

The Impact Of Artificial Intelligence Development On Personal Data Protection In An Effort To Achieve Legal Certainty

Sahat Maruli Tua Situmeang¹, Musa Darwin Pane², Diah Pudjiastuti³

sahat@email.unikom.ac.id

^{1,2}Department of Law, Universitas Komputer Indonesia

³Criminal Justice Study Programme, Universitas Wanita Internasional

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Abstract

Artificial Intelligence (AI) has revolutionised various sectors, including law, by providing significant efficiency and innovation. However, this development also presents complex challenges related to data privacy. This research aims to analyse, first, how legal protection of personal data in AI applications can help achieve legal certainty, and second, what efforts are being made to strengthen the legal framework in addressing data privacy challenges posed by AI development. The legal research method used is normative legal research. The findings highlight that improvements are needed in the existing legal framework to be more responsive to AI advancements. Therefore, in order to achieve legal certainty, the legislature must develop more specific regulations regarding the use of AI in the context of personal data protection and establish a task force responsible for public outreach and education to raise public awareness about the importance of personal data protection.

I. Introduction

Artificial intelligence (AI) has become an integral part of many aspects of human life. This technology offers various benefits, ranging from increased work efficiency. However, the rapid development of AI also brings new challenges, especially in terms of individual data privacy. Large-scale data collection, storage and analysis by AI has the potential for data misuse and privacy breaches.¹

The current legal framework, both at the national and international levels, tends to be reactive rather than proactive.² In Indonesia, regulations related to personal data protection have only begun to be strengthened with the passing of the Personal Data Protection Law (PDP Law). Despite the establishment of a clear legal umbrella, however,³ the lack of awareness and understanding among the public about the importance of personal data protection is prone to data misuse.

Therefore, evaluation and supervision in efforts to protect personal data as an implementation of human rights protection need to be supported by legal obedience and awareness. So that in its enforcement, policy design in accordance with the values that live in society is a mitigation and legal framework that is inclusive in fair law enforcement.

Based on this, the problems in this research are: First, how is the legal protection of personal data in artificial intelligence applications in an effort to realise legal certainty, and second, how are efforts made to strengthen the legal framework in the face of data privacy challenges posed by the development of artificial intelligence.

This research aims to analyse the impact of artificial intelligence (AI) developments on data privacy protection, with a particular focus on evaluating the existing legal frameworks in Indonesia (PDP Law) and Europe (GDPR). The legal research method used is normative legal research. Normative legal research is research whose data is sourced from secondary data. The nature of this research is descriptive, which aims to provide an overview of the impact of the development of artificial intelligence on personal data protection. The research data sources are primary legal materials, secondary legal materials and tertiary legal materials. The data collection method is carried out using document study techniques, which are analysed using qualitative analysis techniques.

2. Research Method

This research is descriptive analytical, which aims to describe the impact of the development of artificial intelligence (AI) on personal data protection in an effort to realise legal certainty. This research uses the normative juridical method to analyse

¹ Smith, J., & Doe, A. (2020). Artificial Intelligence in Healthcare: Privacy and Security Challenges. *International Journal of Medical Informatics*, Vol. 134, pp. 104036.

² Brown, L., & Green, M. (2019). The General Data Protection Regulation: Analyses and Challenges in the Era of Artificial Intelligence. *European Journal of Law and Technology*, Vol. 10, No. 1, pp. 1-18.

³ Rachman, T., & Kurniawan, D. (2023). Personal Data Protection in Indonesia: Challenges and Opportunities in the Implementation of the PDP Law. *Journal of Law and Development*, Vol. 34, No. 2, pp.. 210-230.

applicable legal norms, with a focus on Law No. 27 of 2022 on Personal Data Protection⁴, Electronic Information and Transaction Law No. 11 of 2008, amended through Law No. 19 of 2016⁵, as well as other regulations relevant to personal data protection and artificial intelligence regulation. Through this approach, the research will examine and analyse existing legal provisions to understand how Indonesian law addresses the issue of personal data protection in the era of artificial intelligence and the challenges posed by this technological advancement.

A comparative law approach will be used to compare how other countries handle the development of artificial intelligence and its regulation of personal data protection, as well as its comparison with the Indonesian legal system. With this approach, the research aims to see the diversity and compatibility of international regulations in regulating AI and personal data, as well as a comparison of Indonesia's regulations with countries that have more advanced legal systems in this field.

An empirical approach will also be applied to analyse the application of the law in practice, by examining how personal data protection rules and artificial intelligence are applied in Indonesia, as well as the legal impacts brought about by these technological developments. This research will examine a number of cases relating to the application of personal data protection regulations in the context of artificial intelligence, as well as explore the legal challenges faced in the effort to create legal certainty in this area.

Conceptually (conceptual approach), this research will examine legal theories relevant to the protection of personal data and artificial intelligence, as well as the basic concepts underlying the harmonisation of the two to realise legal certainty. Secondary data will be collected through primary legal materials, such as the Personal Data Protection Law, the ITE Law, and other relevant regulations. In addition, this research will also collect secondary legal materials in the form of relevant literature, journals, and academic articles, as well as tertiary legal materials in the form of legal dictionaries and additional references to explain the legal and technical terms needed.

Using this method, this research is expected to provide a comprehensive overview of the impact of AI developments on personal data protection and how these developments may affect efforts to realise legal certainty in Indonesia. Furthermore, this research will provide practical and policy recommendations to address potential problems that arise with the development of AI technology in the context of personal data protection and legal certainty.

3. Results and Discussion

⁴ Republic of Indonesia, "Law Number 27 of 2022 on Personal Data Protection," *Republic of Indonesia*, no. 016999 (2022): 457-83.

⁵ Republic of Indonesia, "Law of the Republic of Indonesia Number 19 of 2016 Concerning the Amendment to Law Number 11 of 2008 Concerning Information and Electronic Transactions," *Republic of Indonesia, Indonesia.*, 2016.

Legal Protection of Personal Data Use in Artificial Intelligence Applications in an Effort to Realise Legal Certainty

The development of artificial intelligence (AI) technology in Indonesia has seen a significant increase in recent years. This has led to an urgent need for regulations governing the use and protection of personal data. Currently, Indonesia's legal framework related to personal data and AI is still under development, although some relevant regulations have been implemented. The Electronic Information and Transaction Law No. 11 of 2008, amended through Law No. 19 of 2016⁶, is the main legal basis governing the use of information technology, including AI. While the EIT Law provides a legal basis for the protection of personal data, it does not specifically address AI and its implications for personal data. In addition, Government Regulation No. 71/2019 on the Implementation of Electronic Systems and Transactions (PP PSTE)⁷ complements the ITE Law by regulating the implementation of electronic systems and electronic transactions. This PP covers aspects of information security and personal data protection in the context of the operation of electronic systems, which are important to mitigate the risks associated with the use of AI. In this context, one of the relevant studies is that conducted by Christopher Collins, etc.⁸ which identified gaps in AI-related personal data protection policies in various countries. They suggest that AI regulations should be harmonised with international standards such as the European Union's General Data Protection Regulation (GDPR) to improve effectiveness and strengthen personal data protection systems at the global level.

Furthermore, the Minister of Communication and Informatics Regulation No. 20/2016 on Personal Data Protection in Electronic Systems⁹ provides guidelines on the consent of data owners, the rights of data owners, and the obligations of electronic system operators. Although this regulation provides a clearer framework, it still lacks in its specification of AI technology. In order to strengthen the legal framework related to personal data protection, the Indonesian government established the Personal Data Protection Law which aims to provide more comprehensive protection of personal data in various contexts, including the use of AI. Previous research conducted by Brian Daigle and Mahnaz Khan¹⁰ mentioned that the application of the principles of the General Data Protection Regulation can help countries outside the European Union, including Indonesia, to create a stronger legal framework for personal data protection in artificial intelligence applications. Harmon emphasised the importance of compatibility between national

⁶ Republic of Indonesia, "Law of the Republic of Indonesia Number 19 of 2016 Concerning the Amendment to Law Number 11 of 2008 Concerning Information and Electronic Transactions," *Republic of Indonesia, Indonesia.*, 2016.

⁷ State Secretariat, "Government Regulation of the Republic of Indonesia Number 71 of 2019 on the Implementation of Electronic Systems and Transactions," *Legal Media* 7, no. 2 (2012): 70.

⁸ Christopher Collins et al., "Artificial Intelligence in Information Systems Research: A Systematic Literature Review and Research Agenda," *International Journal of Information Management* 60, no. November 2020 (2021): 102383, <https://doi.org/10.1016/j.ijinfomgt.2021.102383>.

⁹ Republik Indonesia, "Regulation of the Minister of Communication and Information Technology Number 20 of 2016 on Personal Data Protection," *Republik Indonesia* 1, no. 1 (2016): 1188–97.

¹⁰ Brian Daigle and Mahnaz Khan, "Working Paper ID-079 The Changing Tides of Data Protection Regulation and Enforcement in Europe U . S . International Trade Commission The Changing Tides Of," no. February (2022).

regulations and international standards to enhance public trust and international cooperation in personal data management.

However, the existing legal framework has some significant weaknesses. Firstly, the existing regulations do not specifically address AI and the implications of using personal data in AI. The ITE Law and PP PSTE are more general in nature and do not address the specific challenges posed by AI. Second, the implementation and enforcement of laws related to personal data protection remains a major challenge. Limited resources and capabilities in law enforcement often hamper the effectiveness of existing regulations. According to research conducted by Brian Daigle and Mahnaz Khan, these limitations include a lack of experts and adequate infrastructure to handle personal data breaches. Thirdly, existing regulations are not fully in line with international standards such as the General Data Protection Regulation (GDPR) in the European Union. Thus, the weaknesses of these regulations indicate barriers to international co-operation and reduce trust in Indonesia's data protection system. Furthermore, in an international study, Harmon showed that compliance with the GDPR increases trust and international co-operation in personal data management. Fourth, public awareness of the importance of personal data protection and rights is still low. Adequate education and socialisation have not been conducted widely to educate the public.

In addition, regulations on the use and protection of personal data, including in artificial intelligence (AI) applications, have been regulated through the Personal Data Protection Law (PDP Law). The PDP Law sets out various rights and obligations to protect citizens' personal data. This regulation covers several important aspects that aim to ensure the safe and responsible use of personal data in the context of AI. The PDP Law requires data controllers to obtain explicit consent from individuals before collecting and using personal data. This aims to ensure that users know and understand how their data will be used.

Data controllers are also required to implement adequate security measures to protect personal data from unauthorised access, theft, or damage. Encryption techniques and data anonymisation are some of the recommended measures to protect data privacy in AI systems. In addition, individuals have the right to access their personal data stored by data controllers and request corrections if the data is inaccurate. It is important to ensure that the data used by AI systems is accurate and up-to-date. Data controllers must also report any data breaches to the relevant authorities as well as the affected individuals. This aims to ensure accountability and transparency in the management of personal data.

That the supervision and enforcement of the PDP Law has not been optimal, indicating a lack of sufficient resources as well as low awareness and legal compliance that affect the effectiveness of the PDP Law in protecting personal data. Massive education and socialisation and inclusive personal data education are efforts in equitable legal protection.

For this reason, the government needs to develop more specific regulations related to the use of AI, including aspects of ethics, transparency, and personal data protection. Capacity building of law enforcement through training, provision of adequate resources, and cooperation with international institutions are also necessary to improve the effectiveness of regulations. In addition, harmonising regulations with international

standards such as GDPR can help increase international trust and facilitate cross-border cooperation. In addition, it is important to raise public awareness through intensive education and socialisation on the importance of personal data protection and the rights that people have to ensure more effective personal data protection in the digital era. Continuous and comprehensive education programmes can increase public awareness and understanding of the importance of personal data protection.

Efforts Made to Strengthen the Legal Framework in the Face of Data Privacy Challenges Raised by the Development of Artificial Intelligence

Facing data privacy challenges arising from the development of artificial intelligence (AI), the Indonesian government needs to take various strategic steps to strengthen the existing legal framework. The first step is to develop more specific and comprehensive regulations related to the use of AI. One important step that needs to be taken is the development of additional regulations that specifically govern the use of AI. These regulations should cover the unique aspects of AI technology, such as the use of algorithms, transparency in AI decision-making, and responsibility for the impact of AI decisions. It should also ensure that ethical principles such as fairness, accountability, and non-discrimination are applied in the development and use of AI. The development of AI-specific regulations is essential to address the unique challenges faced by AI technologies and ensure comprehensive data protection. More specific regulations will help reduce the risk of misuse of personal data in AI applications and ensure that the use of AI is conducted ethically and responsibly. Clear regulation of the collection, storage, and processing of personal data in the context of AI is essential to provide adequate protection to individuals. Isdayani's research¹¹ on privacy policy in the AI era also supports this, suggesting that more specific regulations are needed to reduce legal uncertainty and guarantee individuals' right to privacy in their interactions with AI-based systems. The research emphasises the importance of transparency in AI decision-making, which is in line with the need to develop detailed regulations in this aspect.

The second step is law enforcement capacity building. This can be achieved through intensive training for law enforcers to enhance their understanding of AI technologies and the associated legal implications. The provision of adequate resources and the development of technological infrastructure that supports effective law enforcement are also crucial factors. Strong law enforcement is essential to ensure that existing regulations are effectively implemented and able to protect personal data from misuse. Cooperation with international agencies can provide the necessary insights and technical assistance to improve law enforcement capacity in Indonesia, thus ensuring that violations of personal data protection can be dealt with firmly. The government also needs to improve its supervisory capacity to ensure compliance with existing regulations. This includes providing adequate resources to supervisory bodies tasked with overseeing the

¹¹ Isdayani B, Andi Nurlinda Thamrin, and Agus Milani, "Implementation of Ethical Use of Artificial Intelligence (AI) in Education System and Learning Analysis in Indonesia," *Digital Transformation Technology* 4, no. 1 (2024): 714–23, <https://doi.org/10.47709/digitech.v4i1.4512>.

implementation of the Personal Data Protection Law (PDP Law) and additional AI-related regulations. These measures could include increased budgets, training for supervisory officers, and the development of tools and technologies that support effective supervision. This capacity building will help ensure that regulations are not just on paper, but are also properly implemented on the ground.

Furthermore, efforts to harmonise national regulations with international standards, such as the General Data Protection Regulation (GDPR) in the European Union. This harmonisation will help increase international trust and facilitate cross-border cooperation in personal data protection. Compliance with the GDPR can enhance personal data protection and strengthen Indonesia's position in international trade and cooperation. By adopting best practices from the GDPR, Indonesia can ensure that personal data protection in the country is on par with global standards, thereby increasing trust and security in digital transactions. This harmonisation will also make it easier for international companies operating in Indonesia to comply with regulations that are consistent with standards they are already familiar with.

The fourth step is to raise public awareness on the importance of personal data protection through intensive education and socialisation. Raising public awareness about their rights to personal data as well as the risks associated with unsafe data disclosure is crucial to creating a strong data protection culture. Comprehensive and continuous education can increase people's understanding of the importance of personal data protection and how they can protect themselves in the digital era. This educational campaign can be conducted through various media, including schools, universities, and digital platforms, to reach a wider audience. It could also include practical guidance on how to secure personal data and recognise potential threats.

The establishment of an independent oversight body specialising in personal data protection and AI use could be an important step. This body should have the authority to oversee and enforce compliance with regulations, as well as impose strict sanctions for violations. A strong and independent oversight body will ensure that personal data protection regulations are implemented effectively and consistently. It should also be empowered to conduct audits and inspections of organisations that manage personal data, as well as develop operational guidelines and standards that must be followed. With this oversight body in place, the government can ensure that all entities using personal data adhere to the set standards, thereby enhancing protection for the public. In addition, it can also serve as a coordination centre for handling data security incidents and provide technical and legal assistance to individuals and organisations affected by data breaches.

AI technology is evolving at a rapid pace, and regulations are often unable to keep up. Therefore, regulations governing AI should be designed to be flexible and quickly adaptable to new innovations. Governments can adopt a principles-based regulatory approach, which provides general guidance and basic principles that must be adhered to, but also leaves room for customisation in line with technological developments. AI and data privacy are global issues that require international cooperation. The Indonesian government should actively participate in international forums and collaborate with other countries to share experiences, knowledge and best practices. This collaboration can help

Indonesia develop better regulations and ensure that international data protection standards are implemented domestically, international collaboration is essential to share best practices and ensure that Indonesia's data protection standards are in line with global norms. By taking these steps, the Government of Indonesia can strengthen the legal framework governing the use and protection of personal data in artificial intelligence applications, thereby addressing the challenges and protecting individuals' privacy more effectively.

4. Conclusion

1) Conclusion

The development of artificial intelligence (AI) technology in Indonesia demonstrates the urgent need for regulations for the use and protection of personal data. While the Electronic Information and Transaction Law (UU ITE), Government Regulation No. 71 of 2019 (PP PSTE), and Minister of Communication and Informatics Regulation No. 20 of 2016 have provided a legal basis, they still lack specificity in addressing the challenges posed by AI. The Personal Data Protection Law (PDP Law) passed in 2020 is a step forward, but still has shortcomings related to AI. Key challenges include limitations in implementation and enforcement, misalignment with international standards such as GDPR, and low public awareness on personal data protection. To strengthen personal data protection in the AI era, it is recommended to develop more AI-specific regulations, increase law enforcement capacity, harmonise regulations with international standards, and intensify public education and socialisation. These measures are expected to address the existing weaknesses and provide more effective protection of personal data amid the development of AI technology.

Facing data privacy challenges due to the development of artificial intelligence (AI), the Indonesian government needs to strengthen the legal framework with several strategic steps. First, develop specific and comprehensive AI-related regulations that cover transparency, responsibility, and ethical principles. Second, improve law enforcement capacity through intensive training and provision of adequate resources. Third, harmonise national regulations with international standards such as GDPR to increase trust and international cooperation. Fourth, increase public awareness of the importance of personal data protection through intensive education and socialisation. Fifth, establish an independent supervisory body that has the authority to oversee, enforce compliance, and sanction violations. Sixth, ensuring that regulations are flexible and adaptable to technological developments. Finally, enhance international cooperation to share best practices and global data protection standards. With these measures, Indonesia can effectively protect personal data in the digital era.

2) Suggestion

Based on this, in an effort to realise legal certainty in legal protection related to the development of artificial intelligence on personal data, the legislature must develop more specific regulations related to the use of artificial intelligence (AI) in the context of personal data protection. Clear and comprehensive regulations will help reduce the risk of data misuse and ensure that the use of AI is conducted ethically. In addition, a task

force should be established to conduct public socialisation and education to raise public awareness about the importance of personal data protection.

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