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# INDIA'S COURTS AND ARTIFICIAL INTELLIGENCE: A FUTURE OUTLOOK

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**Abstract** In recent years, the legal system has used artificial intelligence technology extensively. Artificial intelligence for judicial purposes is more efficient, knowledgeable, and impartial than human judges. It has its limitations, largely based on big data, algorithms, and computing power rather than organic intelligence. Judiciary artificial intelligence cannot completely replace human judges because of differences in conceptual framework, application scenario, and ability and potential. Unambiguously stating that judicial artificial intelligence is never a replacement for human judges is crucial. The study aims to investigate the legal issues and the various ways that AI impacts the legal system. The research methodology is qualitative, inductive and descriptive.

**Keywords**
artificial intelligence, machine learning, judiciary, legal justice system, India

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## 1 Introduction

Large-scale enterprises now have new options to increase productivity, thanks to artificial intelligence (hereinafter: AI) and machine learning (hereinafter: ML), adaptive computer programmes that can carry out tasks usually done by humans (Russell, S. J., 2010). Computers used to be rigorously defined task-performers, but recent improvements in data collecting, systems of aggregation, algorithms, and processing power have made them into machines that can learn on their own and adapt to new inputs without having to be programmed (Norvig 2002). Every sector and industry is given the opportunity to use a new innovation whenever it enters the world in order to advance their tasks. In the fields of commerce, medicine, sports, and large-scale systems more generally, these developments have already produced palpable benefits (Brynjolfsson and Mcafee, 2017). Even Uses include prognostication, diagnosis, treatment optimization, and disease prediction (CAR 2019). Numerous prospects exist for using AI platforms to enhance justice systems. To find an unusual activity, look into suspected criminal activity, and enhance the legal system, a lot of data from surveillance systems, digital payment platforms, newly computerised governmental procedures, and even social media platforms can be evaluated. Artificial intelligence, or AI, is on the verge of fundamentally altering the legal profession. It will assist law firms in managing their operations by expanding and reducing many of the tasks that previously required human labour, freeing up time and resources that can still be applied to more advantageous endeavours (Bang Bit 2019). AI is already being utilised in different nations in order to make it easier to create policies that will promote the growth of a good society (Cath, *et al.,* 2018). However, need to concentrate on how AI systems may enhance the accuracy of the data as well as the actual legal procedures. The AI-based system we're referring to here is a computer programme that was taught all the legal principles (Rao and Gore, 2022). AI systems are not used to take the role of human decision-makers. Instead, they aid in enhancing human productivity and decision-making ability. Fortunately, it is clear that AI should support judges rather than take their place. The judicial system does not appear to have been significantly affected by this aspect of technology. No matter the complexity of a case, judges must first consider a number of legal requirements and constitutional issues before rendering a decision. There should be no room for chance factors in the AI implementation of a set of rules for rendering a decision in a particular case (Rao and Gore, 2022). Artificial intelligence, or AI, is on the verge of fundamentally altering the legal profession. It will assist law firms in managing their operations by expanding and reducing many of the tasks that

previously required human labour, freeing up time and resources that can still be applied to more advantageous endeavours (Dhyani, *et al.*, 2019). These techniques can also detect both intentional and unintentional bias. The law essentially rests on two crucial tenets: predictability and precedent. Artificial intelligence can significantly aid in the alignment of these processes and provide the legal industry with high-quality analytical data as well as help it in a variety of other ways, especially by cutting down on the time spent on tedious tasks like reviewing and managing legal documents (Marciano, 2018). AI frees up attorneys' time so they can focus on more important tasks like counselling clients, getting ready for court, and closing deals. Technology has long had an impact on the legal industry, as evidenced by the development of the Internet, emails, and online legal databases (Nishith Desai Associates, 2018). AI technologies have a huge potential to enhance India's judicial procedures. India has millions of pending cases and few judges for them. Such pending cases have a domino effect that harms the judiciary's effectiveness and, in turn, restricts the public's access to justice (Drishti IAS, 2022). It was designed with the intention of modernising the Indian judiciary by empowering the courts with ICT (Information and Communication Technology) (Drishti IAS, 2022). We contend that using machine learning methods in conjunction with newly available legal data provides a way to identify biases in judicial behaviour and propose real-time adjustments for these behaviours, simplifying the system and decreasing backlog. Such techniques can also spot bias and discrimination even when they are not obvious to the court's participants themselves, enhancing the judiciary's authority. Data accessibility enables new types of academic research on the efficiency and efficacy of the legal system itself, including macro-level studies carried out as "far readings" of the system as opposed to micro-level "near readings" as is typically done in legal studies (Bhupatiraju *et al.* 2020). However, integrating AI technologies into a court system is not a foolproof fix. Because of certain reasons, the use of ML and AI cannot replace human judgement. Instead, we believe that systems ought to be utilised within the system to support and improve human decision-making. We believe that when used carefully and morally, AI systems have significant benefits and encourage discussion of issues that are crucial to the administration of justice.

### 1.1 Objectives

It was designed with the intention of transforming the Indian judicial system through the use of ICT (Information and Communication Technology) in courts as part of the pan-India project, which is overseen and supported by the Ministry of Law and

Justice, Department of Justice, for District Courts all over the nation (Drishti IAS, 2022). The study is aimed:

- To deliver services that are efficient and time-bound for citizens.
- The creation, setup, and application of decision support systems in courts.
- To computerise the procedures for giving its stakeholders information accessibility and transparency.
- To increase judicial productivity on both a qualitative and quantitative level in order to make the delivery of justice more accessible, affordable, efficient from a financial standpoint, predictable, trustworthy, and open.

## 2 Artificial Intelligence

Artificial intelligence, or AI, is a field of science as well as technology that focuses on developing machine intelligence, particularly insightful computer systems. In its simplest form, artificial intelligence manages to combine computer science and sizable datasets to aid in problem-solving. It also encompasses the deep learning and machine learning subfields of artificial intelligence, which are frequently combined. The use of AI in society has already resulted in a wide range of applications, including fingerprint scanners (including facial) identification, object classification, success and threat forecasting, computational decision-making process or support, automatic interpretation, recommendation engines, and many more. Law enforcement, justice, personnel management, finance, public transit, medical services, and government infrastructure are just a few examples of industries that have all benefited from these applications (Muller, 2020). Although "artificial intelligence" is more common in many areas of our lives, there is no consensus on what it exactly is. Instead, it acts as a general term for a variety of computational techniques and related practices meant to increase the ability of machines to perform specific tasks requiring intelligence, such as pattern recognition, computer vision, and language processing. With such a vague definition and the quick advancement of technology, it is not surprising that artificial intelligence evolves over time. The "AI effect" or the "odd paradox" describes this situation in which once-ground-breaking innovations become commonplace and routine and lose their status as AI, while newer technologies with more impressive capabilities are given the AI designation (Raso, *et al*., 2018). AI is defined as a human-created agent that makes decisions and takes a course of action according to its perceptions in the most popular rationalist

definition (Russell, 2010). A computer passes the Turing test once it accomplishes a mission which would otherwise involve human (conversational) intellectual ability, which is the most well-known illustration of a definition that is human-centric. Almost every aspect of our lives is being revolutionised by AI, which has generated a lot of hype. Computers are programmed with artificial intelligence to simulate human intelligence, to put it simply. The software is programmed using vector graphs for mathematical operations. Known as machine learning, these algorithms allow computers to educate themselves through data and experiences (Chandra, *et al.,* 2020).

### 2.1 Weak Artificial Intelligence

The term "weak AI" or "narrow AI" refers to artificial intelligence that has limited capabilities. It describes the use of complex algorithms to carry out particular justification or challenging tasks that don't call for the entirety of an individual's cognitive abilities. Voice-based freelancers the same as Siri and Alexa might be viewed as weak AI programmes because they frequently have a pre-programmed response and only carry out a limited set of pre-defined tasks. Weak AI merely proposes that machines can model intelligent behaviour and use it to tackle difficult issues and complete difficult tasks. Weak AI is less excited by the results of AI (Khillar, 2020). However, just because a machine is capable of intelligent behaviour does not mean that it has the same level of intelligence as people. Weak AI is unquestionably the application of AI that has been most successful so far. It covers two out of the four categories or classifications of artificial intelligence, namely reactive machines and limited memory machines. Reactive machines, which lack memory storage but can respond to urgent needs and tasks, are the most fundamental form of artificial intelligence and the ability to learn from previous experiences. The next stage in AI's development is limited memory, which enables machines to store knowledge and use it to learn and train for upcoming tasks (Glover, 2022). Examples: Spotify shuffle, Chatbots, Apple autocorrect, Google Maps, and Smart assistants like Siri, Alexa and Cortana.

### 2.2 Strong Artificial Intelligence

Strong AI is a type of theoretical AI that backs the notion that machines might someday develop human consciousness comparable to humans. It refers to devices or software with a mind of their own that are capable of independent thought and

complex task completion. It has sophisticated algorithms that direct the system's behaviour under different conditions, and machines with powerful AI are able to make independent decisions without human input. Like humans, powerful AI-powered machines are able to handle challenging tasks on their own. It merely asserts that a computer with the appropriate organisational structure has a mind with similar perception, thought, and intention as a human mind (Khillar, 2020). The more closely an AI system mimics human capabilities—including intelligence, emotion, and a wide range of knowledge—the more capable it is regarded as being. Strong artificial intelligence is able to generalise information and apply it to different tasks, plan ahead based on available information, and adjust to changing environments (Glover, 2022). Examples: "WALL-E," "Her," "The Terminator," "I-Robot," and others.

## 3 Machine Learning

The goal is to draw knowledge from the data. An automated computer system can forecast future events or decide certain things by using historical data without the need to be clearly and unambiguously programmed. Large amounts of constructed and semi-structured data are required for a machine-learning algorithm to accurately produce results or form hypotheses based on that data (Next IAS, 2022). Machine learning is one of the most innovative scientific fields in the current modern age and a technique for achieving artificial intelligence. Learning in both humans and machines is based on the computational study of algorithms based on automated learning approaches. It is a branch of cognitive science and artificial intelligence that is built on learning algorithms that are fundamentally in line with our understanding of the structure of the human brain. Simply put, machine learning enables computers to learn and think more like humans do without explicit programming (Khillar, 2019). Machine learning is a branch of science that allows computers to acquire knowledge without explicit programming. Machine learning has been among the most incredibly interesting technologies ever created. As the title suggests, the computer's capacity for learning is what gives it more human characteristics. Machine learning is actively used in a lot more fields today than one might imagine. Additionally, machine learning is used for a wide range of tasks, including automated tasks, fraud detection, predictive maintenance, portfolio optimization, and more (Mohit Gupta, 2023). Machine learning seems to be significant because it allows computers to improve their performance on specific tasks by learning from data without even being explicitly programmed. Machine learning is particularly helpful

for tasks involving large amounts of data, complex decision-making, and dynamic environments because of its capacity to learn from data and adapt to new circumstances (Mohit Gupta, 2023).

## 4 Artificial Intelligence & Allied Fields

Concern over the effects of our increasing reliance on artificial intelligence (AI) is growing in democracies (Donahoe and Metzger, 2019). As a disruptive technology, AI has evolved to have an impression on a variety of human rights-related problems, from discrimination to supply chain due diligence (Kriebitz nad Lütge, 2020). Al is more prevalent in everyday life, reflecting a rising propensity to consult algorithms for guidance or to delegate decision-making entirely. The capacity to anticipate the future and complete challenging tasks is referred to as intelligence. Smartphones, tablets, laptops, drones, self-driving cars, and robots are examples of machines that have this capability. These machines could perform a variety of functions, including policing, warfare, and companionship (including sexual companionship) in the home (Risse, 2019). It is now possible to use machines that are powered by artificial intelligence in a variety of industries, including healthcare, automotive, defence, marketing, and education. Medical diagnosis, health record management, treatment planning, medication management, and drug development are all made easier by AI. Additionally, it is helping surgeons perform precise operations (Britt, 2018). The most obvious application of AI in the automotive industry is driverless cars. Artificial intelligence is used in warfare to analyse the battlefield, make tactical choices, and create intelligent, autonomous unmanned weapon systems (Morgan, *et al.,* 2020). With the development of chatbots to answer customer questions, voice and image recognition technologies for quicker search results, and virtual assistants that use data about customers to make recommendations for products that are right for them, artificial intelligence has also been developing a reputation for itself within the field of marketing (Faggella, 2017). Another area where AI has had an impact is education. It is now standard procedure to use machines to evaluate and verify answers to questions that require multiple choices as software developers take a further step and develop software that could also evaluate the subjective ends up created by a student (Lynch, 2018). According to Pearson, students may soon have a lifetime AI acquaintance who will monitor their progress from the time they enter school until they graduate, enabling them to identify their strengths and improve their weaknesses (Luckin, *et al.,* 2016). It is crucial to note that "intelligence" is a concept that is linked to the capacity for making predictions about the future and

providing solutions to challenging problems. The operation of drones, laptops, robots, tablets, smartphones, and even self-driving cars is significantly influenced by AI technology. Numerous applications find these devices to be beneficial. Numerous household support activities for military operations may be among them (Chatterjee and NS, 2022). Instead, certain social actors are using AI to make decisions automatically in a particular field of endeavour. When viewed against the backdrop of societal institutions with their pre-existing implications restricting human rights, it is being done by those actors in order to achieve outcomes that are deemed desirable (Gosine, 2011). Modern life is becoming more and more dominated by artificial intelligence and machine learning, which are also being incorporated into the healthcare industry. Radiology studies are big data sets that typically condense megabytes of image data into a brief text-based data set that highlights clinically important information (Canadian Association of Radiologists Artificial Intelligence Working Group, 2019).

## 5 Artificial Intelligence & Judiciary

A set of methods and tools known as artificial intelligence (AI) were created to enable computer systems to carry out tasks that call for rational human capacity (Baˇci´c, 2016; Mikalef, *et al*., 2021). A subfield of computer science called artificial intelligence develops artificially intelligent computer systems. Its two constituent words, "Artificial" and "intelligence," mean "a thinking ability created by humans. One technique that stands out and has been useful in judicial systems is natural language processing (NLP) (Xiao, *et al.,* 2021). In order to carry out a variety of tasks, NLP aims to "accomplish language processing that really is similar to human" (Liddy, 2001). It employs such algorithms, which don't require pre-programming and can work on their own intelligence. It makes use of deep learning computational models and socialisation learning algorithms as examples of machine learning algorithms (Next IAS, 2022). The use of technology is changing many facets of people's lives. In the legal profession, disruptive technology is also fostering improved culpability and reducing the length of litigation. Since the COVID-19 outbreak, India has also developed into a country with virtual courts that provide exceptional services (Hussain, 2022).

### 5.1 Need for Technology in Judiciary

The legislative, executive, and judicial branches of the Indian government have expressed concern over the steadily rising number of cases that are pending in Indian courts. Various actions are being taken to address this issue, including pushing for Alternative Dispute Resolution mechanisms and repealing outdated laws, but using the recently discovered field of Artificial Intelligence to address this dilemma is still an unexplored territory. With a populace of higher than 135 crores (1.35 billion), India is the leading democracy across the world and struggles with a lack of resources in almost every industry, including the judiciary. A civil as well as criminal trial can take ages to be decided due to the issue of a judge shortage and the persistent increase in the numeral of cases filed, in contrast to developed nations where trials can be concluded in a matter of days. The end result is justice being delivered slowly and ineffectively, which is not very beneficial for any society (Jain, 2018). A statistical data analysis approach may be useful for comprehending historical data on the verdict decisions by the categories of cases filed in India. Repetition of this type of analysis is possible for courts of law that base their decisions on judgements, such as session's courts and lower courts (Prison Statistics India, 2019). A growing number of cases involving bail are being handled exclusively by sessions and lower courts, not by higher courts. Naturally, AI may also be helpful to higher courts (Rao and Gore, 2022). The District, Taluka, and high courts are currently handling the majority of cases. Such awaiting cases have a domino consequence that harms the judiciary's efficiency and, in turn, restricts the public's access to justice (Drishti IAS, 2022).

### 5.2 Technology Use in the Judiciary

AI is advocated for use in courts to assist judges in expediting various legal processes in order to address the issue of burgeoning pendency due to how well it has worked out in these fields. AI is already proving to be a time and money saver for legal professionals like law firms and attorneys. For instance, to facilitate quick drafting and note-taking, automation speech processing software is now used by lawyers like Dragon. Similarly to this, AI-powered machines are assisting lawyers in more efficiently and quickly reviewing documents, particularly contracts, than it would normally take for a human (Mlot, 2018). The software for this purpose is called Contract Intelligence, or COIN. Not only this but in a contemporary contest concerning lawyers and an AI-powered mechanism to forecast case outcomes, the

AI-powered processor was talented to do so with 86.6% accuracy equated to lawyers' 66.3% accuracy. This demonstrates how AI will be used in the future by attorneys to advise clients on the best course of action with regard to the law. Another area where lawyers are using AI machines is in legal research (Marr, 2018).

### 5.3 Several Instances of Artificial Intelligence in the Legal Sector

- Using an AI-enabled robot chatbot named "FaXiaotao," Wusong Technology is being used in China to digitise the way courts operate by providing users with case analyses and assisting them in finding attorneys.
- At the litigation centre of Beijing No. 1 Intermediate People's Court, a robot by the name of Xiao Fa was put into operation. This machine can print documents and can also verbally respond to questions and take questions via a touchscreen or keyboard on its screen.
- To support its corporate/M&A practice, the Singapore-based Wong Partnership adopted AI technology from the London-based AI company Luminance. The business uses technology to highlight portions of M&A transaction documents that needed human review and intervention.
- Using natural language processing, Linklaters' Singapore office has been collaborating with software solutions Eigen Technologies to create the artificial intelligence system Nakhoda programme that uses text contracts and documents like NDAs. Nakhoda uses computers' ability to recognise and respond to human language.
- Yulchon, a law firm in South Korea, creates technology that gives clients access to low-cost compliance tools, such as apps. Additionally, the firm promotes innovation among its attorneys.
- By collaborating with Canadian AI assistant Kira Systems, an Indian company, Cyril Amarchand Mangaldas, is now in use of AI for contract exploration and evaluation.
- Using Visual Search and the Case Ranking algorithm to quickly display the most pertinent cases, startups like Case Mine and Near Law are attempting to reinvent legal research. The top 50 cases were determined by sorting and ranking over 300,000 case records from more than 20 courts of law and tribunals. The original method deftly pinpoints the crucial 0.01% of user-relevant cases.
- Virtual Hearing: Due to the Covid-19 pandemic, there has been a sharp proliferation in the use of technology for electronic filing and virtual hearings.

- SUVAS (Supreme Court Vidhik Anuvaad Software): The system uses AI to assist in translating judgements into regional tongues. This is yet another crucial effort to increase access to justice.
- SUPACE (Supreme Court Portal for Assistance in Court Efficiency): The Indian Supreme Court just recently launched it. It was created to first comprehend the judicial processes that need automation, and by summarising the judicial methods that can be computerised through AI, it helps the Court increase efficiency and decreases pending cases.

## 6 Artificial Intelligence's Effects on the Legal System

The judiciary's position has been viewed as precarious in a number of nations (Bielen, *et al.,* 2017). The Judiciary is in charge of upholding the law. As a result, it fulfils the five roles of administrative, enforceable, declaratory, conciliatory, and adjudicative. Due to issues with quick trials, the efficacy of using these functions is constantly questioned (Whalen-bridge, 2019). Artificial intelligence, which is more trustworthy as well as economical than humans, is taken into account to be a judge if it can present compelling arguments and write decisions that outperform human judges (Volokh, 2019). The results confirmed a framework that incorporates the resources and impacts of artificial intelligence on the speed of judgements, demonstrating how solutions make a significant contribution to judgement, pre-trial, and litigation support. As a result, it is thought that the supposed increase in bureaucratic promptness brought on by AI is real. It is possible, but there are some restrictions because of the path length to go between using this technology for simple functioning farm duties and multifarious tasks like comprehensive process evaluation (De Sousa, *et al.*, 2022). In the legal industry, some artificial intelligence has demonstrated prediction accuracy that is superior to that of human judges. However, there are inherent limitations to judicial artificial intelligence (Xu, 2022). AI technologies have significant effects on the legal system (Tomsett, *et al.*, 2020). The judicial system can experience advantages when AI is used properly. On the other hand, when AI is applied incorrectly, it naturally has the potential to have negative effects. This is justified because applications for AI in law and decision-making have not yet reached their full potential (Rodrigues, 2020). The machine is more accurate at predicting a case's outcome than it is in cases where significant changes haven't been made and no legal principles have been established (Jenkins, 2008). The benefits of implementing AI can be examined from a variety of analysis

angles, including legal activities should be accessible, flexible, consistent, efficient, impartial, precise, supportive, and transparent (Kazim and Koshiyama, 2021; Xiao, *et al.*, 2021). Applying sophisticated technologies, like artificial intelligence, frequently leads to technocratic governance or using technology to address pressing social issues (Janssen and Kuk, 2016). But each legal case is unique and challenging to decide, according to even the most experienced judges and attorneys. Not all problems in the legal system can be resolved by AI because these tools can be inaccurate and are shaped by the history of thousands or even hundreds of thousands of court decisions (Alarie, *et al.*, 2018; Weber, 1999). In order to elude the ambiguous circumstances, judges are constrained by their subjective acquaintance and involvement and may discount specific significant case information, making an irrational decision that may even put their careers at risk. Judiciary artificial intelligence is capable of calculating the likelihood that the facts and the elements of the evidence will lead to the conclusions that they will, based upon that learning of a large body of prior experience (Hastie, 2006). After being "trained" on a sizable body of historical precedents, the application is now capable of highlighting important clauses that are pertinent to particular contracts. Through the analysis of thousands of prior cases, "judge analytics" will be produced (Upadhyay and Romashkin, 2023). The partiality of decision-making by judicial artificial intelligence will be imperceptibly amplified and solidified by one-sided experience, which will then have an impact on the consistency and acceptability of its decision-making. Humans must provide the system with the necessary emotional and resonance components in order for judicial justice to be realised through algorithmic decision-making. (Calo, *et al.*, 2016).

### 6.1 Artificial Intelligence's Positive Effect

Judges can use AI-powered machines, just like lawyers, to expedite various stages of a case, which will ultimately result in a shorter overall time for decision-making. It might facilitate quicker and more efficient trial processes for judges, resulting in a decrease in case pending times. It will help attorneys spend more time refining their legal arguments, legal debates, and legal interpretations (Omoteso, 2012). Legal artificial intelligence has produced some successes. To address the issue of fewer cases coming before the courts, artificial intelligence machinery in jurisdictive decision-making is directly applied (Katsh, 1995). The efficiency of those handling cases will increase significantly thanks to artificial intelligence in the legal sector. The rationale for doing this is to conserve jurisdictive means and encourage the case-

handling staff to focus more of their efforts on challenging and multifarious cases, maximising the proficiency of judicial assets (Zheng, 2020). It is possible to prevent the issues of "dissimilar judgements in parallel cases" and "inconsistent use of law" to the greatest extent promising, which is helpful for the harmonisation of local judicial principles and the avoidance of discriminating judgements (Yang, 2017). In typed cases with unambiguous facts, unambiguous laws, and few conflicts, such as cases involving the payment of traffic damages, the lending of money by a bank, and the disclosure of public information, the automatic generation of judgement documents can significantly reduce the workload of judges (Zhang, 2020). The collective wisdom of judges has increased to the point where it straightforwardly exceeds the "critical point" of human perception (Ma, 2020). Similar or parallel cases can result in alike or like outcomes when the law is applied equally and consistently, which means that a standard judicial ruling that "related cases are decided correspondingly" should be made (Gao, 2019). Artificial intelligence can assist in striking a balance between fairness and effectiveness in terms of procedural justice, substantive justice, and judicial efficiency (Zhou and Q. Wu, 2019). Artificial intelligence could indeed extract criteria on the same case components, consistent computation modelling work, and standardised parallel processing operations, helping to ensure the referee's consistency with a comparable or equivalent algorithmic outcome for identical or similar cases (Li, 2020). In a short amount of time, a trial knowledge atlas can analyse the incident and provide commendations to judges (Chen and Xiao, 2017).

### 6.2 Artificial Intelligence's Negative Effect

Artificial intelligence is only the first phase of intellectual imitation (Pan, 2017). Despite resources, using AI techniques has its challenges (Alshahrani, *et al.*, 2021). In the same way that nuclear fission can either light up cities or cause their destruction, artificial intelligence is a technology with two distinct sides (Barrat, 2015). The data's lack of structure presents a challenge to the judiciary. Judges present information in an individualistic manner even though the cases involve similar time periods and have a general structure (Alarie and Yoon, 2017). Similar facts have been the subject of conflicting rulings that support various legal precedents. As a result, AI-based solutions may yield unreliable results (Rosenthal & Yoon, 2011). Similar cases that are not resolved in a manner consistent with judicial authority and social recognition will cause even more harm (Shen, 2020). Judiciary artificial intelligence application still has some issues, including a lack of application,

concentration, and actual impact (Zuo, 2018). Even though current artificial intelligence is capable of deep erudition, the learning approach and track are still determined by the programme that the designer had previously written (Wang, 2019). Only in situations with a single knowledge system, distinct accurate and incorrect responses, and discernible underlying patterns and structures can artificial intelligence are used (Surden, 2019). It is impossible to ignore how tolerant society is of judicial artificial intelligence's error rate (Zhu, *et al.*, 2019). Judiciary AI algorithms will inevitably result in bias, departing from the impartial and objective course (Mayson, 2019). They can produce economies of scale and increase the accessibility of services if properly utilised (Zeleznikow, 2017). It is erroneous to believe that training AI is simple because dealing with situations where a legal issue cannot be determined by a specific set of factors or during times of insufficient evidence data can be difficult (Rosenthal and Yoon, 2011).

## 7 Artificial Intelligence and Legal Concerns

Although AI has been widely used in industries like healthcare, finance, education, transportation, courts, homes, and more, no single definition of AI is accepted worldwide (Wang and Siau, 2018). Applications for AI to replace human judgement and decision-making span the gamut from insignificant to important issues (Sulleyman, 2017). What penalties would be meted out to people for AI's misdeeds? In the event that AI is found to have followed human instructions and committed an act that would be illegal if done by a person (Gabriel, 2010). The idea encompasses situations in which the principal is released from responsibility due to accident or insanity (Matusevich, 1977). Concerns about data security, privacy, human rights, and ethics will present new difficulties as AI technology advances and will necessitate significant self-regulation on the part of those who develop it. The judiciary, through judicial review and constitutional standards, as well as the legislature, through statute, rules, and regulation, will also need to regulate it from the outside (Drishti IAS, 2022). The use of ML in Indian law has so far been limited to back-end work automation; it has a long way to go before being utilised as a tool by the judiciary to make decisions. There are still many judgements that need to be fully digitised, especially in the lower courts. Given global trends at the moment, more of these tools will undoubtedly be implemented in the Indian legal system. Human decision-making should be supported by AI and ML, but not replaced. In legal and judicial processes, the use of AI and ML in an ethical and responsible manner to advance efficiency improvement is becoming more and more possible

(Next IAS, 2022). In some parts of the United States, controversially, computerized tools were being used to decide bail applications, and other nations, like Estonia, have heavily utilised AI and ML. However, given that the Indian judicial system is "more conservative" in general, there is still much to be done to make India's legal data compatible with ML formats. Tribunals can hear cases involving AI and ML without the need for oral testimony or cross-examination. An area where AI can be useful is in consumer courts. However, we must rely on routine human intervention in criminal cases where oral evidence and cross-examination are essential procedures (Next IAS, 2022). The development of an AI governance model faces three difficulties. First, there is significant considerable uncertainty between AI experts, AI users, and government leaders as a result of the "black boxes" in AI applications, which limit awareness and understanding of the social as well as technological implications of AI. For instance, deep adaptive algorithms have very limited capacity for explaining their recommendations or decisions. Second, it can be challenging for different stakeholders to agree on norms. Third, the undercurrents constrain conventional methods of policymaking in the era of AI. The governance of AI may be better understood by using sophisticated governance models like active matrix theory and hybrid regulation (Gasser and Almeida, 2017). There are few studies on democratic accountability, policy, and regulatory topics in AI. Policymakers need to be made aware of the risks posed by autonomous weapons which might employ algorithms to strike key goals as well as the potential applications of AI and the difficulties it poses (Zeichner, 2017). Governance and guideline are unavoidable and essential because AI is undeniably real.

## 8 Conclusion

Concerns about data security, privacy, human rights, and ethics will become more pressing as AI technology advances, posing new problems and necessitating strict self-regulation on the part of technology creators. The risk of covert ceding of decision-making authority exists when an AI assistant and a human judge coexist. It is crucial to talk about how AIs guidance could be implemented in the judiciary as soon as feasible to avoid this. Whether to allow the AI and the human judge to collaborate or to institutionally separate them is the key question in this discussion. One of the main problems in this regard is making it possible for human and AI communications to function. The idea that Judge Al will always be unique from other judges may also not be helpful. As was already mentioned, many technologists predict that humans are unlikely to be completely replaced by Al. It is more likely

that technological advancements will augment human intelligence. According to this theory, judges could still be made of human beings, but they might be "supplemented" by Al, who would help them with their intelligence and analytical skills. These improvement strategies bring up issues with judicial appointment, workload, and retention as well as more general questions about the role of judges in society. They also highlight the value of responsive judging and the need to further understand and investigate the effects that people feel when a human judge addresses their concerns. It can be concluded from the study that artificial intelligence-powered machines can assist judges by providing assistance them in stages of decision-making, which can help in reducing the duration that is typically taken in a trial, as well as lawyers by shortening the time taken for everyday functions at different stages of a trial. Uncertainty cannot be tolerated in the pursuit of justice by the judicial system. If correctly applied, the methodology we offer can cut down on the subjectivity and time involved in legal proceedings. If the specifics of judicial cases are entered into computer-fillable forms, there is room to consider complex investigations through the exact matching of the investigation material with the machine-trained information. The strength of the suggested method could be diminished by human errors made during investigations, a lack of sufficient pieces of evidence, and manual filing of a case. The current applications of artificial intelligence in numerous fields, as well as its potential application in legal settings to help judges and attorneys, provide strong support for this conclusion. Saving time would inevitably lead to improved case disposition efficiency, which would ultimately help the cause of reducing courtroom pending times. The noble goal of providing the general populace with effective and lasting justice will be accomplished once this is done. Finally, institutional separation enables us to assign straightforward cases to an AI while maintaining control. It takes work to make it easier for humans to understand an AI's decisions and caution to avoid slipping into the trap of giving up control due to scientific proof reasoning when assigning difficult cases to an AI. In general, integrating AI into the judicial system is a very delicate process. Instead of rushing through efficiency maximisation at all costs, it necessitates caution and patience. The most important requirement is transparency because it is impossible to have a public discussion when there are discrepancies between appearances and realities regarding the scope of AI's decision-making authority in the judiciary. We can't talk about a problem we don't understand. But we must have this conversation. And we must get it quickly.

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