judicial databases and portals, including Law Commission reports, the E-Courts Portal, and the National Judicial Data Grid (NJDG).

DELIMITATION AND SCOPE OF THE STUDY:

- The study primarily examines how AI is used in courts rather than in legal enforcement or the legislative branch.
- Although international developments are studied for perspective, the main focus is the Indian court.
- The research is restricted to what is published because it does not collect empirical data through surveys or fieldwork.
- The study focuses on advancements till 2025.

LITERATURE REVIEW: ROLE OF ARTIFICIAL INTELLIGENCE IN JUDICIARY:

Providing a Legal Definition of AI:

- The term artificial intelligence (AI) in the judiciary describes the application of data analytics, machine learning, and natural language processing (NLP) to support judicial duties. Legal AI, according to Surden (2014), functions by identifying patterns in data and providing insights without having actual comprehension or legal reasoning.
- Susskind (2019) highlights that AI is an assistance system that can increase productivity, especially in monotonous or data-heavy activities, rather than a replacement for judges. In order to increase access to justice, he supports "online courts."

SIGNIFICANCE OF ARTIFICIAL INTELLIGENCE

Dealing with Backlogs of Cases

- Sort cases according to their time sensitivity or urgency.
- Aid in the early screening of instances that are low-complexity or recurring.
- Assist judges in making decisions to expedite the resolution process.

Research on the Law and Analysis of Judgements

- Legal precedents, Statutes and Past Judgments.
- Recognize patterns in decisions to assist judges and attorneys in projecting likely outcomes.
- Judges are already aided by platforms such as SUPACE (Supreme Court Portal for Assistance in Court's Efficiency), which provide summaries of statutes, facts, and prior rulings.

Improving Access to the Courts

- Chatbots and digital assistants driven by AI can assist citizens in comprehending fundamental legal rights and processes.
- The judiciary can become more inclusive by providing regional language support with Natural Language Processing (NLP).

Document Automation & Management

- Speeds up Legal review process, Drafting and Filing.
- Improves Record-keeping and reduces human errors.
- Old case files can be digitized and organized using AI tools, which will make them easier to access and search.

Reducing Human Bias

- If applied properly, it can lessen personal prejudice in court rulings.
- Supports Fairness & Transparency and provide data insights.

Predictive Justice

- AI can estimate outcomes based on past verdicts.
- Probabilities of petitions and appeals being successful

Accountability and Transparency

- Monitor and evaluate the performance of the judiciary.
- Aid in discovering systemic problems such as bottlenecks in the process or delays.
- Encourage openness in the way the courts operate.

AI integration in the Indian judiciary has enormous potential to improve the legal system's accessibility, efficiency, and transparency. AI can lessen the workload for courts and raise the standard of justice delivery by helping with the management of cases, legal analysis, and data-driven insights. Its implementation, however, needs to be done carefully to maintain human oversight, data protection, and ethical norms at the forefront. AI might prove to be a useful friend in bolstering India's rule of law with careful implementation and ongoing improvement.

Impact of Artificial Intelligence in Judicial system

AI technologies are being implemented in the judiciary to improve the efficacy, accuracy, and accessibility of multiple facets of legal processes. The judicial system is significantly affected by Artificial Intelligence (AI), which has the potential to transform the way legal procedures are conducted. While AI has the potential to increase productivity, decrease wait times, guarantee equity, and facilitate access to the legal system, it also presents ethical, privacy, and accountability issues.

Let us first talk about the positive aspects of Artificial Intelligence in the judicial system:

POSITIVE IMPACT:

- 1. Automatic Review of Documents:** AI can assist lawyers in swiftly processing a lot of documents. AI can greatly cut down on the amount of time spent on repetitive operations by streamlining the legal investigation, and contract evaluation processes.
- 2. Simplified Court Administration:** AI can help with case assignment, scheduling, and progress monitoring, which improves the distribution of resources and overall effectiveness.
- 3. Translation Services:** AI can translate court hearings and legal documents into a variety of languages, increasing access to justice for those who do not speak the court's language.
- 4. Virtual Assistants and Legal Aid:** Based on artificial intelligence computer-generated assistants, such voice-activated interfaces and chatbots, offer users individualised legal help, respond to their questions, and aid them with the legal process. These online Assistants make legal advice and resources more accessible, especially for those who lack access to legal knowledge.
- 5. Decision Assistance Systems:** By offering pertinent case summaries, precedents, and legal arguments, AI systems can help judges and legal experts. Although AI cannot take the place of human judgement, it can support and enhance decision-making and equity in court decisions.

NEGATIVE IMPACT:

- 1. Reinforcing Pre-existing Biases:** AI programs use past data to forecast outcomes or support judgement. AI has the potential to reinforce and even magnify biases if the data used to train it is biased, such as past decisions that exhibit racial, sexual, or socioeconomic bias. This is a major issue, particularly when it comes to risk evaluations (such as recidivism prediction) and criminal sentence.
- 2. The absence of Transparency:** Some AI algorithms are "black box" in nature, making it challenging to comprehend how choices are made and to recognise and correct biases.
- 3. Violation of Confidentiality:** AI-related data breaches have the potential to reveal private information, endangering people and eroding public confidence in the legal system.
- 4. Lead to unemployment:** Legal professionals who have historically performed positive legal activities, such as paralegals or clerks, may lose their jobs as a result of AI technologies' mechanisation of these tasks. AI has the potential to boost productivity and cut expenses, but it may also lead to joblessness and social upheaval, especially for people whose jobs require manual labour or regular legal work.
- 5. Destruction of Critical Thinking Skills:** If legal professionals rely too much on AI, they may lose their core writing and research abilities, which could impair their ability to function effectively in scenarios where AI tools are inappropriate or unavailable.

Cutting Edge Technology adopted by the Hon'ble Supreme Court of India:

A significant turning point was reached in 2017 when legal student Swapnil Tripathi encountered difficulties while interning at the Supreme Court. In order to allow interns to watch hearings without packing the courtrooms, he filed a Public Interest Litigation (PIL) to create live-streaming rooms on the court's grounds.

An important stride into the digital age was taken in September 2018 when the Hon'ble Supreme Court handed down its ruling in the matter of Swapnil Tripathi. A bench made up of Hon'ble. Chief Justice Dipak Misra, Hon'ble. Justice A.M. Khanwilkar, and Hon'ble. Justice Chandrachud decided that matters of national and constitutional significance ought to be aired live to the public. When it comes to incorporating technology advancements into the court, the e-committee has been essential. The E-committee addressed issues of secrecy and privacy for litigants and witnesses in 2021, outlining draft regulations for High Courts on the live broadcasting and

recording of court proceedings after consulting with the Hon'ble Supreme Court and High Courts. It underlined that in order to strengthen the idea of open justice, Technology should make it possible to access courts via virtual platforms as well as physical ones.

Up to August 5 2024, the Supreme Court used AI to interpret 17,142 rulings into 16 regional languages and 36,271 rulings into Hindi.

AI tools undertaken by the Hon'ble Supreme Court of India:

- **SUVAS (Supreme Court Vidhik Anuvad Software):** It is a translation tool powered by artificial intelligence that was created to support the Indian legal system. In keeping with the constitutional objective of expanding access to justice, SUVAS, which was created especially for translating legal documents, makes it possible to translate court orders, judgments, and legal writings from English into a variety of regional Indian languages. It was launched in November 2019 by Justice S.A. Bobde Chief Justice of India of that time.
- **SUPACE (Supreme Court Portal for Assistance in Court's Efficiency):** The Supreme Court of India created this artificial intelligence-based application to help judges with case analysis and legal research. SUPACE, which was introduced in 2021, aims to improve court efficiency by saving judges time and effort by facilitating their rapid access to pertinent data, case laws, and documents. This tool was also launched by Justice S.A. Bobde then Chief Justice of India.
- **E-COURTS:** The Government of India launched the e-Courts initiative as part of the Digital India program with the goal of using information and communication technology (ICT) to revolutionize the Indian judiciary. The primary objective is to improve the efficiency, transparency, accessibility, and paperless nature of the justice delivery system.
- **AI-Powered Decision Support System:** DSS is a computerized system that collects and evaluates data is called a decision support system. It creates thorough information reports by synthesizing it.

Several instances of artificial intelligence being used in the legal field³

- In order to enhance its corporate/M&A practice, the Singapore-based Wong Partnership also adopted AI technologies from London-based AI firm Luminance. The company use technology to highlight parts of M&A transaction documents that need human inspection and involvement as well as to perform due diligence on them.

³ Parth Jain, Artificial Intelligence for sustainable and effective justice delivery in India

- A robotchatbot named "FaXiaotao," powered by artificial intelligence, is being used by Wusong Technology in China to digitize the way courts operate. It provides customers with case analysis and assists them in finding attorneys.
- In order to create Nakhoda, an Artificial Intelligence (AI) software that uses natural language processing, the Singapore office of the law firm Linklaters has been collaborating with Eigen Technologies, a software company. This program allows computers to recognize and react to human language in order to read text contracts and documents, including NDAs.
- Yulchon, a South Korean law company, creates technology that gives its clients access to affordable compliance solutions, such as applications. Additionally, the business encourages its attorneys to come up with original solutions on their own.
- At the Beijing No. 1 Intermediate People's Court lawsuit center, a robot named Xiao Fa was placed into service. It can respond to inquiries orally, receive input on its screen via a touchscreen or keyboard, and print papers.
- By collaborating with Canadian AI aide Kira Systems, an Indian company called Cyril Amarchand Mangaldas is now using AI to analyze and review contracts.

What Differences Exist in the Views of Various High Courts Regarding the Use of ChatGPT in the Legal Procedure?⁴

Punjab & Haryana High Court

- In March 2023, Jaswinder Singh, who was charged with assault resulting in death, was denied bail by Punjab & Haryana High Court Judge Anoop Chitkara using ChatGPT.
- Justice Chitkara asked ChatGPT for advice on jurisprudence pertaining to bail in assault instances involving cruelty.
- The judges' cautious approach—possibly refusing bail or imposing excessive bail amounts—was underscored by ChatGPT's response.
- The court explained that ChatGPT's contribution was for a more general legal framework rather than a case-specific viewpoint.
- The High Court's utilization of AI for legal analysis to support judicial thinking is demonstrated in this case.

Delhi High Court

⁴ <https://www.drishtijudiciary.com/editorial/artificial-intelligence-ai-in-indian-judiciary>

- August 2023: In a trademark lawsuit, Delhi High Court Justice Pratibha M. Singh decided in favor of Christian Louboutin.
- Louboutin's legal team used comments generated by ChatGPT to show how the company is known for its "spike shoe style" with a "red sole," which is being imitated by Shutiq.
- However, Justice Pratibha M. Singh disapproved of ChatGPT's use to decide factual or legal matters in court, citing worries about possible errors, fictitious case law, and creative data produced by AI chatbots.
- This case highlights the value of human judgment over artificial intelligence-generated information in court rulings and demonstrates the Delhi High Court's conservative approach to integrating AI in judicial proceedings.

Challenges faced by the Judicial system while using Artificial Intelligence:

In the legal domain, artificial intelligence poses a number of hurdles, such as algorithmic bias, a lack of transparency, worries about data privacy, and difficulties establishing responsibility and liability. Furthermore, uncertainties and confusion result from existing legal frameworks' frequent inability to keep up with AI's quick progress. The use of AI in the legal field raises ethical questions as well, such as the possibility that it would eventually replace human judgment & the necessity of a well-rounded strategy that capitalizes on AI's effectiveness without compromising human knowledge.

Its application in courts faces a number of important obstacles. Below is a summary of the main challenges:

Absence of structured and high-quality data:

- Court records are frequently neither standardized nor digitalized.
- A large number of documents are written out by hand, scanned PDFs, or preserved differently in different states and courts.
- To be effective, AI requires data that is clean, organized, and annotated.

Discrimination and Bias in AI Models:

- If AI systems are educated on biased data, they may reproduce preexisting biases in conclusions.
- Possibility of prejudice on the basis of socioeconomic status, gender, caste, or religion.
- Fairness and impartiality in AI-assisted decision-making are difficult to guarantee.

Limitations of Technology and Infrastructure:

- In India, a large number of lower courts lack skilled personnel, reliable internet, and basic IT equipment.
- Inconsistent implementation results from uneven digitization across courts.

Absence of Ethical and Legal Frameworks:

- There are no precise rules or regulations governing the application of AI to court decisions.

Legal Professionals' Opposition:

- Lawyers and judges can be hesitant to use or trust AI techniques.
- Fear of AI displacing people or compromising the independence of the judiciary.
- Inadequate education and knowledge of the possible advantages of AI.

Issues with Data Security and Privacy:

- There are security hazards while handling private information and sensitive legal documents.
- Danger of private information being misused and data breaches.

Barriers related to diversity and language:

- India's courts are multilingual, and regional variations exist in legal terminology.
- It is difficult to train AI models in different languages and dialects.

Reliance on Human Supervision:

- AI can support human judgment, but it cannot take the place of it, particularly when it comes to complicated moral or constitutional matters.
- Effective human-AI interaction is still being worked out.

Resource and Cost Limitations:

- AI system development, deployment, and maintenance are costly.
- Large-scale AI deployment may not always be supported by government agendas and funding.

SUGGESTIONS:

Artificial intelligence integration into the legal system is a systemic and cultural change that requires careful consideration. It is not just a technology change. The following thorough suggestions are put forth to guarantee the moral, efficient, and inclusive application of AI in legal systems, particularly in the Indian context, in light of the research's findings and the analysis of international best practices:

Create a thorough legal and moral framework:

Establishing precise guidelines and legal frameworks that control the application of AI in the courts is one of the most pressing need. These ought to consist of:

- Rules for the explainability, accountability, and transparency of AI tools.
- Procedures to ensure fairness and address algorithmic bias.
- Legal protections for judges' independence and the natural justice principle.
- Clauses outlining accountability and culpability in situations when outputs produced by AI cause ethical or legal issues.

Maintain Judicial Discretion and Human Oversight:

AI need to be used as a tool to assist in decision-making rather than as a decision-making authority. Jurists legal professionals must evaluate and approve all AI-assisted results. Judicial discretion must be maintained, particularly when dealing with complicated moral issues, constitutional analysis, or rights adjudication.

This can be accomplished by:

- Putting "human-in-the-loop" systems into action.
- Educating judges to assess and challenge AI-generated results critically.
- Promoting committees or ethical review panels to keep an eye on the use of AI in legal systems.

Make investments in both physical and digital infrastructure:

Strong technology infrastructure must exist at all judicial levels, particularly in lower and rural courts, for Artificial Intelligence to be successfully applied at scale. This comprises:

- Fast internet access.
- Safe data management systems and cloud storage.
- Program for managing courts that is compatible with AI.

Additionally, to guarantee interoperability with AI systems and across jurisdictions, courts need to be outfitted with standardized data formats.

Put Training and Capacity Building First:

- Include courses on artificial intelligence and legal technology in judicial academies' curriculum.
- Provide judges and court employees with frequent seminars, workshops, and refresher training.
- Work together with academic institutions and technology companies to create multidisciplinary legal and artificial intelligence training programs.

In conclusion, even if AI has the potential to revolutionize judicial reform, its use needs to be thoughtful, inclusive, and morally sound. These suggestions highlight the necessity for a well-rounded strategy that preserves the fundamental values of justice, equity, and human oversight while utilizing technology to increase accessibility and efficiency. AI has the potential to be a potent ally in bolstering the judiciary and restoring public confidence in the legal system with careful planning, strong infrastructure, legislative protections, and ongoing assessment.

CONCLUSION:

AI is a tactical instrument to help modernize legal institutions, not a panacea. In order to preserve the values of justice, openness, and equity, its function in the judicial system must be carefully planned. AI presents India with a once-in-a-lifetime chance to revolutionize the legal system—as long as judicial training, infrastructure support, and ethical measures are in place.

Virtual legal assistants, document automation systems, legal research platforms, and predictive analytics are just a few examples of AI-powered solutions that have already shown promise in lowering human workload and enhancing uniformity in judicial operations. Projects like SUPACE and the E-Courts Project's digitalization of court documents demonstrate a great desire to embrace technological solutions to persistent problems in the Indian context. Furthermore, the ability of AI-driven systems to support judges, attorneys, and litigants will increase dramatically as India begins to digitize its enormous repositories of legal data.

Nevertheless, despite the significant advantages, the judiciary must deploy AI carefully and cautiously. The studied literature raises important issues including algorithmic bias, data privacy, absence of transparency, & the risk of impairing human judgment in intricate legal situations. Artificial intelligence (AI) runs the risk of reinforcing current inequities or making incomprehensible decisions without accountability in the absence of appropriate ethical protections, legal frameworks, and oversight systems.

In conclusion, artificial intelligence should be seen as a helpful tool that supports human decision-making rather than as a substitute for judges or attorneys. A hybrid approach is the way

of the future for AI in the court, where the use of AI technologies is guided by constitutional values, legal principles, and human discretion. AI has the potential to greatly advance the development of a quicker, more equitable, and more adaptable legal system that can better serve the requirements of a varied and expanding populace if it is used carefully and morally.