Revolutionizing the Bench: Integration of Technology & AI in Subordinate Courts

Tanvi Jindal[1], Sushant Uniyal[2], Shrestha Dayal[3]

[1,2,3]Student, Law College Dehradun

Abstract

The Indian Judiciary, particularly the subordinate courts, plays a crucial role in upholding justice and the rule of law. However, these courts face significant challenges, including case backlogs, resource constraints, and procedural inefficiencies. This research article explores the potential of technology and Artificial Intelligence (AI) to revolutionize the functioning of subordinate courts in India. The study presents a comprehensive analysis of the structure and judicial process of subordinate courts, highlighting the need for fair, efficient, and transparent proceedings. The article discusses the application of AI in subordinate courts, focusing on its potential and challenges. It emphasizes the importance of adequate judicial infrastructure, including physical, digital, and human resources, to enhance access to justice. The study also addresses the issue of judge-population ratio and the potential of AI to support human judges in handling straightforward cases and transactional work. However, the article acknowledges the limitations of AI and emphasizes its role as a supports system and not a replacement of human judges. The purpose of this research is to provide insights into how a technologically empowered judiciary can significantly enhance the delivery of justice in India, paving the way for a more effective and responsive justice delivery system.

Keywords: Artificial Intelligence (AI), Judiciary, Subordinate Courts

1. Introduction

The judiciary is a cornerstone of democratic societies, that ensures to give out justice and the follow up of the laws. In India, the subordinate courts, comprising district and lower courts, from the backbone of the judicial system, dealing with the bulk of civil and criminal cases. However, these courts face significant challenges, including case backlogs, resource constraints, and procedural inefficiencies, which impede the timely delivery of justice.

In recent years, the integration of technology and AI act as a catalyst for change across different sectors, including the legal. The advent of digital tools, case management systems, and AI-driven solutions presents unprecedented opportunities for the enhancement of the accessibility, efficiency, and transparent nature of the legal procedures in subordinate courts. This research article explores the potential of technology and AI to revolutionize the functioning of these courts, addressing the persistent issues and paving the way for a more effective and responsive justice delivery system.

By presenting a comprehensive analysis, this research aims to provide insights into how a technologically empowered judiciary can significantly enhance the delivery of justice in India.

2. Delivering Justice in subordinate courts

Justice in subordinate courts in India is delivered through a well- structured judicial process, which includes several types of courts and specific procedure: (Singh 2021)

2.1 Structure of Subordinate Courts:

- **District Courts**: These are the foremost courts of primary jurisdiction in both criminal as well as civil issues. Each district typically has one district court and one or more additional district courts.

- **Subordinate Judges and Magistrates**: The district courts are followed by the courts of subordinate judges (for civil matters) and magistrates (for criminal matters). These include: (Vats, P 2019)

  - Civil Courts- Civil judges handle various civil disputes.

  - Criminal Courts- Judicial Magistrates of First Class (JMFC) and Second Class (JMSC) handle criminal cases. Session courts deal with more severe criminal cases.

  - Family Courts- Specialised Courts dealing with family- related matters such as marriage, divorce, and child custody.

  - Small Causes Courts- Handle minor civil disputes, particularly those involving small financial claims

2.2 Judicial Process:

- **Filing a Case:** A legal proceeding begins with the filing of an accusation for civil matters or a complaint or an FIR (First Information report) in the criminal matters.

- **Pre-Trial Procedures:** This includes the scrutiny of documents, framing of charges, and issuing summons to the defendants and witnesses**.**

- **Trial:** Both parties present their arguments, evidences, and witnesses. In civil cases, thi involves cross-examination of witnesses, while in criminal cases, it includes the prosecution presenting its case followed by the defense.

- **Judgment:** The judge or magistrates delivers a verdict based on the evidence and arguments presented. This could be a decree/order in civil cases or a conviction/acquittal in criminal cases.

- **Appeals:** Parties dissatisfies with the verdict can appeal to a higher court.

When it comes to delivering justice in subordinate courts, it is important to ensure that the process is fair, efficient, and transparent. For this, the courts need to ensure that the court proceedings are conducted in a timely manner. Any sort of delay in the court proceeding can lead to frustration and mistrust in the justice system. As the phrase "Justice delayed is Justice denied" need to be taken care of. Also, there is need of several kind of resources for delivering justice in subordinate courts so that they can effectively manage their caseloads. This includes providing adequate staffing, technology, and infrastructure. The encouragement of judicial independence is one such important concept so that the judges are not unduly influenced by external factors, such as political pressure or personal biases. (Jagadeesh, C.T 2017)

. Application of AI in Subordinate Courts

Judicial Infrastructure:

The judicial infrastructure consists of three main components: 1st Physical infrastructure like courtrooms, lawyer's chambers, 2nd Digital infrastructure which includes video conferencing tools and internet access and 3rd Human resources like judges and their support staff. (SAHOO, N., & KHAN, J. A. 2023)

The lack of infrastructure plays a role in delays in judicial system and becomes relevant for enhancing access to justice. Vidhi's report "Building Better Courts Surveying the Infrastructure of India's District Courts" highlights appalling statistics with regards to navigation tools, unhygienic washrooms, lack of facilities for persons with disabilities and inadequate security in courtrooms.(Sekhar, R., Chandrashekaran, S., & Sanyal, D.2019)

In the study titled "Subordinate Judiciary-Access to Justice 2016" the apex court of India asserts that the main reason for high level of pendency is capacity limitations, the study claims that one important factor is that not every subordinate court has profited from computerization or modernization leaving the subordinate courts functioning with deficiency courtrooms and judicial officers. Consequently the backlog of cases in lower courts has been increasing. As a result justice is served in an ineffective and delayed manner that is not beneficial for any society. (Siani J.A. 2024). AI can help in incress access to justice by offering legal support to those unable to afford a lawyer. Chatbots, virtual reality, and AI driven online platform can afford legal information guidance, and even elementary legal advice. Having increased availability of legal resources can assist in closing the justice divide and empower individual to navigate through legal procedures.

Judges strength:

"As per the target recommended by Law Commission's 1987 report recommending 50 judges per million populations, presently the judge-population ratio in the country works out to be approximately 21 judges per million populations" In recent years AI has been widely used technology.
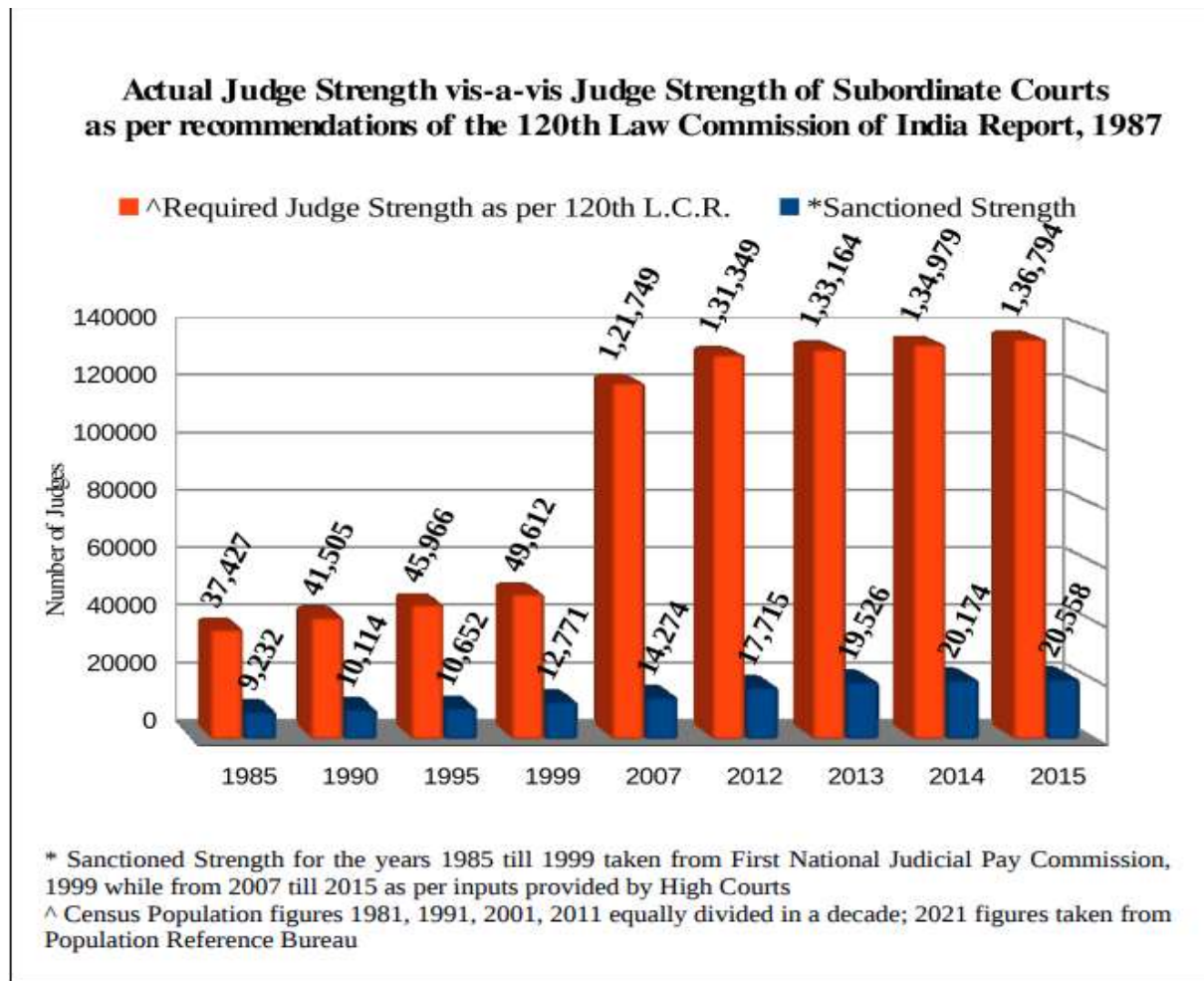
Actual Judge Strength vis-a-vis Judge Strength of Subordinate Courts as per recommendations of the 120th Law Commission of India Report, 1987

■ ^Required Judge Strength as per 120th L.C.R. ■ *Sanctioned Strength

* Sanctioned Strength for the years 1985 till 1999 taken from First National Judicial Pay Commission, 1999 while from 2007 till 2015 as per inputs provided by High Courts
^ Census Population figures 1981, 1991, 2001, 2011 equally divided in a decade; 2021 figures taken from Population Reference Bureau

Chart 4: Actual Judge Strength vis-a-vis Judge Strength of Subordinate Courts as per recommendations of the 120th Law Commission of India Report, 1987

(Source: Subordinate Courts of India: A Report on Access to Justice 2016)

In the justice system, judicial artificial intelligence can be more effective than human judges in terms of objectivity and intelligence. However, AI is not without limitations. It is more of a machine intelligence based on big data and algorithm than organic intelligence. Judicial AI cannot fully replace human judges because of different structures of knowledge, and application scenarios, and difference in the potential abilities between humans and AI judges. It is crucial to emphasize that judicial AI serves as a support system to the human judges. First of all, it should make the most of judicial AI in handling well established cases and other transactional work. Secondly, there is a need to actively transform the roles and responsibilities of the judges in order to make them more professional, warm and rational. (Xu, Z. 2021). The Supreme Court of India has introduced a portal; Supreme Court Portal for Assistance in Courts Efficiency. It collects relevant facts and laws and makes them available to a judge. A result can be tailored to a specific needs and the manner in which the judge believes.

Language:
Delay in translation of documents from regional language to English and vice-versa is also a reason for

delay in adjudication in many cases like example M Siddiq (D) Thr Lrs v. Mahant Suresh Das & Ors case.

Supreme Court Vidhik Anuvaad Software (SUVAS) developed with assistance and technical support of the Ministry of Electronics and Information Technology, is trained by AI to translate English judgments, orders and other reports into ten native languages and vice-versa. SUVAS can be used to improve ICJS's sustainability and make it possible to integrate data from police stations and prisons across linguistic boundaries. Many high courts are using Google AI-based translator to translate documents from regional languages to English and vice-versa. (Supreme Court of India. 2023)

Proximity of Courts:

The COVID 19 had a profound impact on the operation of the Indian judicial system that interrupted the routine process of adjudication. While the Supreme Courts and High Courts, the top judicial authorities in India, adapted quickly to the new normal, it was significantly different for the districts and taluka-level courts. About two decades back, the merger of technology with the legal system was initiated with the 'E-court mission mode project' in 2007. Thus, virtual court an idea is not completely foreign to the Indian legal system.

Video- conferencing is a scientific breakthrough, it is a technology that enables individuals to see, hear and talk someone at a distant location. It would allow witnesses to give evidences without being physically present in the courtroom (Kaur, J. 2009) because physically producing witness or accused in the court costs enormous amount to the government.

Developed countries like UK, China, Singapore, USA and Hong Kong, and other countries from the European Union have been relying on Online Dispute Resolution (ODR) for a significant period of time. (Saxena, P. 2022)
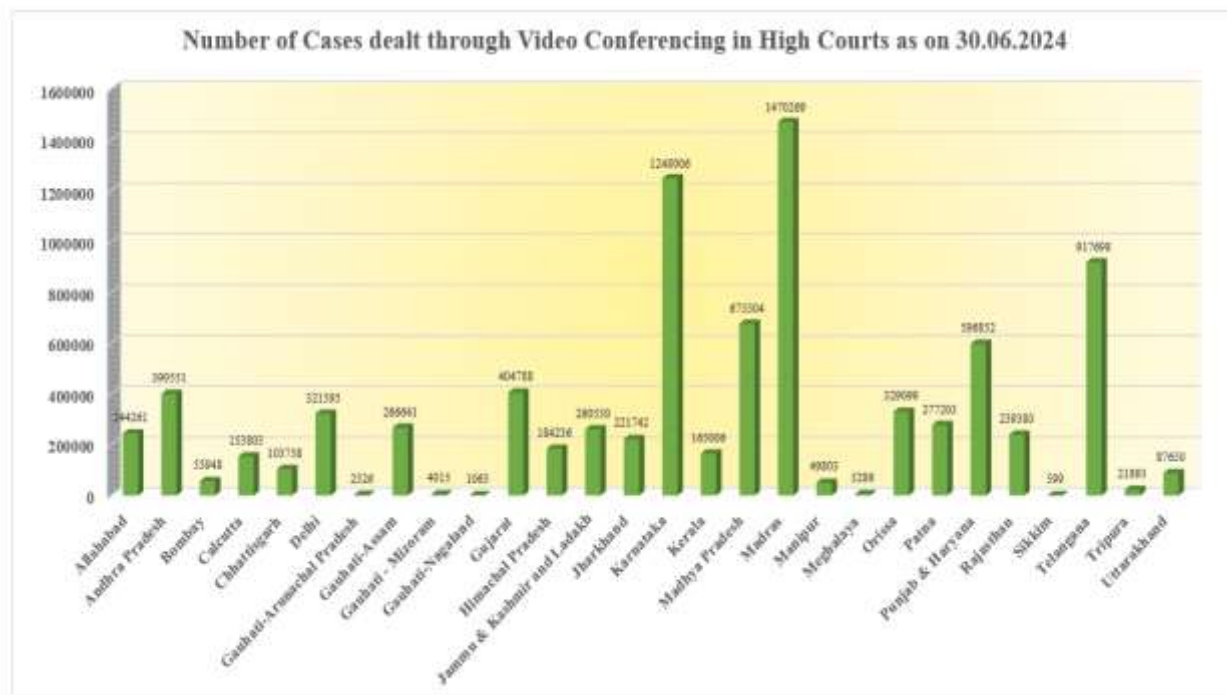
(Source: STATE OF THE JUDICIARY A Report on Infrastructure, Budgeting, Human Resources, and ICT)
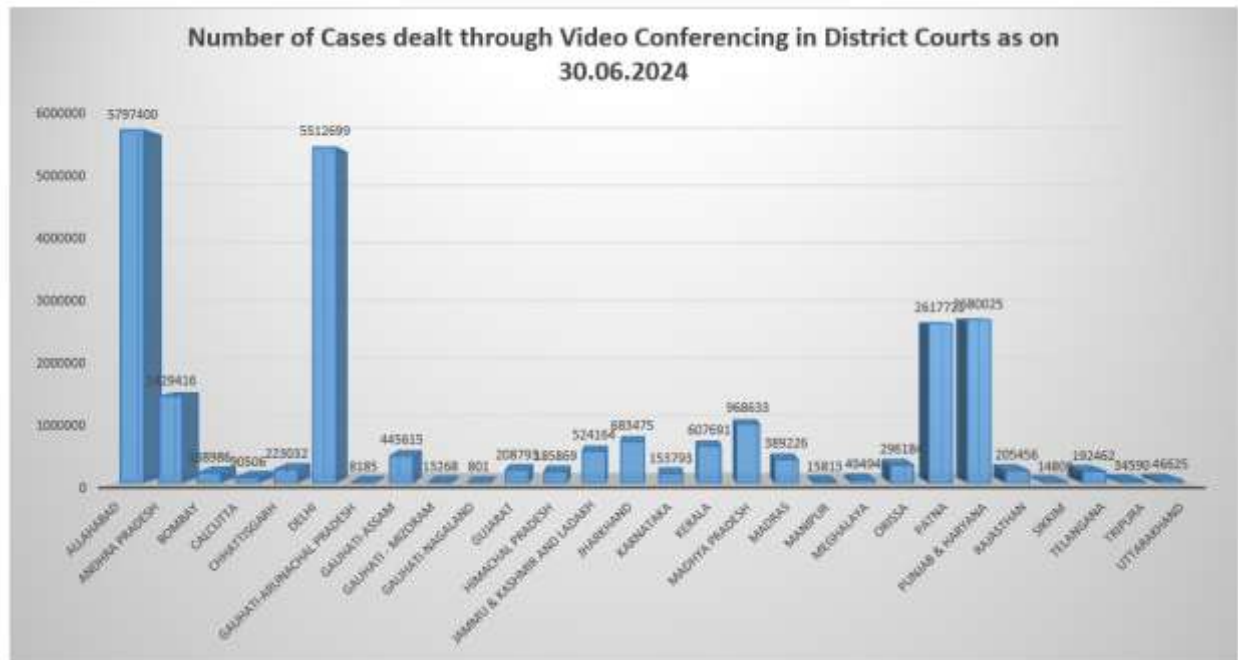
(Source: STATE OF THE JUDICIARY A Report on Infrastructure, Budgeting, Human Resources, and ICT)
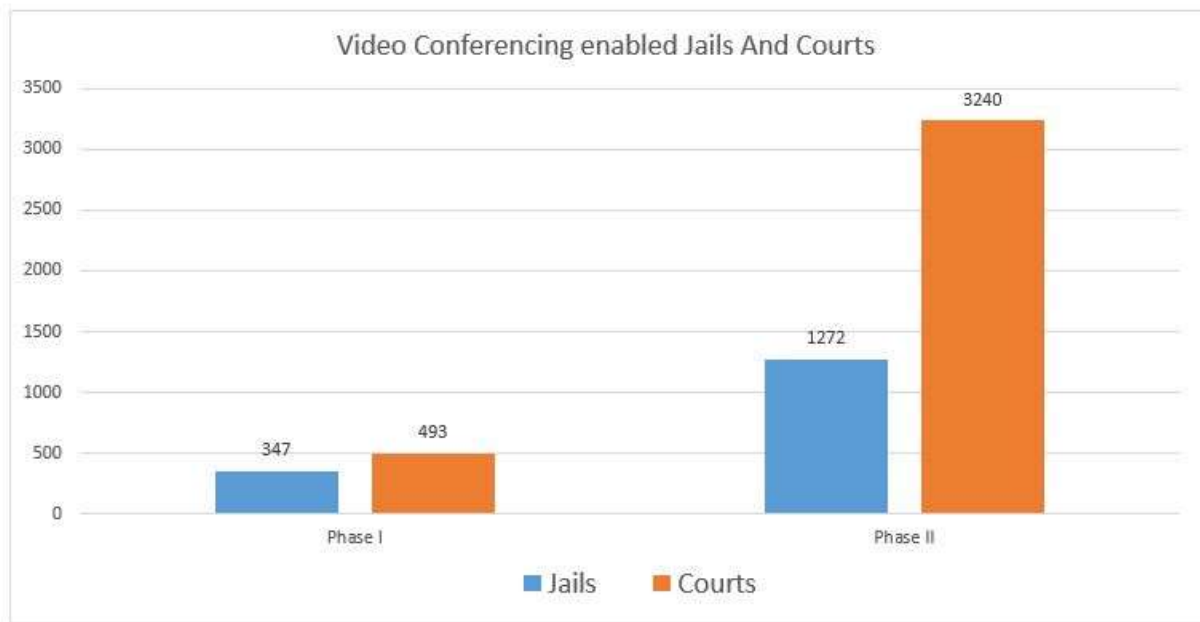
(Source: STATE OF THE JUDICIARY A Report on Infrastructure, Budgeting, Human Resources, and ICT)

The Uttarakhand high court have launched mobile e-court vans less with Wi-Fi and computers for video conferencing in order to quickly resolve cases in the remote hilly areas of the state which do not have easy access to courts. High court of Telangana also implemented a comparable initiative.

5. AI posing Challenges & Limitations

Loss of decision making ability-

As AI reliance and usage grow, the human brain's ability to think will naturally constrained. As a consequence, there is a quick reduction in a cognitive ability of an individual. This diminishes human's intellectual abilities and makes them completely artificial. Furthermore our extensive use of technology has resulted in us adopting algorithmic thinking without comprehension. (Nasir, S. 2018)

Data Privacy and cyber security-

One of the limitations of implementing e-court is concern regarding data security and cyber security. Ensuring the safe keeping of computer systems, networks and devices from unauthorized access, theft and damage is a key aspect of cyber security. Maintaining robust cyber security for e-courts for handling sensitive data like personal information, financial records, and legal documents is crucial. Safeguarding this data requires robust cyber security protocol within e- courtrooms. (Waseem; Sharma, Anupam; Kumar, Akhil. 2023). AI typically depends on the extensive data to gain knowledge and make predictions. This kind of data could contain confidential details. AI algorithm that requires this type of data may create problem for organization in adhering data protection laws.

The recently enacted Digital Personal Data Protection Act, 2023 (DPDPA) acknowledges individuals' rights in safeguarding personal data and poses compliance obstacles for both domestic and international AI applications.

Bias in Artificial Intelligence-

Biases present in an AI system during its training may influence its final result. AI results can merely mirror present social norms, inequalities from the past based on race, caste, gender and belief system producing outcomes that do not reflects true merit. (Lakshmi Priya Gorlamudiveti, & Sagee Geetha Sethu. 2023)

Accountability on Licensing-

Unlike qualified attorneys, AI is no within the ambit to oblige professional code of conduct and ethical standards as they do not require a license in order to practice law. If an AI system produces false and inaccurate legal advice, who will be held liable? the user or the creator of that AI system. Even though judges have final say over decisions, there are problems with the indulgence of AI in the judicial system. Automated bias often leads to an excessive dependence on technology based recommendation. Siani J.A. (2024)

Recently a New York based attorney filed a brief with the court that contained six case citations that he had found using ChatGPT for legal research. However, the opposing counsel failed to find those cases and attorney had to accept that he did not independently verify their legitimacy. The judge, thus imposed sanctions on the concerned lawyers whereas their law firm was fined to pay $5,000 in total. Therefore using generative AI for legal research should be done with caution. (Merken, S. 2023, June 26)

Loss of jobs-

Services make up more than half of Indie's GDP and serves as a significant source for jobs for Indie's skilled workforce. India's legal profession is one of the largest globally, with more than 1.4 million registered advocates across country. In 2010 the Indian legal market was valued at around USD 1.25 billion.(Ganguli, A. K. 2014, July 30)

This article shows the results regarding service jobs and how they are being replaced by AI. AI has the potential to create new collaboration between humans and AI in future in service delivery, while also

displacing human jobs in the lower three intelligence levels.(Ullal, M. S., Nayak, P. M., Dais, R. T., Spulbar, C., & Birau, R. 2022)

6. Case Studies

In the case of Jaswinder Singh v. State of Punjab, the Punjab & Haryana High Court rejected a bail petition after the prosecution alleged that the petitioner had been involved in a brutal fatal assault. The presiding judge requested input from ChatGPT in order to get a broader perspective on how the bail should be granted when such cruelty is involved. However, it is necessary to clarify that the mention of ChatGPT does not express an opinion on the case's merits, and the trial court will not take these comments into account. The reference was solely intended to provide a broader understanding of bail jurisprudence when cruelty is a factor. (Aditi Prabhu & Aditi Prabhu 2023, August 23)

7. Impact on Judicial Processes

- **Improvements in Access to Justice:** AI can assist in reducing the number of cases oending in the Indian courts. The technology's ability to quickly identify critical information from large volumes of legal documents enables the judges as well as solicitors to easily analyze, evaluate, and interpret the data. Consequently, the disputes can be settled more quickly, reducing the time required to resolve cases and saving the court money and lowering the cost of litigation for the public. Additionally, AI can help make more efficient decisions by analyzing trends that human specialists may overlook.
- **Efficiency Gains:** AI-powered systems can quickly and accurately analyze massive volumes of data, saving time and effort on legal tasks. This can lead to a more efficient legal system with better access for everyone.
- **Savings:** Automating routine legal tasks like document examination and analysis can lower litigation expenses. This can result in significant cost savings for both litigants and the court system.

8. Suggestions

Combination of AI and judges: combination of AI and human can be superior to AI performing alone. Just how morden judges overrule mistakes and outdated practices future judges will likely override AI in legal matters based on the previous decisions or customary law if present. At the time when measurement is straightforward and prediction is precise rules will prevail. When practice limitation arise like over fitting or Simpson's paradox. Measurement becomes challenging due to omitted variable, AI should be trusted less and law should give way to standards. (Levmore, S., & Fagan, F. 2019)

Effective legislation: the critical problem in the field of AI is lack of rules for regulating the creation, implementation and utilization of it in legal system. Also developing ethical guidelines for the utilization is very important in the legal system. These guidelines should encompass principles like fairness, transparency, accountability, and non-discrimination. Lawyers, judges, AI experts and other stakeholders should collaborate in order to frame the good piece of legislature for this field. (Said, G., Azamat, K., Ravshan, S., & Bokhadir, A. 2023)

Educating lawyers and judges regarding AI. Despite the great success of AI in the legal industry, its deployment rate is disappointing especially in India. 100 %of lawyers in USA and 95 %of lawyers in UK adopted AI but only 4% of Indian lawyers use AI capabilities in their operations. Even though the 95% of Indian courts been digitalized. There has been a rise in legal-tech start-ups and companies in

recent years, however, Indian law practitioners are hesitant to embrace this technology-focused way of working.(Yeshey Rabzyor Yolmo. 2019, December 27)

9. Conclusion

Electronic justice has advanced to a new level as a result of the current state of information technology. Digital advancement is replacing the traditional process of document flow in paper. The judicial implementation of AI is majorly dependent on the level of progress and advancement of the information technology. At present, AI development cannot be compared to the cognitive functions of the human brain and neural complexities. However, AI excels in processing large amount of electronic information and documents. For instance, AI can be utilized for certain routine task of the court records department and the judge, thereby allowing more time for detailed case review and analysis. This shift can lead to operational savings and faster dispute resolution b accelerating analysis speed and efficiency.

In conclusion, technology of forensic AI should be open, reliable, and transparent for all individuals, businesses, and society as a whole for it to be effectively and widely acceptable. Such qualities will help in building public trust and confidence in the judicial system and modern information technologies, including AI and cloud computing. The rise of digital technologies in present digital and big data driven society the scope for incorporating AI into the judicial system is also increasing.

It is crucial to realize that AI is not a substitute for legal professional work, rather it should be a complimentary addition to it. AI can efficiently simplify repetitive and tedious tasks, but it cannot replace the nuanced judgment, strategic thinking, and complex legal expertise that lawyers contribute.

Ultimately, lawyers remain accountable for their work and must safeguard the interest of their client. Although, AI can help in boosting the efficiency and productivity, a lawyer's expertise and experience cannot be replaced by it. The sophisticated judgment and strategic insight that lawyers bring to legal matters are irreplaceable.

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