



# The Implications Of Artificial Intelligence Use On Legal Liability In Indonesia

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Article	Abstract
<p><b>Keywords:</b> Artificial Intelligence; Legal Accountability; Regulation; Legal Certainty; Indonesia.</p> <p><b>Article History</b> Received: Jan 12, 2026; Reviewed: Apr 16, 2026; Accepted: Apr 29, 2026; Published: May 1, 2026;</p>	<p><i>This study is motivated by the increasing use of Artificial Intelligence (AI) across various sectors in Indonesia, which raises new challenges regarding the clarity of legal accountability, especially when AI systems produce decisions or actions that cause harm. The rapid development of AI, which outpaces existing regulations, leads to several central research questions: how AI is positioned within Indonesia's legal system, who should bear responsibility when algorithm-driven errors occur, and to what extent current laws can accommodate the risks posed by such technologies. The aim of this research is to analyze the relationship between AI and legal accountability, identify regulatory gaps, and provide a comprehensive understanding of the need for legal reform. The study employs a qualitative juridical-normative approach through analysis of statutory regulations and relevant literature. The findings indicate that current regulations do not explicitly address AI's legal status, creating uncertainty in determining responsible actors when harm occurs. Moreover, existing legal instruments remain fragmented and insufficient to address the complexity of AI technologies. This research concludes that Indonesia requires comprehensive, responsive, and adaptive regulations to ensure legal certainty and adequate public protection as AI continues to evolve.</i></p>



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## INTRODUCTION

Advances in Artificial Intelligence (AI) technology have permeated various aspects of human life and brought about fundamental changes in the way people work, interact, and make decisions in the digital age. In Indonesia, the use of AI is beginning to emerge in sectors ranging from public services, banking, transportation, and the creative industries to law enforcement, meaning this technology is no longer viewed as a future innovation but has become an integral part of daily activities (Kandriana et al., 2025). The speed and capability of AI to process massive amounts of data provide

efficiency and accuracy that were previously difficult for humans to achieve; however, behind these benefits lie far more complex issues regarding the legal status, role, and liability of systems operating autonomously. When decisions or recommendations generated by AI directly impact people's rights, fundamental questions arise regarding how national laws respond to this phenomenon, particularly in cases of system errors, algorithmic bias, or harm resulting from the use of intelligent technologies that cannot be fully controlled by humans (Haris, 2022).

The rapid development of AI has also raised new concerns, particularly because this technology operates through machine learning processes that allow systems to make decisions based on data without direct human intervention. On one hand, fast and accurate decision-making is seen as helping to improve the quality of public services and the efficiency of institutional bodies; on the other hand, AI systems are not always capable of understanding the social world, moral values, or ethical considerations that humans possess when making legal decisions. When this technology is widely adopted in the banking system for credit analysis, in the healthcare sector for initial diagnosis, or even in criminal investigations to detect patterns of crime, risks arise such as discrimination, misinterpretation of data, or abuse of authority that could harm the public. This situation underscores the need for a clearer legal framework to ensure that the presence of AI does not create uncertainty or exacerbate the potential for human rights violations in Indonesia (Sebayang et al., 2024).

Legal liability is a key issue that must be thoroughly addressed, as AI technology possesses characteristics distinct from conventional technological tools (Kandriana et al., 2025). AI systems can generate outputs autonomously based on continuously evolving learning processes, making it difficult to determine which party should be held liable in the event of harm: the developer, the service provider, the user, or even the system itself. The lack of clarity regarding who is responsible indicates that the current legal framework is not yet fully capable of accommodating the dynamics of technological development (Simbolon, 2023). Although Indonesia has the Electronic Information and Transactions Law and the Personal Data Protection Law, these two legal instruments do not explicitly regulate the form, scope, or liability models for autonomous intelligent systems, particularly when AI decisions result in legal consequences that harm specific individuals or groups.

Furthermore, the development of AI demands the harmonization of legal norms capable of addressing differing perspectives on the legal status of AI within the legal system (Noerman, 2023). To date, AI cannot be categorized as a legal subject because it lacks consciousness, will, or moral capacity as possessed by humans or legal entities; however, AI's ability to make decisions autonomously renders it a unique entity and creates regulatory dilemmas. Other countries are beginning to draft comprehensive regulations to govern the use of AI, such as the European Union AI Act, which provides an example of how a country can establish legal control over high-risk systems (Jumantoro, 2024). For Indonesia, discussions regarding these regulations are still in the early stages and require in-depth study so that the legal framework

established can protect the public without hindering rapidly developing technological innovation (Amelia, 2024).

A study on the implications of AI use for legal liability in Indonesia is crucial for providing clearer policy direction in the face of the inevitable digital transformation. Through comprehensive analysis, this research aims to identify the risks inherent in AI use, assess the adequacy of existing regulations, and propose a concept of legal liability that is relevant and adaptable to the characteristics of intelligent technology. This effort serves as a crucial foundation to ensure that the utilization of AI in Indonesia remains within the bounds of a fair, transparent, and accountable legal framework, so that this technology can deliver optimal benefits without compromising the protection of citizens' rights and the values of justice that form the cornerstone of the national legal system.

## **METHOD**

This study employs a qualitative approach using a literature review method, focusing on an in-depth analysis of legislation, legal doctrines, and prior research related to the development, use, and implications of Artificial Intelligence within Indonesia's legal system. In the process, the author reviews relevant literature, including scientific journals, legal books, international policy reports, and official government documents discussing digital technology regulations and personal data protection. This approach was chosen because legal liability issues related to AI are normative matters requiring legal interpretation based on principles, legal foundations, and global regulatory trends. The data obtained was then analyzed using a descriptive-analytical method, which involves systematically describing legal phenomena while assessing the adequacy of existing regulations in addressing the challenges posed by the use of AI. Through this method, the study aims to provide a comprehensive understanding of how the national legal framework can accommodate various risks, potential violations, and the need for legal accountability arising from the operation of AI technology in Indonesia.

## **RESULTS AND DISCUSSION**

### **The Ambiguity of Legal Liability Models for AI Systems in Indonesia**

The ambiguity surrounding legal liability models for the use of Artificial Intelligence in Indonesia is largely influenced by the absence of specific regulations governing the status, role, and responsibilities of autonomous systems. Existing legal instruments, such as Law No. 11 of 2008 on Electronic Information and Transactions (ITE Law) and its amendments, still focus on human actions in the digital realm, and thus do not explicitly address situations where AI technology's decisions or outputs result in harm (Sebayang et al., 2024). Similarly, Law No. 27 of 2022 on Personal Data Protection (PDP Law) only regulates the obligations of data controllers and processors, without providing provisions on how liability should be allocated if an AI system automatically processes personal data and gives rise to risks of misconduct. Consequently, when algorithmic errors or system failures occur such as AI

misdiagnoses in healthcare or inaccurate recommendations in credit risk assessments the existing legal framework cannot provide certainty regarding who is liable (Haris, 2022).

In other sectors, technical regulations also have not yet been able to accommodate the autonomous nature of AI. Government regulations, ministerial regulations, and sector-specific rules such as those in banking, public services, and digital transportation still limit themselves to standards for electronic system security, rather than legal liability for decisions made by intelligent systems. For example, in the financial industry, there is a POJK regarding the implementation of information technology risk management; however, these provisions only regulate the supervisory obligations of operators, not liability when losses occur due to algorithmic bias or automated decisions made by AI. This legal vacuum leads businesses, technology developers, and institutional users to have differing interpretations regarding the scope of their respective liabilities (Simbolon, 2023). In practice, this creates a gray area that complicates dispute resolution, particularly when it is difficult to prove a causal link between the losses suffered by the victim and the actions of the technology developer or operator (Kandriana et al., 2025).

The absence of specific regulations means that applying conventional legal principles to cases involving AI is often inadequate. Principles such as fault-based liability or strict liability cannot yet be applied appropriately because AI's ability to evolve and learn independently means that the line of accountability does not always trace back to humans as creators or end-users. This situation also creates the potential for injustice toward victims who suffer losses, as there is no certainty regarding the compensation mechanisms available when AI outputs are inaccurate or infringe upon individual rights (Jumantoro, 2024).

### **Risks of Privacy Violations and Harm Due to Algorithmic Bias**

One of the most significant implications of AI use in Indonesia is the increased risk of privacy violations, as AI systems operate by collecting, processing, and analyzing large volumes of data. This process is often automated and occurs without users' full understanding of how data is used or stored, thereby increasing vulnerability to the misuse of personal information (Amelia, 2024). Although the Personal Data Protection Act (PDP Act) has introduced a framework for personal data protection, in reality, many AI-based technologies have not consistently implemented the principles of transparency, purpose limitation, and data minimization. Some platforms relying on AI still collect excessive data, use automated profiling techniques, and conduct intensive monitoring that potentially threatens citizens' privacy.

In addition to privacy violations, the potential harm resulting from algorithmic bias is also a key finding in this study. Algorithmic bias arises when the training data used to build AI systems is non-representative, unbalanced, or contains discriminatory patterns that are subsequently replicated by the machine (Ghazmi, 2021). This phenomenon can be observed in various examples, such as AI-based recruitment systems that tend to reject certain candidates due to historical patterns, credit scoring

systems that may discriminate against specific groups, or facial recognition systems that are inaccurate for certain ethnic groups (Putra, 2025). Such biases can cause social, economic, and even psychological harm to individuals, yet Indonesia's legal system has not yet provided effective mechanisms to assess, audit, or correct errors generated by these algorithms.

When bias leads to incorrect or harmful decisions, victims often find themselves in a difficult position because they lack access to the technical configuration of the algorithm, are unaware of the basis for decision-making, and are unable to request verification of system errors. The limited transparency of algorithms and the absence of algorithmic audit requirements in national regulations leave the public without adequate protective mechanisms (Haris, 2022). Without standards strictly governing accuracy, fairness, and bias minimization, the use of AI in Indonesia has the potential to reinforce social inequality and create new harms that cannot be anticipated by conventional regulations. These findings underscore the need for stronger legal frameworks to ensure that AI implementation is not only technologically efficient but also safeguards citizens' fundamental rights.

### **The Urgent Need for Comprehensive AI Regulations**

Research findings indicate that Indonesia's need for comprehensive AI regulations is becoming increasingly urgent, given the rapid technological advancements and the expanding use of AI across various sectors. Currently, Indonesia still relies on general regulations not designed to govern highly autonomous technologies like AI, leaving many legal issues inadequately addressed. Compared to other countries that have begun drafting specialized regulations such as the EU AI Act, which establishes risk classifications and legal obligations for both developers and users, Indonesia remains behind in defining the safety, ethical, and accountability standards that intelligent technologies must meet. Without robust regulations, Indonesia risks facing prolonged legal uncertainty, which could hinder innovation while increasing the risk of public harm (Ghazmi, 2021).

This regulatory need extends beyond legal liability to other areas such as system transparency, algorithmic audits, personal data protection, cybersecurity, and technological ethics standards. Several countries have adopted the "trustworthy AI" principle, which requires AI systems to be explainable, monitorable, and testable; however, Indonesia does not yet have a national mechanism governing these matters. Without national standards on how AI should operate, businesses tend to implement technology according to their own interests without considering potential social impacts or risks to public rights (Jumantoro, 2024). This creates a gap between the need to foster digital innovation and the state's obligation to protect the public from the negative impacts of technology.

The research findings also emphasize that the development of comprehensive AI regulations must consider the harmonization of legal, technological, and ethical aspects. Regulations that are too strict can hinder innovation, while regulations that are too lax can lead to the misuse of technology and disregard for citizens' rights.

Indonesia needs to develop a legal framework that is adaptive, progressive, and risk-based, so that every form of AI technology can be regulated according to its level of impact on society (Noerman, 2023). The development of these regulations must involve the government, academics, industry stakeholders, and civil society to produce comprehensive rules capable of addressing the challenges of the digital age. AI-specific regulations will serve as a crucial foundation for the future of technology in Indonesia, while ensuring that the use of AI delivers optimal benefits without compromising the values of justice and the protection of human rights.

The implications of Artificial Intelligence use on legal liability in Indonesia necessitate a deep understanding of how the characteristics of this technology fundamentally differ from previous technological instruments. AI possesses the ability to perform analysis, make predictions, and make decisions autonomously, thereby challenging traditional legal structures that were originally built on the assumption that only humans and legal entities can make decisions and are therefore liable. When technology can operate autonomously, the line between human and machine actions becomes increasingly blurred, while conventional law still requires a clear actor as the perpetrator of an act. It is this condition that places AI in a problematic position: this technology is not a legal subject, yet it possesses the capacity to act, rendering existing legal frameworks inadequate to address contemporary issues (Simbolon, 2023).

On the other hand, the use of AI across various sectors demonstrates that while this technology brings about positive transformation, it also has the potential to cause harm if not closely monitored. Since AI systems operate based on data and historical patterns, the integrity of the data and the quality of the algorithms determine the accuracy of the results produced. The problem is that Indonesia does not yet have algorithmic audit mechanisms, risk evaluation obligations, or transparency standards that can ensure that AI systems operate accurately, fairly, and accountably (Sebayang et al., 2024). In terms of legal accountability, the absence of such mechanisms hinders efforts to determine whether an erroneous decision is truly a system failure or the result of human negligence in the design, oversight, or operation processes. From the perspectives of administrative, criminal, and civil law, this situation creates a loophole that renders dispute resolution ineffective because technical evidence is difficult for the aggrieved party to access and understand (Putra, 2025).

The need for AI regulation also cannot be separated from comparisons with international developments, where various countries are beginning to adopt risk-based approaches to address the uncertainties posed by autonomous technologies. This approach assesses the level of risk posed by AI systems based on their potential impact on public safety, human rights, and social stability. Indonesia can draw important lessons from regulatory models such as the EU AI Act, which establishes a multi-layered oversight framework, reporting obligations, and strict requirements for high-risk AI. The adoption of international models cannot be fully applied directly, as they must be adapted to the national social, cultural, and legal context (Amelia, 2024).

Indonesia must strengthen its regulatory, institutional, and technological ethics capacities to keep pace with the rapid pace of innovation. Without a clear legal

ecosystem, the use of AI has the potential to create new inequalities, amplify the risk of discrimination, and open the door to abuse by those who control the technology (Noerman, 2023). The development of AI regulations is not merely a matter of determining who is liable when the technology causes harm, but also ensuring that the entire process from design, development, and implementation to post-use evaluation is conducted in accordance with principles of accountability and the protection of public rights.

## CONCLUSION

The use of Artificial Intelligence in Indonesia presents significant challenges for the legal accountability system because AI's autonomous, adaptive, and not entirely human-controlled nature renders conventional legal frameworks inadequate. Uncertainties regarding the allocation of liability, risks of privacy violations, and the potential for algorithmic bias underscore that existing legal instruments ranging from the ITE Law, the PDP Law, to sector-specific regulations have yet to provide comprehensive protection against the harms that intelligent systems may cause. Therefore, regulatory strengthening is needed through a risk-based approach, transparency obligations, algorithmic audits, and clear accountability mechanisms to ensure that every AI-based decision remains legally accountable.

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