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The Legal and Ethical Implications of AI in Judicial Decision-Making: Challenges to Fair Trial and Due Process

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***Abstract*: A paradigm shift in the discussion of law, justice, and governance has resulted from the incorporation of artificial intelligence (AI) into judicial systems. Even though AI has been successful in increasing productivity, simplifying case management, and helping judges with research, using it to make decisions in court presents serious ethical and legal issues. The constitutional protections of due process and fair trial, which protect individual rights from caprice and guarantee openness, impartiality, and accountability in decision-making, are at the heart of this discussion. The ethical and legal ramifications of using AI in court decision-making are examined in this paper. It looks at how the idea of equality before the law may be threatened by algorithmic tools that, despite their promise of objectivity, may replicate or even worsen systemic biases present in training data. The constitutional requirement of reasoned judgments is challenged by the "black box problem," in which algorithms generate results without comprehensible reasoning, undermining public confidence in the legal system. Furthermore, there are serious concerns about who is responsible for incorrect or unfair results when accountability is distributed between algorithmic systems and human judges. The study examines developments in China, India, the United States, and the European Union using a comparative methodology. Both the advantages and disadvantages of AI-driven adjudication are highlighted in the study, ranging from the US controversy surrounding COMPAS risk-assessment tools to China's smart court experiment and India's cautious use of AI through SUPACE. It contends that although artificial intelligence (AI) can increase judicial efficiency, human conscience, empathy, and interpretive reasoning—all of which are essential components of justice—cannot be separated from adjudication. In order to ensure that technological innovation does not undermine constitutional values but rather strengthens the accessibility, fairness, and credibility of judicial systems, the paper ends by suggesting safeguards such as regulatory frameworks, transparency standards, and a "human-in-the-loop" principle.**

***Keywords*: Artificial Intelligence, Judicial Decision-Making, Fair Trial, Due Process, Algorithmic Justice.**

1. Introduction

Globally, the emergence of artificial intelligence (AI) has profoundly changed social life, business, and governance. AI tools have already been used in the legal field in a variety of contexts, including contract analytics, legal research platforms, e-discovery, and predictive coding in litigation. However, the incorporation of AI into judicial decision-making has emerged as a crucial topic of discussion in more recent times. Artificial Intelligence (AI) in the judiciary raises significant ethical and legal issues, whether it takes the form of decision-support systems (like tools that help judges with legal research or drafting) or more contentious decision-making systems that can recommend bail, sentence, or even determine liability.

At the core of these inquiries is a basic worry: can algorithms, no matter how advanced, preserve the due process and fair trial guarantees that form the basis of constitutional democracies? The judiciary is more than just a means of settling disputes; it is the arbiter of justice, the defender of constitutional values, and the defender of fundamental rights. There will always be conflict when machine-based systems are introduced into this field between justice and efficiency, between automation and human judgment.

AI in courts has already been tested in a few international jurisdictions. Risk-assessment algorithms, such as COMPAS, have been used to inform bail and sentencing decisions in the US, drawing criticism for their opacity of reasoning and racial bias.[1] China is credited with creating the first "smart courts," which use AI for case management, document creation, and even some adjudicatory duties.[2] To assist judges in processing vast amounts of data, the Supreme Court of India has gradually implemented programs like the Supreme Court Portal for Assistance in Court Efficiency (SUPACE).[3] In addition to highlighting the dangers of algorithmic bias, opacity, and the deterioration of human judicial conscience, these developments

[1] Julia Angwin and others, 'Machine Bias: There's Software Used Across the Country to Predict Future Criminals. And it's Biased Against Blacks' *ProPublica* (23 May 2016) https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing accessed 3 September 2025.

[2] Mimi Zou, 'Digital Justice in China: A New Frontier for the Rule of Law?' (2021) 9 *Asian Journal of Comparative Law* 145.

[3] Press Information Bureau, 'Supreme Court Launches SUPACE: An AI Tool to Aid Judges in Legal Research' (6 April 2021) https://pib.gov.in/PressReleasePage.aspx?PRID=1710496 accessed 3 September 2025.

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also represent a global trend.

This paper contends that although artificial intelligence (AI) can improve judicial efficiency, the constitutional guarantees of a fair trial and due process of law are threatened by its incorporation into adjudicatory functions. It specifically looks at,

a) the moral conundrums of transparency, accountability, and bias in AI-driven justice;
b) the legal ramifications for human rights and constitutional protections; and
c) the comparative lessons from jurisdictions experimenting with judicial AI.

The following are the main research questions that drive this investigation:

1. How much can artificial intelligence be used in court decisions without undermining the rights to due process and a fair trial?
2. What are the main moral and legal dangers associated with AI-powered decision-making?
3. What can India learn from other jurisdictions' approaches to AI in the judiciary?

The paper aims to add to the expanding corpus of research on the relationship between technology, law, and justice by tackling these issues. It emphasizes the necessity of an ethical and regulatory framework that embraces the potential advantages of technological innovation while maintaining the human-centric character of the administration of justice.

2. Conceptual Foundation

A. Defining AI in Judicial Decision-Making

The two main categories of artificial intelligence (AI) in the legal field are decision-support systems and decision-making systems. While decision-making systems play a more active role by forecasting case outcomes, recommending bail or sentencing, or even rendering judgments, decision-support tools help judges with research, document review, case management, or drafting judgments.[4] While the latter presents serious moral and legal questions about giving machines the ability to make decisions, the former upholds the supremacy of the human judge.

Judicial AI tools have been developed globally to increase productivity and decrease the backlog of cases. For example, the Supreme Court Portal for Assistance in Court Efficiency (SUPACE) in India is designed to support research rather than serve as a substitute for judges.[5] On the other hand, AI-driven adjudicatory systems have been put to the test in regular civil cases through China's "smart courts" experiment.[6] This discrepancy demonstrates the range of judicial AI approaches and the varying degrees of comfort that different jurisdictions have with giving machines adjudicatory discretion.

B. Theories of Justice and Fair Decision-Making

The theories of justice that support legal systems must be taken into consideration when evaluating the application of AI in judicial functions. Justice is intrinsically linked to values that transcend computational logic, as evidenced by Rawls' theory of justice as fairness, which places an emphasis on equality and procedural fairness, and Dworkin's concept of law as integrity, which calls for consistency and moral reasoning. Consistency may be guaranteed by algorithms, but they are devoid of the interpretive and compassionate skills required to assess context, subtlety, and human dignity.[7]

Similar to this, the natural justice principle necessitates transparency, objectivity, and human reasoning. It is embodied in the maxims audi alteram partem (hear the other side) and nemo judex in causa sua (no one should be a judge in their own cause). These ideas could be compromised by AI systems that produce ambiguous results without sufficient reasoning, especially those that function as "black boxes." [8]

C. Constitutional Foundations of Fair Trial and Due Process

Articles 14 and 21 of the Indian Constitution provide for due process and a fair trial. Article 14 forbids the state from acting arbitrarily and upholds the rights to equality before the law and equal protection under the law.[9] According to the Supreme Court's broad interpretation, Article 21 incorporates the ideas of fair, just, and reasonable procedure while safeguarding life and individual liberty.[10] When taken as a whole, these clauses guarantee that legal procedures follow the principles of accountability, impartiality, and transparency.

Internationally, comparable safeguards are in place: the Fifth and Fourteenth Amendments of the United States Constitution uphold the principle of due process, while Article 6 of the European Convention on Human Rights ensures the right to a fair trial.[11]The use of AI in court decision-making is subject to normative restrictions imposed by these constitutional and human rights frameworks. Any application of AI that jeopardizes reasoned adjudication, fairness, or transparency runs the risk of breaking these essential guarantees.

D. Framing the Problem

In contrast, comparable safeguards are in place globally: Article 6 of the European Union Thus, the conceptual basis reveals a conflict: although AI may increase consistency, speed, and efficiency, its application in judicial decision-making runs the risk of undermining justice as a process that is focused on people. The question is not only technical but also profoundly philosophical: is it possible to reduce the logic of justice to

[4] Cary Coglianese and David Lehr, 'Regulating by Robot: Administrative Decision-Making in the Machine-Learning Era' (2017) 105 *Georgetown Law Journal* 1147.
[5] Press Information Bureau, 'Supreme Court Launches SUPACE: An AI Tool to Aid Judges in Legal Research' (6 April 2021) https://pib.gov.in/PressReleasePage.aspx?PRID=1710496 accessed 3 September 2025.
[6] Mimi Zou, 'Digital Justice in China: A New Frontier for the Rule of Law?' (2021) 9 *Asian Journal of Comparative Law* 145.
[7] John Rawls, *A Theory of Justice* (Harvard University Press 1971) 36–40; Ronald Dworkin, *Law's Empire* (Harvard University Press 1986) 225–275.
[8] Karen Yeung, 'Algorithmic Regulation: A Critical Interrogation' (2018) 12 *Regulation & Governance* 505
[9] *E.P. Royappa v State of Tamil Nadu* (1974) 4 SCC 3.
[10] *Maneka Gandhi v Union of India* (1978) 1 SCC 248.
[11] European Convention on Human Rights, art 6.

algorithmic patterns without undermining its moral and normative underpinnings? This essay starts with the idea that judicial decision-making, which is based on moral and constitutional principles, cannot be fully left to machines without jeopardizing fundamental rights.

3. Ethical Implications

A. Algorithmic Bias and Discrimination

The neutrality of AI systems depends on the quality of the data they are trained on. Algorithms can reproduce and even worsen discriminatory outcomes if the training data reflect prevailing social or systemic biases.[12] For example, it was discovered that the United States' COMPAS risk assessment tool disproportionately classified African-American defendants as having a higher risk of recidivism than white defendants with comparable profiles.[13] Such results run the risk of undermining public trust in judicial impartiality in addition to undermining equality before the law.

Another source of bias in AI is the algorithm's own design, which is impacted by the beliefs and presumptions of its creators.[14] The fundamental ethical precept of substantive justice, which calls for treating like cases similarly and refraining from arbitrariness, is jeopardized when such biases permeate judicial decision-making.

B. Transparency and the "Black Box" Problem

The opacity of AI systems presents another ethical dilemma. A lot of machine learning algorithms, especially deep learning models, operate as "black boxes," generating results without offering a transparent justification or line of reasoning.[15] However, the foundation of judicial decision-making is the principle of reasoned judgments, which states that decisions must be supported by evidence.[16] This ethical and constitutional requirement is broken by an opaque algorithm that is unable to justify its results.

Additionally, the lack of transparency restricts litigants' ability to challenge or appeal AI-assisted decisions.[17] People are denied a meaningful chance to contest a decision when they are unaware of its foundation, which compromises the moral precept of accountability.

C. Accountability and Liability

Accountability is a prerequisite for the judiciary to make ethical decisions. Judges are bound by professional ethics, are answerable for their decisions, and are subject to appellate review. However, accountability becomes hazy when AI is used in court decisions. Who bears the burden—the judge, the programmer, the government, or the AI system itself?[18] This "accountability gap" presents a significant moral conundrum. Judges run the risk of neglecting their duty to exercise judicial conscience if they rely too much on AI outputs without using their own judgment. On the other hand, the privatization of judicial functions is called into question if programmers or corporations are held accountable. Maintaining ethical and constitutional legitimacy requires making sure that human authority bears the responsibility.

D. Human Dignity and the Question of Moral Judgment

Justice is more than just following the law; it also entails moral judgment, compassion, and respect for human worth.[19] A deeper ethical question is brought up by the idea of machines deciding what constitutes guilt, innocence, or punishment: can human lives and liberties be reduced to algorithmic calculations?

Aristotle made a distinction between phronesis (practical wisdom), which is necessary for making just decisions, and techne (technical knowledge).[20] AI lacks the ability to make moral decisions (phronesis), despite its technical ability to process large amounts of data efficiently. Giving AI the ability to make decisions runs the risk of depriving justice of its moral and human component, turning people into data points rather than sentient beings with rights.

E. Efficiency vs. Justice: An Ethical Tension

AI is frequently defended on the basis of its efficiency, which includes cutting costs, expediting trials, and decreasing backlog. However, justice must never be sacrificed for efficiency. [21]Refusing to reduce justice to a utilitarian calculation of speed and cost is the ethical challenge. By its very nature, justice necessitates thoughtful consideration, compassion, and human interaction—values that cannot be mechanized.

F. Ethical Principles for AI in Judicial Contexts

A number of global frameworks have attempted to define moral guidelines for artificial intelligence. Transparency, responsibility, and human oversight are emphasized in UNESCO's Recommendation on the Ethics of Artificial Intelligence.[22] In a similar vein, the European Ethical Charter on the Use of AI in Judicial Systems of the Council of Europe maintains that AI should support human judges rather than take

[12] Solon Barocas and Andrew D Selbst, 'Big Data's Disparate Impact' (2016) 104 *California Law Review* 671.
[13] Julia Angwin and others, 'Machine Bias: There's Software Used Across the Country to Predict Future Criminals. And it's Biased Against Blacks' *ProPublica* (23 May 2016) https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing accessed 3 September 2025.
[14] Kate Crawford, 'The Trouble with Bias' (Conference on Neural Information Processing Systems, Montreal, December 2017).
[15] Frank Pasquale, *The Black Box Society: The Secret Algorithms That Control Money and Information* (Harvard University Press 2015) 3–5.
[16] *Union of India v Mohan Lal Capoor* (1973) 2 SCC 836 (holding that reasoned decisions are part of natural justice).
[17] Lilian Edwards and Michael Veale, 'Slave to the Algorithm? Why a Right to an Explanation is Probably Not the Remedy You Are Looking For' (2017) 16 *Duke Law & Technology Review* 18.
[18] Cary Coglianese and David Lehr, 'Regulating by Robot: Administrative Decision-Making in the Machine-Learning Era' (2017) 105 *Georgetown Law Journal* 1147.
[19] Martha C Nussbaum, *Frontiers of Justice: Disability, Nationality, Species Membership* (Harvard University Press 2006) 73–82.
[20] Aristotle, *Nicomachean Ethics* (trans Terence Irwin, Hackett 1985) 1140b.
[21] Mireille Hildebrandt, 'Primitives of Legal Protection in the Era of Data-Driven Platforms' (2016) 20 *Theoretical Inquiries in Law* 1.
[22] UNESCO, 'Recommendation on the Ethics of Artificial Intelligence' (2021) https://unesdoc.unesco.org/ark:/48223/pf0000380455 accessed 3 September 2025.

their place.[23] These frameworks highlight the moral necessity of making sure that technology in the judiciary enhances human judgment rather than replaces it.

4. Legal Implications

A. Natural Justice and Judicial Integrity

The foundation of adjudication is the natural justice principle. Fairness in legal proceedings depends on the tenets audi alteram partem (the right to be heard) and nemo judex in causa sua (no one should be a judge in their own cause).[24]These principles may be violated by the opacity and potential bias of AI systems used in decision-making. The need for a fair hearing is essentially undermined if litigants are unable to effectively challenge or question the logic of an algorithm.

Reasoned decisions are essential to natural justice, as the Indian Supreme Court has repeatedly confirmed.[25] AI-generated outputs, especially those from "black box" models, might not pass this test since they provide results without clear explanation. The rights of the litigant as well as the legitimacy and integrity of the legal system are jeopardized when judicial reasoning is lacking.

B. Fair Trial Rights Under the Indian Constitution

No one may be deprived of their life or personal freedom unless a "procedure established by law" is followed, according to Article 21 of the Indian Constitution. This phrase has been interpreted by judges, most notably in Maneka Gandhi v. Union of India,[26] to mean a fair, just, and reasonable procedure. Therefore, fairness and reasonableness requirements must be met by AI systems used in adjudication. Algorithms may be in violation of this constitutional guarantee if they generate discriminatory results or function opaquely.

Additionally, Article 14 forbids arbitrary state action and guarantees equality before the law. [27]This guarantee would be directly violated if biased AI systems were used in court decisions. In E.P. Royappa v. State of Tamil Nadu, the Supreme Court made fairness a key component of Article 14 by equating arbitrariness with inequality. This requirement cannot be met by an algorithm that generates discriminatory or arbitrary results.[28]

C. Procedural Due Process in Comparative Perspective

Additionally, procedural rights are protected globally. The right to a fair and public hearing by an impartial and independent tribunal is guaranteed by Article 6 of the European Convention on Human Rights.[29] There are concerns about whether a machine can ever be regarded as an "independent and impartial tribunal" if AI takes the place of or has a substantial impact on judicial decision-making.

Deprivation of life, liberty, or property without due process of law is forbidden in the United States by the Fifth and Fourteenth Amendments' Due Process Clauses.[30] According to court interpretation, this covers procedural protections like the right to appeal and the right to face down unfavorable evidence, as well as substantive fairness.[31] Judicial AI systems run the risk of violating due process rights if they deny parties a substantial chance to contest results.

D. Right to Reasoned Judgments

A fundamental component of legal systems is the requirement that judicial decisions be supported by justifications. In cases like Union of India v. Mohan Lal Capoor, the Indian Supreme Court has highlighted this, concluding that logging reasons is a necessary component of justice and openness. This right is compromised by AI systems that produce results without providing an explanation. [32]

In a similar vein, the European Court of Human Rights has ruled that a court's failure to provide justification may constitute a denial of the right to a fair trial.[33] Reliance on inexplicable AI models thus runs the risk of violating both international human rights commitments and domestic constitutional safeguards.

E. Accountability and Judicial Review

The foundation of the legal system is the idea of judicial review as a means of accountability. Oversight is ensured by the ability to appeal lower court decisions to higher courts. But AI-generated results pose a special problem: who is legally accountable when an AI-driven choice results in injustice? Accountability is muddled if a judge simply signs off on an AI recommendation. The possibility of privatizing or politicizing judicial functions exists if the programmer or state agency is held accountable. Constitutional governance is structurally challenged by the lack of a clear chain of accountability.[34] AI in adjudication runs the risk of weakening the rule of law itself in the absence of procedures to assign blame.

F. Data Privacy and Surveillance Concerns

Concerns about data security and privacy rights are also brought up by AI in legal settings. Numerous datasets, such as criminal, biometric, and personal records, are frequently used by algorithms. In Justice K.S. Puttaswamy v. Union of India[35], the Indian Supreme Court upheld the right to privacy as a fundamental right guaranteed by Article 21. Therefore, disproportionate data collection or profiling used in AI-driven adjudication may be in violation of constitutional privacy protections.

G. Implications for Judicial Independence

Lastly, judicial independence may be jeopardized by an over-

[23] Council of Europe, 'European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems' (2018) https://rm.coe.int/ethical-charter-en-for-publication-4-december-2018/16808f699c accessed 3 September 2025.
[24] M P Jain, *Principles of Administrative Law* (8th edn, LexisNexis 2018) 437–441.
[25] *Union of India v Mohan Lal Capoor* (1973) 2 SCC 836.
[26] *Maneka Gandhi v Union of India* (1978) 1 SCC 248
[27] *State of West Bengal v Anwar Ali Sarkar* AIR 1952 SC 75.
[28] *E.P. Royappa v State of Tamil Nadu* (1974) 4 SCC 3.
[29] European Convention on Human Rights, art 6
[30] US Const amend V and amend XIV.
[31] *Goldberg v Kelly* 397 US 254 (1970).
[32] *Union of India v Mohan Lal Capoor* (1973) 2 SCC 836.
[33] *Hadjianastassiou v Greece* (1992) 16 EHRR 219.
[34] Cary Coglianese and David Lehr, 'Regulating by Robot: Administrative Decision-Making in the Machine-Learning Era' (2017) 105 *Georgetown Law Journal* 1147.
[35] *Justice K.S. Puttaswamy v Union of India* (2017) 10 SCC 1.

reliance on AI. According to the constitution, judges must make their own decisions without interference from outside parties. Judicial discretion runs the risk of being supplanted by technological instruments created by state organizations or private actors if algorithms start to have a major impact on results.[36] These calls into question the judiciary's independence and the division of powers.

5. Comparative Perspectives

A. The United States: Risk Assessment and Due Process

When it comes to using AI-driven tools in judicial decision-making, especially in the criminal justice system, the US has led the way. Correctional Offender Management Profiling for Alternative Sanctions (COMPAS), which helps judges decide on bail and sentencing and predicts recidivism, is the most hotly contested example. Although supporters contend that these tools improve uniformity and lessen the workload of judges, their implementation has given rise to significant due process issues.

The Wisconsin Supreme Court affirmed the use of COMPAS in State v. Loomis, but it also recognized some of its drawbacks, including the algorithm's opaque operation and the possibility of racial bias in predictions.[37] The case brought to light the "black box" problem, in which defendants cannot contest the process used to determine risks that have a direct impact on their freedom. According to academics, this compromises the adversarial system, which requires that the evidence be subject to scrutiny.[38]

Furthermore, the due process clause of the US Constitution demands personalized and well-reasoned decisions, but opaque algorithmic rulings run the risk of achieving mechanical justice. In contrast to white defendants, COMPAS flagged African-American defendants as high risk disproportionately, according to studies, exposing systemic biases in the data.[39] As a result, the U.S. experience highlights both the potential benefits of AI and the risks it presents to procedural justice and equality before the law.

B. The European Union: Ethical Regulation and Fundamental Rights

Because of its long history of defending fundamental rights under the Charter of Fundamental Rights of the European Union (CFR), the European Union takes a very different tack. AI systems are divided into four risk categories under the proposed Artificial Intelligence Act (2021): unacceptable, high, limited, and minimal.[40] Artificial intelligence (AI) in legal settings is regarded as "high risk," necessitating strict adherence to regulations, especially when it comes to decisions that impact fundamental rights.

The EU emphasizes transparency, explainability, and accountability as legal safeguards. The EU aims to proactively regulate before harms worsen, in contrast to the US, where judicial experimentation has frequently outpaced regulation. The European Data Protection Supervisor has issued a warning against completely automated judicial decision-making, pointing out that it may violate Article 47 of the CFR's guarantee of a fair trial.[41]

Furthermore, as part of the guarantees of a fair trial under Article 6 of the European Convention on Human Rights (ECHR), the jurisprudence of the European Court of Human Rights (ECtHR) emphasizes the importance of reasoned judgments.[42] Therefore, completely entrusting adjudication to algorithms would probably be against European human rights law, even though AI may be utilized to help judges with research or case management. The cautious, rights-based approach of the EU contrasts with the experimental pragmatism of the United States.

C. China: Smart Courts and Efficiency-Oriented AI

China has adopted artificial intelligence (AI) in the judiciary more forcefully than most other countries, situating it within the larger framework of digital governance. AI-driven platforms for case management, legal research, and even the automated creation of basic judgments in civil and business disputes have been made available by the creation of "smart courts."[43] The Chinese strategy is very utilitarian, giving state control, efficiency, and consistency precedence over issues of openness or individual liberties. The Supreme People's Court, for example, has implemented tools such as the "206 System," which aids in the assessment of evidence and the recommendation of sentences in criminal cases.[44] Although they still have the last say, judges' reasoning is greatly influenced by the system.

Critics contend that this model runs the risk of weakening judicial independence and bolstering state interests.[45] Fairness concerns are subordinated to efficiency and social stability goals because China's constitutional framework does not place as much emphasis on due process as the U.S. and EU do. The smart court model raises serious concerns about justice being seen as political and mechanized, even though it demonstrates AI's ability to handle enormous caseloads.

D. India: Emerging Caution and Judicial Augmentation

India's approach to incorporating AI into its legal system is cautious but forward-thinking. In 2021, the Supreme Court of

[36] Thomas W Simon, 'Judicial Independence and Artificial Intelligence' (2020) 35 *Harvard Journal of Law & Technology* 99.
[37] *State v Loomis* 881 N.W.2d 749 (Wis. 2016).
[38] Danielle Keats Citron, 'Technological Due Process' (2007) 85 Washington University Law Review 1249.
[39] Julia Angwin and others, 'Machine Bias' *ProPublica* (2016) https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing accessed 3 September 2025
[40] European Commission, 'Proposal for a Regulation Laying Down Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act)' COM (2021) 206 final.
[41] European Data Protection Supervisor, 'EDPS Opinion on the Proposal for a Regulation on Artificial Intelligence' (2021).
[42] *Hadjianastassiou v Greece* (1992) 16 EHRR 219 (ECtHR).
[43] Mimi Zou, 'Smart Courts in China: Towards the Digitisation of the Judicial Process' (2020) 3 Journal of Law, Technology and Policy 25
[44] Supreme People's Court of China, 'White Paper on Smart Courts' (2019).
[45] Rogier Creemers, 'China's Social Credit System and the Rule of Law' (2018) 10 Journal of Comparative Law

India introduced SUPACE (Supreme Court Portal for Assistance in Court Efficiency), an artificial intelligence tool that helps judges with case analysis and research.[46] In contrast to COMPAS in the US or China's smart courts, SUPACE respects judicial discretion by curating pertinent legal materials for judges rather than rendering decisions.

AI will only be utilized as an aid, not as a replacement for human reasoning, as the Indian judiciary has made clear.[47] This is in line with India's constitutional framework, which ensures due process and a fair trial under Article 21. It may be argued that any delegation of decision-making authority to non-human actors is unconstitutional.

However, academics warn that even assistive AI could give rise to ethical issues, like promoting preexisting biases in court rulings or giving preference to particular types of legal reasoning over others.[48]Additionally, India has issues with digital literacy and infrastructure, which makes it more difficult to implement AI in lower courts.

India's strategy, which embraces AI for efficiency while overtly maintaining the human-centric nature of adjudication, thus exemplifies a balanced model. With careful regulation, India could develop a sound legal system that bridges the gap between the extremes of the United States and China.

This paper makes the case that India cannot use AI in court decisions unless it carefully examines what other countries have done. The United States has taught us the peril of algorithmic bias, which has led to discriminatory sentencing and parole outcomes that India cannot afford to duplicate in its already unfair legal system. The main lesson learned from the European Union is the significance of stringent frameworks for accountability and transparency, as exemplified by the EU's AI Act. In contrast, China's experience highlights the dangers of state-driven technological control, where judicial independence is threatened by efficiency and surveillance taking precedence over justice. According to the authors, India needs to strike a balance between embracing the EU's protections and steering clear of both China's authoritarian tendencies and the US model's risk of laissez-faire. India runs the risk of importing the worst features of each system if it doesn't take such a balanced approach.

6. Challenges and Risks of AI in Judicial Decision-Making

Artificial Intelligence (AI) has the potential to revolutionize legal systems, but it also presents difficult problems that go right to the core of justice, equity, and constitutional rights. To keep AI from eroding the very values it is supposed to uphold, these risks need to be carefully considered.

A. Algorithmic Bias and Discrimination

The possibility of bias in algorithms is one of the most urgent issues with AI in judicial decision-making. The historical data used to train AI systems frequently reflects societal biases. As such, they have the potential to replicate or even intensify systemic disparities.

For instance, it was discovered that, in comparison to white defendants with comparable profiles, African-American defendants were disproportionately classified as high risk by the COMPAS risk-assessment tool in the United States.[49] The equality before law principle, which is a cornerstone of most constitutional systems, is jeopardized by such results. This might directly violate Article 14 of the Constitution, which guarantees equality, in countries like India.

Depending on the dataset, bias can extend beyond race to include gender, socioeconomic status, and geography.[50] Accountability is made more difficult by machine learning's opaque nature, which makes it hard to determine whether bias was introduced through data, design, or implementation.

B. Transparency and the Black Box Problem

Decisions made by judges must be transparent and well-reasoned. This is a fundamental component of due process, guaranteeing that parties can comprehend and contest the reasoning behind a ruling. However, AI frequently functions as a "black box," generating results without offering a clear explanation of how it arrived at its conclusions.[51]

The right to a fair trial guaranteed by the constitution is compromised by the absence of explainability. Reasoned judgments are required in the European context by Article 6 of the ECHR.[52] In a similar vein, Indian courts have consistently maintained that judicial reasoning is necessary to guarantee accountability.[53] AI systems run the risk of making decisions that are legally sound but fundamentally unfair if they are unable to produce understandable reasoning.

Efforts to build “explainable AI” are ongoing, but remain limited, especially when applied to complex deep learning systems. The black box challenge thus poses a direct threat to transparency in justice.

C. Accountability and Liability

Clear lines of accountability are essential to judicial systems: judges are answerable for their decisions and are subject to constitutional checks and appeals. This chain of responsibility becomes hazy with the advent of AI. Who is responsible if a judge follows an AI tool's recommendation and the result is unfair—the judge, the vendor, or the programmer? According to academics, litigants might not be able to pursue compensation for algorithmic errors in the absence of

[46] Supreme Court of India, Press Release, ‘Launch of SUPACE’ (6 April 2021).
[47] DY Chandrachud, CJI, ‘AI and the Judiciary: Friends or Foes?’ (Lecture, 2022).
[48] Aparna Chandra, ‘AI and Judicial Decision-Making in India: Promise and Peril’ (2022) Indian Law Review (forthcoming).
[49] Julia Angwin and others, ‘Machine Bias’ *ProPublica* (2016) https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing accessed 3 September 2025
[50] Solon Barocas and Andrew D Selbst, ‘Big Data’s Disparate Impact’ (2016) 104 California Law Review 671.
[51] Frank Pasquale, *The Black Box Society: The Secret Algorithms that Control Money and Information* (Harvard University Press 2015).
[52] *Hadjianastassiou v Greece* (1992) 16 EHRR 219 (ECtHR).
[53] *Union of India v Mohan Lal Capoor* (1973) 2 SCC 836.

accountability frameworks.[54] Additionally, depending on private companies to provide AI solutions could bring corporate interests into the legal system, which would raise more ethical concerns. Judges' personal accountability is diminished if they rely too much on AI recommendations, undermining the idea of judicial independence.

D. Erosion of Judicial Independence and Human Element

Making decisions as a judge involves more than just following the law; it also calls for moral judgment, empathy, and interpretive reasoning. The human component of justice could be undermined if large portions of this process are left to AI.

Initiatives for smart courts in China have already shown a propensity to standardize justice while limiting room for individual reasoning.[55] Efficiency might increase, but justice runs the risk of becoming a robotic procedure lacking discretion and empathy.

Judicial independence is guaranteed by the constitution in liberal democracies.[56]The normative legitimacy of courts could be undermined by an over-reliance on AI, which could turn judges into administrators of machine-generated outputs.

E. Access to Justice and the Digital Divide

AI has the potential to improve access to justice by automating procedures and lowering backlogs, but it could also make digital inequality worse. Litigants from underrepresented groups may not have the resources or technological literacy necessary to interact with AI-driven systems in many developing jurisdictions.[57]

A two-tiered justice system could be created if courts rely more and more on AI tools, further excluding people without digital access. Furthermore, litigants who cannot comprehend how their case was handled may become estranged from the court as a result of opaque algorithms, eroding public confidence in the legal system.

Therefore, if safeguards are not put in place, AI runs the risk of escalating structural inequality even though it may increase efficiency for some.

The difficulties with AI in court decision-making emphasize the need for prudence. In constitutional democracies, issues of bias, accountability, transparency, judicial independence, and access to justice are not incidental; rather, they are essential. These risks have the potential to jeopardize the due process and fair trial guarantees that underpin the legitimacy of legal systems if they are not addressed.

7. Safeguards and Policy Recommendations

A. Adopt a Risk-Based Regulatory Perimeter (with a "No-Fully-Automated-Adjudication" Rule)

Following international best practices, courts and justice ministries should codify a risk-tiered approach to judicial AI: (i) prohibited uses (e.g., fully automated adjudication affecting life or liberty; AI that manipulates litigants); (ii) high-risk uses (e.g., evidence evaluation, sentencing/bail risk tools); and (iii) low-risk assistive tools (e.g., research summarizers). Ex ante conformance obligations (testing, documentation, human oversight, auditability) and ex post supervision should be applied to high-risk systems. The bright-line rule states that an AI system cannot make a final decision; a human judge must still have the final say and offer their own justification. This is consistent with the Council of Europe's binding convention that emphasizes human rights and the rule of law, as well as the EU's classification of AI used in the "administration of justice" as high-risk.

B. Human-in-the-Loop, Human-on-the-Loop

Human-in-the-loop (HITL) should be institutionalized for any stage that may have an impact on rights, such as bail, sentencing, custody, and refugee status. Human-on-the-loop (active monitoring with override powers) is necessary in situations where automation is used earlier (triage, research). In order to strengthen individual accountability and appellate review, judges must record how they evaluated—and, when necessary, deviated from—AI recommendations.

C. The Right to Reasons and Contestation

Give parties a procedural right to pertinent, case-specific justifications. If the outcome was impacted by an AI tool, the court's reasoning must represent independent judicial reasoning rather than serving as a stand-in for the model's output. Give people the ability to challenge decisions influenced by AI and to request that model reliance be disclosed, including the manner, location, and degree of tool usage. This translates to ECHR Article 6 case law on reasoned judgments and operationalizes the guarantees of a fair trial.

D. Algorithmic Transparency: Registries, Model Cards, and Technical Dossiers

List every tool in use (version, provider, purpose, and risk tier) in a Judicial AI Registry. When using tools, make sure that model cards and technical dossiers (training data provenance, evaluation metrics, limitations, known failure modes, and change logs) are accessible to courts and litigants in a sanitized form. Whenever an AI tool informs an outcome, keep parties informed.

E. Independent Testing, Red-Teaming, and Ongoing Monitoring

Require adversarial red-teaming (to investigate manipulation/edge cases), stress testing on representative local data, and third-party validation (accuracy, fairness, robustness) prior to procurement or deployment. Conduct impact assessments, drift monitoring, and recurring bias audits at predetermined intervals (e.g., 6–12 months) following

[54] Cary Coglianese and David Lehr, 'Regulating by Robot: Administrative Decision-Making in the Machine-Learning Era' (2017) 105 Georgetown Law Journal 1147.
[55] Mimi Zou, 'Smart Courts in China: Towards the Digitisation of the Judicial Process' (2020) 3 Journal of Law, Technology and Policy 25.
[56] *S.P. Gupta v Union of India* 1981 Supp SCC 87.
[57] Ethan Katsh and Orna Rabinovich-Einy, *Digital Justice: Technology and the Internet of Disputes* (OUP 2017).

deployment, and publish audit summaries.

F. Fundamental Rights & Human Rights Impact Assessments (FRIA/HERIA)

Before using high-risk judicial AI, a Fundamental Rights Impact Assessment should be required. This assessment should cover the risks to children, vulnerable groups, equality, privacy, and due process. It should also include mitigation strategies and quantifiable success criteria. This aligns with the Council of Europe Framework Convention on AI's commitments to protect democracy, human rights, and the rule of law, as well as the EU AI Act's risk-based compliance requirements.

G. Data Governance, Privacy, and Purpose Limitation

Adopt stringent guidelines for data minimization and purpose limitation; unless absolutely required and permitted by law, do not scrape sensitive or special category data. Align deployments for India with the upcoming Rules and the Digital Personal Data Protection Act, 2023 (consent/legitimate use, children's data, and significant data fiduciary duties); courts should take on the role of data fiduciaries with additional responsibilities.

H. Procurement & Contracting Standards for Judicial AI

Access for audits (including code escrow or secure review portals) must be included in all vendor contracts.

- Liability and indemnity provisions for data breaches or vendor errors.
- End-of-life plans and obligations should be updated or patched.
- Localization, or the capacity to work with regional legal corpora and multilingual inputs.
- No instruction on litigant data without a clear legal foundation and protections.

I. Training & Capacity Building

Make AI literacy—including fundamental machine learning concepts, bias/metrics, interpretability constraints, and ethical frameworks—a requirement for judges, registrars, and court employees (UNESCO/OECD). Create model orders and practice guidelines for disclosure, contestation, and justifications.

J. Access to Justice & the Digital Divide

Adoption of AI should be paired with offline options, plain-language notices, and improvements to legal aid. Verify assistive interfaces (accessibility standards, regional languages). Provide funding to the tech units of public defenders so they can refute AI evidence and acquire independent, open tools for the defense bar.

8. Conclusion

Artificial intelligence has the potential to transform efficiency in judicial decision-making, but it also poses a threat to the fundamental tenets of justice. AI can help courts by improving information access, expediting research, and cutting down on delays. But there are serious risks of algorithmic bias, opacity, accountability gaps, and the loss of the human element in adjudication. These issues directly affect the constitutional rights to due process and a fair trial, which are essential for the legitimacy of legal systems.

Comparative experiences provide insightful information. The United States serves as an example of the dangers of unrestrained experimentation, as racial disparities are exacerbated by risk-assessment instruments such as COMPAS. The significance of proactive safeguards based on openness and human oversight is demonstrated by the European Union's rights-based regulatory approach. Though it raises questions regarding judicial independence and fairness, China is a prime example of efficiency-driven deployment. Through programs like SUPACE, India, on the other hand, exemplifies a cautious middle ground by emphasizing AI as an aiding rather than determining tool.

Innovation and constitutionalism must be balanced if we are to move forward. Courts must adopt new technology while maintaining their obligation to administer justice based on human reason and conscience. Risk-tiered regulation, human-in-the-loop principles, explainability requirements, independent audits, and procedural rights of contestation are all crucial components of a multifaceted framework. Non-negotiable safeguards include educating judges, guaranteeing digital inclusivity, and integrating AI adoption into robust data protection and human rights frameworks.

Clear protections, not ambiguous promises, are necessary for India's future. Efficiency must yield to judicial independence and equity. It is crucial to take a phased approach; before moving on to judicial reasoning, AI should be used in administrative domains like scheduling and legal research. Over time, this incremental approach reduces risks and improves judicial capacity. In order to ensure compliance with constitutional standards, the author also makes the case that mandatory oversight bodies should be established in order to certify AI tools. Additionally, judges need specialized training so they can assess AI outputs critically instead of blindly depending on them. Lastly, collaborations with academic institutions and technologists are essential to creating transparent, open-source models that encourage accountability. Without these protections, AI runs the risk of turning into a "black box" that weakens rather than upholds the rule of law.

In the end, justice is not something that can be determined by an algorithm. AI must never take the place of a judge, even though it might be a useful aide in legal systems. Making decisions as a judge is not just a technical task; it is a moral, interpretive, and compassionate act that protects the rule of law and respects the dignity of people. The imperative is clear as courts around the world negotiate this new landscape: AI must continue to be a tool, not a master, of justice.