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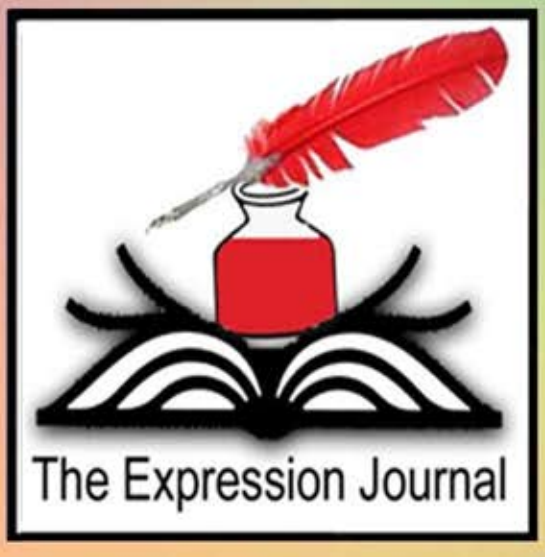

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Admissibility of Ai-Generated Evidence in Criminal Trials: Challenges and Legal Precedents

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Abstract

The artificial intelligence is already making an inroad in the sphere of criminal justice. That may be facial recognition, forensics pattern-recognition or even incident of a deepfake. In case you forgot the successive revolutions, they are swelling, and AI created evidence is being presented in the courtrooms of all sizes with greater frequency, declaring expediency, precision and capacities of investigations in a titanic line-up of cases. But it has significant cases of law and reality cogs. Some of the gaps most of the countries have failed to address during evidence treatment include the issues of reliability, transparency, bias and recourse to conventional rules of evidence. This paper examines how AI-generated evidence is treated by the Indian Evidence Act, and provides an extract of the case law on the same in India and other foreign jurisdictions. It is an apt illustration of the frailty of the chain of custody in digital evidence, how delicate it is to have a second expert of quality, to disprove outputs of computer programs, and, perhaps foolishly enough, how unsafe it can be when the black box systems are not simply known. The aim of the paper is to discuss how such evidence can be used in a less formalized setting. It also requires the comparison of both to make sure that such evidence is genuine, accurate and is constitutive in the fair trial of criminal cases.

Keywords

AI-Generated Evidence, Criminal Trials, Indian Evidence Act, Reliability, Algorithmic Bias, Chain of Custody, Legal Precedents.

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1. Introduction

Artificial intelligence (AI) has ceased to exist as a concept of the future and translated into a reality in the modern fast-paced digital world. It exists in smarter societies (surveillance), self-driving vehicles, content recommending internet, smartphone applications, and even the judicial system. The main question that follows as AI is increasingly used in Indian law and law enforcement is; on the one hand, can machines generate evidence which should be used in the court; on the other hand, how can we be certain that we are appropriately regulating it?

The artificial intelligence-based evidence is a growing and growing component of juridical discussions in India.[1] It is a kind of evidence that incorporates algorithmic reconstructions, deep fake identification, predictive data mapping, and facial recognition information to apply both immense potential and scrupulous difficulties. The existence or lack of the possibility to use such type of evidence in courts is not the final verdict made by Indian courts yet, but this issue will become the center-stage soon. In this paper, it will be discussed what is AI-generated evidence, the current status of Indian laws regarding it (and lack thereof), the ethical and legal challenges associated with it, and the possible changes to implement to ensure that technology and justice remain answerable.

Artificial intelligence (AI) has changed the manner we create, store, and read data. Deepfakes, artificial intelligence documents, face recognition databank, and predictive policing technologies are all, in some way, AI generated content that is increasingly being considered as potentially applicable evidence in court systems throughout the world, even in India. However, this is new technology that can easily

[1] European Union, *Proposal for a Regulation Laying Down Harmonised Rules on Artificial Intelligence (AI Act)*, COM (2021) 206 final.

jeopardize the current standards of evidence. The present article examines the legal aspect of AI-generated evidence, its veracity, and admissibility in Indian courts.

2. Objectives

The paper has the following specific objectives:

1. To compare the legal criteria for admitting AI-generated evidence in the context of criminal prosecutions and assess how well they rationalize the technical challenges before courts.
2. To investigate reliability, authenticity and chain of custody issues with AI-based forensic and investigative products.
3. To examine comparative legal precedent and to suggest a model for the admissibility of AI-generated evidence in Indian criminal procedure, that would induce fairness without violating Due Process.

3. Research Questions

1. What are the factors to be determined in establishing the admissibility as well as trustworthiness of AI-generated evidence in criminal trials under the current Indian evidence laws?
2. What kind of legal and procedural safeguarding does the use of AI- developed evidence in the justice system require to be fair, accurate and transparent?

4. Constitutional and Legal Background

The admissibility of AI evidences in Indian criminal trials needs to be considered under the constitution, statutes and the interpretations of the courts on evidence and fair trial. Right to fair trial has been made a part of Article 21 of the Constitution. This constitutional provision places a special onus on the courts to ensure that evidence tendered before it in a criminal trial is reliable, relevant and has been procured through lawful means. In this environment, the use of artificial intelligence in investigative and forensic settings clearly offers opportunities for increasing precision, as well as the risk of procedural unfairness if not appropriately controlled.

The statutory underpinning for admissibility of evidence is mainly located in the Indian Evidence Act, 1872 (the Evidence Act) which codified rules relating to the relevancy, credibility and weight of evidence.[2] While the act does not envisage AI-generated evidence specifically, its sections on electronic records — particularly Sections 65A and 65B — will apply to AI generated evidence as long as it is saved, processed or sent in digital form. These provisions made it clear that electronic records are acceptable provided they are certified under Section 65B(4) so that it can be tested that there has been no tampering with the computer, no addition/insertion or deletion in the evidence, and that the source is safe. Nonetheless, the opacity of AI systems (often driven by proprietary algorithms and machine-learning classifiers) can defeat such traditional evidential regimes.

Court rulings have started to address the wider admissibility of electronic and technology-augmented evidence, but there have been few explicit rulings as to the admissibility of AI-generated content. There are also decisions such as Anvar P.V. v. P.K. Basheer (2014) where the Supreme Court has made it clear that electronic evidence is to be admitted only if the conditions mentioned in the statute for certification are satisfied.[3] In Arjun Panditrao Khotkar v. Kailash Kushanrao Gorantyal (2020), the Court

[2] Indian Evidence Act, 1872, Ss. 45, 65A & 65B.
[3] Anvar P.V. v. P.K. Basheer, (2014) 10 SCC 473.

reiterated the obligatory character of Section 65B compliance, emphasizing strict procedural safeguards that the judiciary will ensure. Though these cases did not occur in the era of widespread integration of AI, they illustrate the need to require verifiable authenticity and correct processes for decision making—concepts that are equally applicable to AI outputs.[4]

The lack of such evaluations in the legislative sphere and the lack of clarity regarding AI-mediate evidence also have an effect on the ability to classify such evidence, and whether it is expert opinion, body of electronic record, or both. Differentiation can spell the difference as the credibility of human expert is involved in expert opinion, whereas admissibility of electronic records is based on the technical compliance and integrity of the system. AI is not clear, as it is able to generate results without being supervised by a human, and thus, raises responsibility, explainability, and bias concerns.[5]

Even though they employ most of the similar methods in their efforts to demonstrate that AI-generated testimony is credible and admissible, the U.S. as well as the EU are at an early-stage development regarding the same. The issue related to the Indian judicial system is that it is not real yet developed to level of the primary stage. The lack of reforming the AI generated evidence will fill me with the fear that on the one hand, it will not even qualify as minimal standards of acceptance following the prescriptions of the law, on the other hand, by accepting such evidence and providing too little protection we will undermine human justice.[6]

These limitations of the Law of Evidence in its relationship with evidence carried by AI apply at the same time to the evidence and the processes that it carries out and are somewhat irregular in pressing against these constitutional and statutory foundations of the judiciary about its authority and its consistency and compliance with the process. Though to nail down all the remaining details AI-visualizations have no corresponding provisions. These gaps in the legislation need to be closed with legislative reform and judicial direction so that the rights that this AI empowers does not trample on the rights it is supposed to protect.

5. Challenges in Admissibility

The intersection of the law and the technological advancement as well as the procedural controls is implicitly evoked by the use of AI-inference evidence and the criminal trial. The problem that AI chooses to analyze and solve does so, in comparison to other registration methods of the traditional particular form, through levels of mechanized thought, which more frequently than not is itself transparent to any number of investigators, attorneys, or members of the judiciary. This exacerbates the fact that the AI evidence already is harder to pass through the relevancy, authenticity, and admissibility tests in case the undue prejudices against the accused should be avoided.

5.1 Reliability and Accuracy

The dependability of the AI-generated outputs is among the major issues. AI systems based on machine learning and neural networks are also used to discover

[4] Arjun Panditrao Khotkar v. Kailash Kushanrao Gorantyal, (2020) 7 SCC 1.
[5] S. Murlidhar, 'Fair Trial and the Constitution' 46(20) *Economic and Political Weekly* 71 (2011).
[6] European Union, *Proposal for a Regulation Laying Down Harmonised Rules on Artificial Intelligence (AI Act)*, COM (2021) 206 final.

patterns in data sets, although such data sets need to be large. Their assumptions are not enforced, they come out as probable and due to the quality of the training data, model parameters and application context, they may be highly erroneous. As an example, image recognition or voice recognition tools developed as forensics AIs can be highly accurate in a controlled environment but have a false-positive or false-negative error in the real world.[7] Courts are however obliged to tussle with the evidence value of such outputs particularly in a case where erroneous conclusion can result in wrongful conviction.

5.2 Algorithmic Bias and Fair Trial Concerns

It is possible that AI systems will reproduce or sometimes enhance biases that are represented in their training. It is especially problematic in a criminal justice application that can imply historical over-policing or discrimination tendencies in the datasets. To exemplify, predictive policing algorithm viewable as the workings of biased and discriminatory arrest practices may widely label representatives of underprivileged groups.[8] Such favoritism as a source of admissibility presents constitutional matters in Articles 14(equality before law) and 21(right to a fair trial) of such bias and prejudices could impede the validity of the evidence.

5.3 Chain of Custody and Data Integrity

A chain of custody is an important doctrine in a criminal trial, as it will ascertain that evidence was properly gathered, stored and offered without any form of mutation. The chain of custody can be checked on beyond the physical handling and include integrity of the digital procedures with AI-generated evidence. The data within the AI system to be trained is questioned whether or not it was maintained, whether the code was edited or not, and whether the result presented in the court is the same as the initial result produced by the system.[9] The evidence may be inadmissible in case of failure to provide a secure chain of custody that is verifiable.

5.4 Explainability and the "Black Box" Problem

Many AI systems—particularly deep learning models—operate as "black boxes," producing results without offering a clear explanation of the reasoning process. While this opacity does not automatically preclude admissibility, it complicates judicial scrutiny. Under Section 45 of the Indian Evidence Act, expert opinion must be capable of being examined and cross-examined; however, AI-generated outputs may lack human-interpretable reasoning.[10] This raises the issue of whether evidence that cannot be fully explained should be accepted in court, and if so, under what safeguards.

5.5 Compliance with Statutory Requirements

Sections 65A and 65B of the Indian Evidence Act require proper certification for electronic records. Yet, certifying AI-generated evidence poses practical difficulties—should the certification come from the human operator, the system developer, or the agency deploying the AI? Additionally, compliance requires assurance that the system functioned as intended at the time the output was generated.[11] Without clear statutory

[7] Cary Coglianese & David Lehr, 'Regulating by Robot: Administrative Decision Making in the Machine-Learning Era' 105 *Georgetown Law Journal* 1147 (2017).
[8] Solon Barocas & Andrew D. Selbst, 'Big Data's Disparate Impact' 104 *California Law Review* 671 (2016).
[9] R. v. Shepherd, [1993] 2 SCR 881 (Canada).
[10] Andrea Roth, 'Machine Testimony' 126 *Yale Law Journal* 1972 (2017).
[11] Indian Evidence Act, 1872, Ss. 65A & 65B.

amendments or judicial guidelines, uncertainty over certification could hinder admissibility.

5.6 Risk of Overreliance

AI tools are often perceived as objective and infallible, which can create an undue sense of certainty in judicial decision-making. This "automation bias" may lead to overreliance on AI-generated evidence at the expense of critical evaluation, cross-verification, and corroboration with other forms of evidence.[12] The legal system must guard against treating AI outputs as determinative rather than supplementary.

6. Legal Precedents and Comparative Jurisprudence

The response to AI-generated evidence in the courts around the world has differed depending on legislative frameworks, fact-finding practices, and technological acquisition rates. India No broad corpus of precedent specifically addresses AI yields, though courts have reasoned on related matter in regard to current laws on electronic evidence, expert testimony and expert opinion reports. There are judicial systems around the globe that have begun to organize the thinking of the judiciary in terms of the challenges posed by deploying automatic decision-making. The courts that considered news created by AI have shown concern over transparency, rationality, as well as fair treatment. Nevertheless, algorithmic analysis has a possibility to benefit the assistant judges on the issue of an advanced technology with proper protection in place. The credibility and rationale of machine inferences will act further to constitute a central role in their admissibility as evidence.

6.1 Indian Context

India has a testing task to do regarding creating laws in relation to the application of Asian intelligence in judicial matters. Considering criminal justice, however, maybe with the gradual movement, the benefits of AI can still be achieved, without necessarily lowering the current standard of justice. Assuming laws and courts came to a decision within the same keeping with decisions made standard-AI based with strict guidelines, then they would possibly be able to utilize AI findings to some extent, alongside the usual methods. The AI is capable of aiding in investigations provided human beings are mindful and there should be a system in place that allows one to verify or confirm of it. It will not violate the major principles of justice and duty and standard principles of fairness.[13] Advancement will require us to keep an open mind towards technological possibilities, and be on the lookout against the undesired impacts that these technologies can cause on the society.

In fact, in different courts, there is an argument by the judges on whether the models made within computers have the potential to satisfy the requirements of expert testimony to be written as a human being. Person and machine This question of correspondence of person and machine does not solve yet with the artificial intelligence playing its part to assist the judges. Lastly, all the legal system and the new technologies will do is to develop jointly, informed by one another thus being sure that the advancement now perceives a harmonious relation with the safeguarding of the civil rights and liberties.[14]

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[12] Danielle Keats Citron, 'Technological Due Process' 85 *Washington University Law Review* 1249 (2008).
[13] State (NCT of Delhi) v. Navjot Sandhu, (2005) 11 SCC 600.
[14] Ritu Gupta, 'Admissibility of Electronic Evidence in India: An Analysis' 59 *Journal of the Indian Law Institute* 3 (2017) 315.

Also, in the case of State of Delhi v, the Supreme Court made a judgment. It is not essential to strictly comply with section 65B even though it ruled that digital evidence was admissible provided there were oral testimonies given by experts to support it (Navjot Sandhu, 2005). Although the case was reducing the case in Anvar P.V., this case law indicates the courts readiness to enforce rule on the admission of evidence in exceptional situations, which principle can be transformed into a concept of how the AI information might be handled in the future.

6.2 International Approaches

In the United States, courts have confronted AI evidence primarily in the form of algorithmic risk assessment tools and forensic software. Cases such as *State v. Loomis* (2016) upheld the use of COMPAS risk scores in sentencing but acknowledged due process concerns due to the proprietary and opaque nature of the algorithm.[15] Similarly, U.S. courts have applied the *Daubert* standard to require demonstrable scientific reliability and peer review for AI-based forensic tools.

The European Union has been proactive in shaping policy and legal guidance, with the European Court of Human Rights (ECtHR) in *Big Brother Watch v. United Kingdom* (2021) stressing that surveillance and data analysis must comply with necessity, proportionality, and independent oversight.[16] While not directly about AI-generated evidence, the principles from such cases influence admissibility tests by emphasising transparency and rights safeguards.

Table: Select Judicial and Policy Approaches to AI Evidence

Jurisdiction	Key Case / Policy	Core Legal Principle
India	*Anvar P.V. v. P.K. Basheer* (2014)	Section 65B certification mandatory for electronic records; applies to AI outputs.
India	*Arjun Panditrao Khotkar* (2020)	Reaffirmed mandatory certification; emphasised procedural integrity.
USA	*State v. Loomis* (2016)	Permitted algorithmic evidence but flagged due process concerns over proprietary systems.
USA	*Daubert v. Merrell Dow Pharmaceuticals* (1993)	Established reliability and scientific validity as admissibility tests.
EU	*Big Brother Watch v. UK* (2021)	Stressed necessity, proportionality, and oversight in surveillance data use.

7. Policy Recommendations

- Statutory Recognition of AI Evidence

Enforce an amendment of The Indian Evidence Act 1872 With making AI-admissible outputs as a new class of electronic evidence by specially defining its acceptance criteria by taking into consideration the accuracy and transparency of algorithm.

- Mandatory Algorithmic Disclosure

Require disclosure of certain core technical details, including training data and sources, error rates and validation studies, for any AI tools used in the context of

[15] State v. Loomis, 881 N.W.2d 749 (Wis. 2016).
[16] Big Brother Watch v. United Kingdom, App. Nos. 58170/13, 62322/14 & 24960/15, European Court of Human Rights (2021).

criminal matters and trials, when an accused has a proprietary interest in AI tools used, to the extent feasible.

- Independent Technical Audits

Mandate independent third-party audits of AI-driven forensic tools to guarantee their accuracy, and reduce biases and evidentiary reliability issues before they are admissible.

- Judicial and Prosecutorial Training

Educate members of the judiciary, prosecuting and defending counsel about the means, scope and testing of AI evidence for sound decision-making.

- Custody Path for AI Outputs

Develop comprehensive writing a record and storage standards detailing how AI-produced evidence is to be submitted, tracked, and verified electronically.

8. Conclusion

We are on the threshold of a tipping point for the law itself as we bring artificial intelligence evidence into courtrooms. Such stealthy devices might also enhance accuracy, detail and pattern-spotting capability that human researchers might miss, but they run counter to strong principles about fairness, openness and trustworthiness. In India, the arbitrary or illogical use of it is dangerous not only because there is no clear law on it, but also because it can redefine the way for justice to be delivered and the public to trust.

Various countries have begun to experiment with different degrees of openness, of judicial checks, and of scientific scrutiny of the facts about AI, but with caution. Similar laws have been enacted around the world, and nations including the United States, the European Union and others have all unsuccessfully attempted to enact laws that resemble each other. This proves that it is not only optional but also mandatory that development and protection structures be collaborated on. Linking AI evidence to a robust system for protecting rights and procedural safeguards demonstrates that fairness need not be compromised as technology improves. Different courts on this have begun slowly to move towards integrating machine findings with human reflection, but there will never be full replacement of human reflection by machine findings.

India has an uphill task in framing laws for the use of AI in court evidence. But by working one step at a time, one might be able to get the advantages of AI while not completely undermining the old order of justice. “If you decide the law and courts based on typical AI using strong gates, then perhaps you could then use AI information in conjunction with traditional theories.” AI is useful in an investigation as long as people are cautious about using it and there is a way to continue to check on it. It will not violate the fundamental concepts of fairness, responsibility and due process of law. Yes, progress entails being receptive to the new opportunity’s technology provides, but it also means being mindful of the inexorable side effects.