

Original Research Article

Artificial Intelligence in The Perspective of Indonesian Law: Subject or Object of Law?

ABSTRACT

The rapid development of artificial intelligence (AI) technology has presented new challenges in the field of law, particularly regarding its status as a legal subject or object in Indonesia. What is the legal position of artificial intelligence (AI) in Indonesia and what legal implications arise regarding its regulation as an object or subject of law in the Indonesian legal system? The purpose of this study is to explore and determine the legal position of AI in Indonesia, as well as analyze the legal implications that may arise from this status. This research uses a qualitative approach with normative legal research methods and comparative analysis. Data was obtained through a literature review that included national laws and regulations, international legal documents, and related academic literature. The results show that in the Indonesian legal system, AI is currently considered more as a legal object, without a personification status that allows recognition as a legal subject. This leads to various consequences, including liability issues in cases of harm caused by AI actions. This study also found that there are gaps in AI-specific regulations, creating room for debate on whether or not legal policy changes are needed to support AI as partial legal subjects or entities with limited liability. In conclusion, AI in Indonesian law is still positioned as a legal object with inadequate regulations to address the complexity of AI use in various sectors. There is a need to develop adaptive legal policies and a clearer regulatory framework to address the ethical challenges and legal responsibilities in this digital era. This research recommends legal reforms that consider a multidisciplinary approach and the precautionary principle to maximize the potential of AI without compromising legal protection for society.

Keywords: Artificial Intelligence, Legal Subject, Legal Object, Indonesian Law, Legal Responsibility, Regulation, Legal Reform.

1. INTRODUCTION

The development of artificial intelligence (AI) technology in today's digital era is increasingly rapid and has penetrated various aspects of life, ranging from industry, health, transportation, to law. In Indonesia, the use of AI is starting to be utilized for efficiency and innovation in various sectors, but regulations governing this technology are still inadequate [1]. This background underscores the importance of discussing the legal status of AI, whether it can be recognized as a legal subject with rights and responsibilities, or still be treated as a legal object subject to human control. This condition poses significant challenges in the application of law in Indonesia, especially in terms of legal responsibility and protection of the rights of individuals

and society. Artificial intelligence has the ability to make autonomous decisions, which often have a direct impact on humans [2]. For example, the use of AI in autonomous vehicles or medical systems that rely on algorithms for diagnosis and patient care raises the question of who is liable in the event of errors or harm. The lack of clarity regarding the legal status of AI poses a dilemma among legal experts and policymakers: whether AI should be considered a legal subject that can be held liable, or remain merely a legal tool or object for which the human or entity using it bears responsibility.

To date, Indonesian legislation has not explicitly regulated the legal position of AI, which has created a legal vacuum in responding to various situations involving this technology. When disputes or legal issues involving AI arise, courts often have to rely on the interpretation of laws that were not designed to deal with the complexities of modern technology [3]. This can lead to legal uncertainty that interferes with fairness and effective legal protection.

To address this challenge, considerations should be given to the development of a progressive legal framework, which could include regulation of AI liability and protection of user rights. Some countries, such as the European Union, have taken the first step by issuing draft regulations governing the safe and ethical use of AI [4]. Indonesia needs to study these approaches to create policies that can accommodate technological advancements without compromising legal and ethical aspects.

The lack of clarity in the Indonesian legal system on the legal position of AI because the current regulations do not specifically address AI, has resulted in confusion in terms of legal liability in the event of harm caused by AI's actions or decisions [5]. Without clarity on the legal status of AI, there are risks in law enforcement and protection of people's rights. Without a clear legal framework, AI users and developers in Indonesia are faced with uncertainty in determining who is liable for negative impacts or losses caused by AI. This may hinder the development of the technology due to concerns over potential legal disputes that are difficult to resolve. For example, in a situation where AI makes a wrong decision, such as in an autonomous vehicle system that causes an accident, the question arises as to whom should bear the responsibility, the vehicle owner, the software developer, the manufacturer, or other related parties [6].

This lack of clarity also hinders legal regulation to protect users' rights and prevent potential misuse of AI technology. Without adequate regulation, the use of AI may raise ethical issues, such as algorithmic discrimination, data privacy, and misuse of the technology in security. In addition, lack of clarity in the legal framework can slow down technological adaptation and innovation in the private sector due to concerns about unanticipated legal risks.

Development of a clearer and more adaptive regulatory framework, which considers the recognition of AI as a partial legal subject with limited liability, or at least the formulation of new rules capable of closing legal loopholes related to the use of AI. A survey of the literature shows that in various jurisdictions, such as the European Union, efforts have been made to regulate the use of AI, including considering ethical aspects and responsibilities [4]. Some academics argue that the recognition of AI as a full legal subject is still premature, but recognize that firmer rules are urgently needed to mitigate legal risks.

In the Indonesian context, this solution requires an in-depth evaluation of the compatibility of existing legal principles with technological developments. Indonesia's legal system, which is currently based on the Civil Code and traditional criminal law, does not have enough flexibility to deal with the complexity of AI technology. Recognizing AI as a partial legal subject can help in dividing the liability between the developer, the owner, and the AI itself with certain boundaries, which will create a clearer framework for law enforcement [7].

As a first step, the proposed regulatory framework should set out the responsibilities of parties involved in the development and use of AI. This could include the obligation of developers to ensure transparent and bias-free algorithms, as well as the responsibility of users in monitoring and controlling AI actions. The regulation could also include flexible liability mechanisms, such as through *joint liability* or tiered liability schemes that ensure legal protection for victims.

In addition, this research assesses the legal implications that may arise from the uncertainty of AI regulation, including potential conflicts of law in liability determination and consumer protection. Such implications may include situations where harm occurs as a result of AI actions, raising questions about who should be liable: users, developers, or other legal entities. The analysis also explores how legal uncertainty may impact technological innovation, where concern over unclear legal risks may hinder the development of the technology sector in Indonesia.

There is an urgent need for a legal framework that can keep pace with technological advances, striking a balance between innovation and legal protection. Given that AI has great potential to affect various sectors, comprehensive and responsive regulations are essential to ensure that AI is used responsibly and safely, and can support sustainable economic development.

Therefore, it is necessary to examine the legal position of AI in the Indonesian legal system and the legal implications that may arise from its status as an object or subject of law. With the contribution of this research, it is expected to provide new insights for policymakers and academics in developing adaptive regulatory strategies. This research is also expected to be an important reference for the government and related parties in drafting regulations that accommodate the development of AI without ignoring the principles of fairness, transparency, and protection of individual rights.

2. RESEARCH METHODOLOGY

This research uses a qualitative approach with normative legal research methods and comparative analysis [8]. This methodology was chosen to obtain a comprehensive picture of the legal position of artificial intelligence (AI) in the Indonesian legal system. The following are details of the methodology used in this research:

1. **Normative approach:** This research focuses on analyzing legal documents, including relevant Indonesian laws and regulations, such as Law No. 19/2016 on Electronic Information and Transactions (UUITE), as well as other regulations related to technology and data protection. The research will also include a review of international legal documents and AI policies in countries that already have relevant regulations, such as the European Union with its *Artificial Intelligence Act*.
2. **Secondary Data Analysis:** This research utilizes secondary data obtained from various sources, including academic journals, books, research reports, and relevant legal articles. This literature was used to understand the legal position and perspective on AI in various jurisdictions and its implications for the legal system in Indonesia.
3. **Qualitative Analysis:** All data obtained will be analyzed qualitatively using descriptive-analytical methods to develop logical legal arguments that support the development of an AI regulatory framework. This analysis will integrate normative findings and interview perspectives to formulate relevant and applicable policy recommendations for Indonesia.

Research Procedures:

1. Collect primary and secondary legal data.
2. Analyze the existing legal regulations in Indonesia.
3. Integrate findings from multiple sources to develop recommendations.

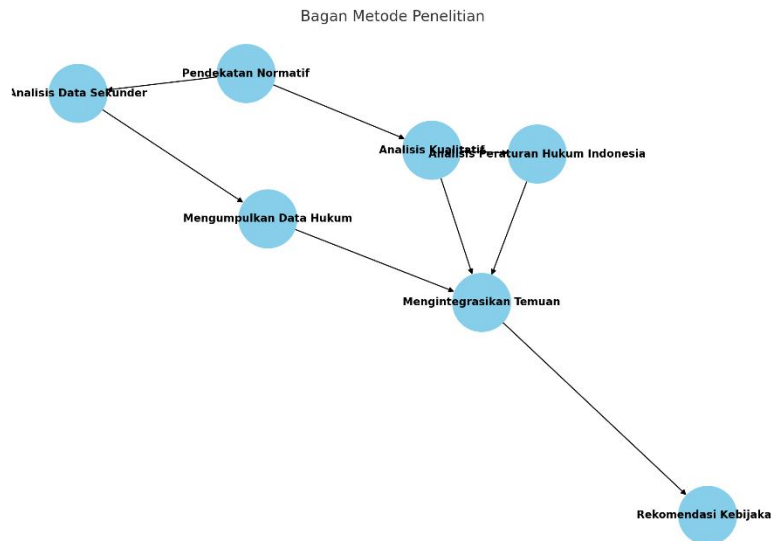


Fig 1. Research procedure

The following chart illustrates the research methodology used in this study. This chart shows the interconnected flow of the Normative Approach, Secondary Data Analysis, and Qualitative Analysis, starting from legal data collection, analysis of Indonesian legal regulations, to integration of findings to produce Policy Recommendations that are adaptive and responsive to the legal position of AI in Indonesia.

LITERATURE REVIEW

Several studies on the legal position of Artificial Intelligence (AI) in Indonesia have raised the debate on whether AI should be treated as a legal subject or object. In an article published by Ravizki and Yudhantaka (2022) in *Notaire*, they argued that AI can be considered a legal subject, which has rights and obligations equal to those of humans or other legal entities. [4]. Although AI can act independently, they argue that the creator or user of AI still has legal responsibility for the actions taken by the AI. On the other hand, Fatimah Nada and her colleagues [9] emphasize the need for clearer regulations regarding the legal position of AI in Indonesia. They suggest that AI should be treated as a legal entity with rights and obligations, but recognize that there is confusion as to who should be liable for AI actions—the creator, the user, or the AI itself. Each of these studies makes an important contribution to the developing understanding of the legal standing of AI, although the regulatory challenges that exist in Indonesia still need to be resolved.

Although there are differences of opinion on the legal status of AI, most experts agree that Indonesia needs to develop more comprehensive regulations to address the legal challenges arising from the development of this technology. However, from the literature review above, the

main weakness is that the research is limited to contractual and legal liability issues and lacks practical discussion on the implementation of regulations that can accommodate the rapid advancement of AI technology. While this research delves deeper into a broader understanding of the social and ethical implications if AI is treated as a legal subject or object in the Indonesian legal system.

4. RESULTS AND DISCUSSION

1. Artificial Intelligence (AI) and its Characteristics

AI has rapidly evolved to be capable of performing complex tasks such as autonomous decision-making, big data analysis, and human-robot interaction. The learning and adaptability characteristics of AI have led to a debate on its status in law: whether AI should be recognized as a legal subject with certain rights and responsibilities, or remain as a legal object controlled entirely by humans [10].

One of the most prominent characteristics of AI is its ability to learn independently from the data it is fed, either in the form of supervised learning, unsupervised learning, or reinforcement learning [11]. This capability allows AI to continuously improve its performance as it gains more data and experience. For example, in facial recognition systems, AI can gradually learn new patterns to improve its identification accuracy.

AI is also capable of making autonomous decisions without direct human intervention. This is seen in applications such as autonomous cars, where AI systems can evaluate traffic conditions, plan routes, and make decisions within seconds to avoid hazards [12]. In the financial sector, AI is used for algorithmic trading that can execute transactions quickly based on real-time data analysis [13]. This autonomous decision-making poses a legal dilemma as AI may make decisions that have negative consequences, raising the question of who should be liable for such actions.

Human interaction with AI in the form of social robots or digital assistants, such as chatbots and virtual assistants (e.g. Siri, Alexa), shows that AI has reached a complex level of interaction. These AI can understand and respond to voice commands, recognize emotions, and provide personalized recommendations. At an advanced level, AI with natural language processing (NLP) capabilities can carry on human-like conversations, enhancing the user experience of interacting with technology [14]. In healthcare, AI is being used to assist in patient diagnosis and treatment through medical robots and data analytics platforms [15].

The autonomous nature of AI raises fundamental questions from a legal perspective: should these entities be treated as legal subjects with responsibilities and rights, or remain as legal objects subject to human control? If AI can make decisions and act independently, then who is liable when those decisions cause harm? Is it the developer, owner, or user of the AI who should bear the legal consequences? These uncertainties trigger the need for a review of the traditional concept of legal subject that includes only humans and legal entities.

Modern AI is often based on highly complex algorithms that are difficult for ordinary humans to understand, known as black boxes [16]. This complexity raises issues of transparency and accountability. How can courts or regulators evaluate AI actions if there is no clarity on how the decision was made? This lack of clarity poses challenges in proving AI intent or responsibility in a legal context.

AI's characteristic of being able to learn and act without human control also carries ethical and social implications. There is a risk that AI may develop biases from imperfect data, resulting in discriminatory de-

cisions. For example, in employee recruitment, an algorithm trained with biased historical data may reinforce gender or racial inequalities. This raises the question of how AI can be controlled to act in accordance with fair legal and social norms.

2. The Subject vs. Object of Law Debate

Efforts to prepare a legal umbrella for AI are very important even though AI has not yet reached the level of AGI (*Artificial General Intelligence*), which is AI that has the ability to think, understand, and solve problems like humans. Currently, AI is still at the *narrow AI* level, which means it is designed for specific and limited tasks, such as facial recognition, data analysis, or natural language processing. However, with the rapid development of technology, the possibility of AGI or even *superintelligence* is becoming more and more real in the future.

Some of the reasons that reinforce the importance of preparing AI regulation early are as follows:

1. Ethical and Legal Risk Mitigation

The increasing autonomy of AI brings new risks in decision-making that are sometimes difficult for humans to control. This raises a variety of ethical and legal repercussions that need to be anticipated, especially in terms of algorithmic bias, data privacy, and human rights protection. [17]. Without clear and strict regulation, AI may operate without adequate moral guidance, potentially creating injustice or unwittingly violating individual rights.

Therefore, a comprehensive legal umbrella is needed to ensure that AI develops in a corridor that is in accordance with the ethical and fairness principles recognized by society. This legal framework should not only serve as a controlling rule, but also as an ethical guide for AI developers and users, so that the use of this technology can be done responsibly and transparently. With proper regulation, AI can provide maximum benefits to society while minimizing the risks that may arise from its increasing autonomy.

2. Responsibility and Accountability Arrangements

The development of appropriate regulations will strengthen the legal basis for enforcing liability in the context of artificial intelligence, especially in Indonesia [18]. This includes not only technical aspects related to security and privacy, but also ethical principles that need to be accommodated in the use of AI. Without a clear legal framework, the potential for misuse or violation of the law by AI, either directly or indirectly, will be difficult to manage.

Regulations that cover the responsibilities of developers and users, as well as entities that utilize AI for commercial or public purposes, can create legal certainty and protect the public from unintended negative impacts [19]. In addition, these rules can also encourage innovation by providing clear guidelines to the tech industry, so that they can develop AI with legal compliance and social responsibility in mind.

3. Anticipating AGI and Superintelligence

While we have not yet reached the level of Artificial General Intelligence (AGI), intensive research and investment trends suggest that progress towards AGI, or even superintelligence, may no longer be mere speculation. AGI will have capabilities that far surpass humans in many areas, including complex decision-making and mastery of multiple disciplines [20]. If not balanced with a legal umbrella that is prepared early on, the risk of negative impacts that are difficult to control can be even greater, from social to security aspects.

Proactive regulation will be a preventive measure to steer AI development towards positive and beneficial goals. With adaptive regulations, governments and society can better control the direction of AI development, mitigate potential harms, and ensure that these technologies operate in accordance with society's desired values. These regulations can also serve as a framework for responsible innovation, where every step forward in AI technology remains in line with ethics, safety, and protection of the public interest.

4. Increased Public Trust

Amidst public concerns about the risks of AI, transparent and accountable regulation will increase public confidence in the technology. This is crucial to support the widespread acceptance of AI, especially if it reaches capabilities that approach or even exceed human intelligence.

Considering these factors, AI regulations in Indonesia should be developed immediately to cover the diverse characteristics and levels of autonomy of AI. In addition, the regulation should be flexible enough to adapt to the rapid development of the technology. These regulations need to summarize various aspects, including legal responsibilities, rights and obligations of relevant parties, ethical supervision, and the safe use of AI in various fields.

Article 1367 of the Civil Code which regulates the liability of employers for the acts of their subordinates or servants can be a relevant basis for the legal discourse on AI in Indonesia [21]. This article states that a person, including an employer or owner, is liable for damages caused by the acts of another party under his or her supervision. In this context, the concept of an employer's liability for the acts of his subordinates can be analogously applied to AI, especially since AI acts as a "tool" that performs actions at the command or under the control of its developer, owner, or operator.

Given that AI operates based on human-created directions or programs, it can be viewed as a "worker" or "servant" in the sense that it acts on behalf of or in furtherance of the interests of the party controlling it. Article 1367(1) and (3) place the employer as the party liable for damages caused by the acts of their employees or subordinates. In this case, the owner or operator of the AI may be considered as the employer who has the responsibility for any impact or loss generated by the AI's actions.

When AI acts or makes decisions that result in harm, the concept in Article 1367 of the Civil Code can be the basis for establishing liability on the party that controls or owns the AI. [7]. Since AIs, like workers, perform actions that can be said to be within the control of the employer (owner or developer), liability will fall on them in the event of losses caused by the AI's decisions or actions.

This analysis of Article 1367 of the Civil Code shows that the Indonesian legal framework actually has a foundation to regulate liability related to the use of AI. However, to accommodate the unique and dynamic characteristics of AI, more specific and adaptive regulations will be required. These draft regulations may include guidelines regarding the level of AI autonomy, limitation of liability, and the owner's obligation to control and supervise their AI.

Thus, Article 1367 of the Civil Code provides an initial foundation in the legal discussion of AI as a subject of liability. However, to meet the legal needs of the digital era, further development is necessary for the legal framework to accommodate the complexities of modern AI.

The analogy approach that considers AI as "workers" has interesting implications in legal discourse, especially in relation to the concept of liability and the legal relationship between AI and its owners [22]. Given that AI is designed to assist human work and is capable of performing tasks autonomously, AI appears to have similar characteristics to workers. As AI evolves in everyday life, it acts as a tool that can accelerate, support, or even replace the role of humans in certain jobs.

If the AI is analogous to a worker, then the owner or user of the AI can be considered the "employer." Under Article 1367 of the Civil Code, liability for AI's negligence or misconduct in the performance of its duties can be imposed on the owner as the employer, who is liable for damages arising from the acts of his subordinates. This means that if the AI makes a mistake or even harms another party, the owner of the AI can be held liable for such actions, in accordance with the principle that employers are responsible for the actions of their servants or subordinates.

As such, the analogy of AI as a worker provides a useful starting point for understanding the legal relationship between AI and its owners, while highlighting the need for additional regulations specifically designed for AI. These regulations are important to ensure that liability for AI actions remains clearly defined for developers, owners, and other parties involved.

There are two main perspectives in the discussion on the legal status of AI, namely whether AI is simply a tool that is fully under human control or whether AI has the potential to be recognized as a legal subject with limited liability.

2.1. AI as a Legal Tool or Object

This view underlies that AI is merely an instrument that is subject to human control and supervision. In this perspective, AI is considered a legal object, where all its actions, including any potential errors or losses caused, are the sole responsibility of the developer, owner, or user of the AI. [6]. This approach is in line with existing legal principles, where objects, including tools or technologies, have no legal capacity or responsibility for their actions. According to this view, AI is not considered to have will or morality that allows for independent liability, so any errors or losses remain within the domain of responsibility of the humans who created or operate it.

With this position, legal responsibility falls entirely on the humans who play a role in the AI lifecycle, including developers, owners, and users. Every action of the AI, whether beneficial or potentially harmful, is considered to be the result of the decisions or arrangements of the humans behind it [23]. This concept reflects the traditional view in law that humans are the only legal subjects who can be held accountable for the actions performed by the tools or technologies they control. For example, if an AI performs an action that harms a third party, the user or owner who utilized the AI can be held liable, as they are considered to have control over the tool used.

While this approach fits within the existing legal structure, it also has limitations. As AI advances to be capable of autonomous decision-making without human intervention, there are situations where AI actions may not be predictable by its developers or users. This limitation poses a dilemma as it is difficult for humans to bear all the responsibility for the actions of AI that they do not fully control. This risk is further increased in AI based on machine learning or deep learning, where AI can learn patterns and make decisions outside of pre-programmed constraints.

Considering the limitations of this approach, additional, more specific regulations are essential. Existing regulations need to be updated to accommodate the unique characteristics of AI that

is able to adapt and evolve beyond human control. For example, regulations could include standards for the development and operation of AI, as well as additional supervisory obligations for users or owners to monitor and limit the autonomous capabilities of AI. In the Indonesian context, such regulations do not yet exist, which calls for a more in-depth discussion on legal liability in relation to AI.

This approach also triggers ethical and social considerations regarding the limits of human control over increasingly smart technologies. Treating AI as a mere tool may overlook the potential for broader societal impacts, especially in the context of AI's highly complex uses. Without proper regulation, AI has the potential to pose great risks in terms of data security, privacy, and fairness, especially for individuals or groups affected by AI-generated decisions. For example, in the application of AI in the field of justice or law enforcement, too much reliance on AI as a tool without considering ethical values may lead to unintended bias and discrimination.

Overall, although AI is still considered a legal object under human control, it is important for the legal system to respond to this rapid technological development with more adaptive and contextualized regulations [24]. Restrictions on the legal responsibility of AI as an object may work for now, but over time, a flexible legal framework is urgently needed to maintain a balance between the utilization of technology and the protection of society.

2.2. AI as a Legal Subject with Limited Liability

On the other hand, advances in AI technology that allow AI to learn, adapt, and even act autonomously, triggered a discourse on the possibility of making AI a legal subject with limited liability [4]. In this perspective, an increasingly intelligent and autonomous AI can have its own form of liability, albeit with uncertain limits. This is similar to the concept of a company as a legal entity—an entity that is legally recognized even though it is not human. This approach would allow AI to assume some responsibility for the actions it takes independently, especially if those actions go beyond the control of the humans operating or developing it.

The approach that sees AI as a legal subject with limited liability is based on the fact that AI technology has reached a level of intelligence that allows AI to learn and adapt independently, without human intervention at every step [24]. With its ability to act autonomously, AI can be said to have certain "behaviors" that have a direct impact on the environment or other parties [25]. This gives rise to the idea that AI can be granted limited legal status, similar to legal entities such as companies, where the entity is recognized as a legal subject and can be held liable within certain limits.

If an AI is given limited legal status, some of the responsibility for its autonomous actions can be placed on the AI entity itself. For example, if an AI acts beyond the developer's prediction or control and causes harm, transferring some of the liability to the AI could provide a new mechanism for handling risk. This can reduce the reliance on full human responsibility, especially when the AI's actions can no longer be predicted or controlled by its owner or developer.

This approach requires a fundamental change in legal definitions, especially in setting the boundaries of the responsibilities and rights that may be granted to AI. If AI is to be positioned as a legal subject with limited liability, regulations need to specify what types of decisions or actions AI can be held accountable for independently [26]. This is complicated because, unlike humans, AI does not have will, consciousness, or moral accountability.

Such arrangements require careful consideration to avoid ambiguity in application. Any policy must be able to clarify how responsibility will be shared between AI and those involved in its development, and under what circumstances AI can be considered to be "acting" autonomously. This challenge requires a cross-disciplinary approach that combines legal, ethical, and technological perspectives to produce a balanced regulatory framework that is adaptive to the rapid development of AI, without compromising the protection of society.

This approach also poses implementation challenges, both technical and ethical. On the one hand, AI has no intention or morality, so recognizing AI as a legal subject could be seen as blurring human responsibility. On the other hand, this recognition could provide more protection for users, as AI as a legal subject would assume certain risks that are currently only imposed on its owners or developers. Therefore, the discourse of making AI a legal subject with limited liability needs to be carefully considered, taking into account its potential impact on the prevailing legal system, justice for society, and safety in the application of AI in various sectors of life.

4. CONCLUSION

The increasingly complex development of artificial intelligence (AI) technology demands legal certainty regarding its status and responsibilities in the Indonesian legal system. Currently, AI is generally treated as a legal object that is fully under human control. Within this framework, the legal responsibility for any AI actions, including any errors or losses it causes, lies with the developer, owner, or user of the AI. This approach is consistent with existing legal principles, but has limitations as the autonomy of AI increases.

On the other hand, with AI's increasingly advanced ability to act independently, there is a discourse to grant AI limited legal status as a legal subject. This approach allows AI to have its own liability within certain limits, similar to other legal entities such as companies. This recognition could provide a new mechanism to manage risks arising from AI's autonomous decisions, while reducing the associated human liability burden.

However, the recognition of AI as a legal subject poses great challenges, both in defining the limits of responsibility and in its practical implementation. Therefore, although still in the discussion stage, it is important for the Indonesian legal system to immediately formulate a regulatory framework that is adaptive to the advancement of AI, both as an object and a legal subject with limited liability. This will not only provide better legal certainty, but also ensure fair and appropriate protection for society and support the responsible use of technology.

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