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Legal Uncertainty in Criminal Law Enforcement through the Utilization of Artificial Intelligence Technology in Indonesia

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ABSTRACT
The integration of Artificial Intelligence (AI) technology in law enforcement has become a significant development in Indonesia's information technology landscape. The use of AI in law enforcement presents substantial challenges, including issues of accountability, privacy concerns, and ethical implications. This study aims to evaluate the effectiveness of existing regulations in addressing the use of AI technology in criminal law enforcement in Indonesia and to identify the need for comprehensive legal reforms. The findings indicate that although regulatory frameworks exist, their effectiveness in managing AI applications in criminal law enforcement remains inadequate. There is an urgent need to update the laws to accommodate the rapid advancements in AI and to address emerging legal uncertainties. Comprehensive legal reforms are essential to ensure that AI-enabled law enforcement can be conducted effectively and in accordance with fundamental legal principles.
Keywords: : Artificial Intelligence; Law Enforcement; Legal Uncertainty

INTRODUCTION

Amid globalization and digital transformation that is sweeping across Indonesia, Indonesia has not escaped the current wave of technological and information developments. As internet penetration and smartphone adoption increase across the country, Indonesian people are increasingly connected to the digital world (Ahmad, 1970). The growth of the digital economy and the presence of giant technology companies have also changed the business landscape significantly. Not only that, the Indonesian government is increasingly paying attention to the importance of investment in information technology to increase public sector efficiency and encourage innovation (Azzahra et al., 2024; Mergel et al., 2024; Mikhaylov et al., 2018).

One technology that is increasingly dominating and frequently used in various fields is Artificial Intelligence (AI) technology. AI refers to the development of computer systems capable

of performing tasks that typically require human intelligence, such as natural language processing, pattern recognition, and decision-making (Desiani & Arhami, 2006). In Indonesia, AI has been applied in various sectors, including health, finance, education and transportation (Kankanhalli et al., 2019; Singh et al., 2024). For example, in the health sector, AI operations analyses medical data and supports disease diagnosis (Ghatge & Parasar, 2023; Nurjanah et al., 2024). Meanwhile, in the financial sector, AI is used for risk analysis and fraud detection. The existence of AI provides great potential to increase efficiency, productivity, and innovation in various industries, but it also raises questions about ethics, privacy, and its impact on human employment (Hania, 2017).

AI is a technology that has the form of a machine that can imitate human actions, can also be developed using human thinking knowledge, and can carry out human thinking procedures. AI can carry out activities in the same way as humans, which often brings unrest to people's lives (Dahria, 2008). AI or artificial intelligence is one of the technological developments concerning several countries (Sutojo et al., 2011). AI currently in Indonesia is a new challenge that must be faced from various existing impacts and there are concerns about threats from new technological developments (Khan, 2024; Muzykant et al., 2023). The application of AI can be an example of several developed countries as a special basic consideration in the development of regulations and policies. However, Indonesia currently does not have policies and regulations for developments in AI technology (Kusumawardani, 2019). Indonesia already has laws and regulations relating to technological developments, namely Law Number 19 of 2016 concerning Amendments to Law Number 11 of 2008 concerning Electronic Information and Transactions, which is then called the ITE Law. However, the ITE Law does not yet provide specific and specific regulations regarding the use of AI, which is present in people's lives today.

AI currently brings anxiety that AI can often carry out the same legal actions as humans. Where the sophistication of AI can surpass the capabilities of humans (Yudoprakoso, 2019). Today's AI is not just an object that will work when commanded by humans, but AI is also capable of carrying out all actions automatically, just like a human (Carrillo, 2020). AI is not placed in the position of a legal subject where AI can carry out legal actions like humans because AI is not a legal subject or legal entity, and AI is also not placed as a legal object because AI carries out legal actions (Stuurman & Lachaud, 2022).

The emerging legal uncertainty regarding AI's ability to perform the same legal acts as humans can be a source of significant concern. It is because AI's sophistication has surpassed humans' capabilities in several aspects (Pendey, 2023). AI is not only an object that waits for orders from humans but also can make decisions and act automatically, similar to human behaviour (Kusumawati, 2018). However, within the legal framework, AI is not placed as a legal subject or legal entity, so it does not have the legal responsibilities that individuals or legal entities have (Stahl et al., 2022).

For example, in the case of traffic accidents involving autonomous vehicles controlled by AI, the question of who is responsible for the accident becomes complicated. Should the vehicle owner, the manufacturer of the AI device, or even the AI itself be held responsible? Ambiguity about the legal status of AI may result in difficulties in determining liability and paying compensation in such cases. Additionally, in law enforcement, if AI is used to monitor and analyze criminal activity, questions about privacy and fairness may arise because AI does not understand the social or ethical context that might influence decision-making. Therefore, it is necessary for a clear and comprehensive legal framework to address these uncertainties and ensure that the use of AI in legal contexts occurs fairly and safely.

RESEARCH METHODS

The research employs a normative juridical research method with a legislative approach and analysis and a qualitative descriptive analysis approach. Through the legislative approach, this research will examine the legal framework governing the enforcement of criminal acts through the utilization of Artificial Intelligence (AI) technology in Indonesia. The qualitative descriptive analysis approach is used to depict and analyze the legal uncertainties arising from the application of AI technology in law enforcement, including related challenges, issues, and implications. Thus, this research aims to provide an in-depth understanding of how law and AI technology interact in the context of criminal law enforcement in Indonesia, as well as to identify steps that can be taken to address emerging legal uncertainties.

RESULTS AND DISCUSSION

The Impact of Using Artificial Intelligence Technology in the Criminal Enforcement Process in Indonesia

AI was created to embody intelligence and cleverness in performing tasks like those carried out by humans related to reasoning, thinking, knowledge, decision-making, and problem-solving. AI can utilize its knowledge and think like humans to solve existing problems. Thus, AI, which thinks and acts like humans, can also engage in legal acts. In the ITE Law, there are no specific rules regarding the definition or use of AI. If we look at Article 1 Paragraph (1) of the ITE Law, legal subjects consist of senders, receivers, individuals, corporations, and the government. Thus, AI is not classified as a legal subject.

Salmond states that in legal theory, an individual is someone whom the law considers to have the ability to have rights and obligations. Any individual with such ability is considered a legal subject, even if they are not human. Salmond explains that during slavery, humans were not considered legal subjects or individuals by the law itself. Instead, although not human, legal subjects determined by the law are regarded as legal subjects or individuals with rights and obligations equal to humans.

Therefore, there is legal uncertainty regarding the position of AI, which brings various impacts on the process of criminal law enforcement in Indonesia. The main impact is the difficulty in identifying responsibility for the use of AI for criminal law enforcement in Indonesia. AI producers may be one of the parties responsible for AI actions that violate the law. However, in many cases, AI producers may be difficult to determine, especially if the AI is a product of joint development or open-source. Additionally, AI users can also be held responsible, especially if the user does not use the AI properly or disregards proper protocols in its implementation. However, assigning responsibility to users can also be challenging, especially if users do not fully understand or have full control over AI behavior. In addition to producers and users, there is also the question of whether AI itself should be responsible for its actions. However, attributing responsibility to AI as a non-human entity also has complicated legal and ethical implications.

Another impact of using AI in law enforcement is data misuse. AI requires extensive access to individual data to train its algorithms, which can threaten individual privacy if the data is not processed correctly or accessed unlawfully. Data misuse may include unauthorized or unpermitted use of data for unauthorized purposes, such as unwanted or discriminatory surveillance. Additionally, the use of AI in law enforcement also has the potential to reinforce biases in algorithms. AI algorithms tend to make decisions based on existing training data, which may reflect biases inherent in that data. It can result in discrimination or injustice in legal decisions, such as unfair racial or social profiling or disproportionate treatment of individuals.

For example, in law enforcement in Indonesia, AI utilization in driving, such as autopilot usage, can lead to criminal acts and losses if errors occur. Although autopilot is designed to improve safety and comfort in driving, the potential for errors or failures in the technology can lead to criminal acts and losses. For instance, in cases of vehicle accidents involving autopilot, questions about who is responsible for the accident become complicated. Is it the driver using the autopilot feature, the vehicle manufacturer developing the technology, or even the regulatory system allowing the use of autopilot? Additionally, AI technology failure in detecting emergencies or changes in road conditions can lead to accidents potentially resulting in loss of life or property, which may be treated as criminal acts.

Furthermore, the facial recognition technology in AI-based crime monitoring and perpetrator identification systems, by police data, raises concerns regarding individual privacy and potential data misuse, as well as the tendency for algorithms to trigger racial or social biases in identifying criminals. Additionally, the use of AI-based facial recognition technology in public security systems, such as in train stations or airports. Although this technology is intended to enhance security by detecting individuals involved in criminal activities, there is a potential for errors in facial identification. AI systems may misidentify individuals not involved in crimes as suspects, or conversely, fail to identify the actual perpetrators. Such errors can result in criminals

evading surveillance, while innocent individuals may become victims of injustice or discrimination.

These cases raise legal uncertainty and concerns in determining accountability in criminal law enforcement in Indonesia. Legal uncertainty arises due to the lack of clear regulations regarding the use of AI technology in law enforcement, leading to controversial decisions or actions taken by law enforcement authorities that may result in different interpretations. Additionally, concerns about accountability arise due to the difficulty in determining who is responsible for the errors or failures of AI technology in the law enforcement process, whether it be the manufacturer, user, or the AI technology itself.

The Effectiveness of Regulations in Indonesia in Dealing with the Use of AI Technology for Criminal Law Enforcement

The existing regulations in Indonesia currently do not include specific legislative rules governing the use of AI in law enforcement. Although the ITE Law is regulating the use of technology at present, this regulation focuses more on technical aspects and electronic transactions rather than addressing the use of AI technology in the context of law enforcement. Thus, there is legal uncertainty and a legal vacuum regarding how AI should be regulated and supervised in law enforcement. Existing regulations do not provide sufficiently clear guidance on the responsibilities, authorities, or limitations of AI usage by law enforcement agencies. It leaves room for misuse, uncertainty, and potential violations of human rights and individual privacy of AI technology in law enforcement.

In contrast to other countries such as the United States and several European countries that have issued the Criminal Justice Information Services (CJIS) Security Policy regulating data security and privacy standards in AI usage. Furthermore, within the European Union, the General Data Protection Regulation (GDPR) has been issued to regulate privacy and personal data protection, including data used in AI. Additionally, China has The Cybersecurity Law of the People's Republic of China regulating data and information security, including data used in AI.

Therefore, it can be concluded that there is a lack of specific and comprehensive regulations regarding the use of AI technology in the context of law enforcement in Indonesia, where the ITE Law has not been able to fully address the challenges and issues arising from the development of AI technology. There is ambiguity regarding the responsibility and accountability in the use of AI technology by law enforcement agencies. It raises the potential for abuse of power and human rights violations, as well as increasing the risk of injustice in the law enforcement process.

Regulations in Indonesia still face inefficiency with current emerging challenges where existing regulations have not been fully capable of addressing challenges such as data privacy, security, and justice related to the use of AI in law enforcement. AI technology usage in law enforcement often involves the collection, storage, and analysis of individuals' data. However, existing regulations have not provided adequate protection for the privacy of individuals involved

in these processes. It can lead to the potential misuse of personal data by law enforcement agencies or other parties, as well as concerns about privacy and human rights violations. AI technology utilization in law enforcement is vulnerable to cyber security risks, such as hacker attacks or data manipulation. Existing regulations have not been able to ensure that adequate security measures are implemented at all stages of AI technology usage by law enforcement agencies, from data collection to analysis. The use of AI technology in law enforcement can introduce biases in decision-making or suspect identification. Existing regulations have not effectively addressed this issue and need to strengthen oversight and assessment mechanisms to ensure that the use of AI technology is conducted fairly and non-discriminatively.

Legal Updates to Ensure Crime Prevention with the Utilization of AI Technology in Indonesia

Considerations for the need to update existing regulations in the use of AI technology in crime prevention in Indonesia are that AI technology has experienced rapid development in recent years, resulting in various new applications that can be used in law enforcement, such as big data analysis, facial recognition, and automatic text analysis. It also means that the current use of AI technology poses risks of privacy violations if not properly regulated. Additionally, there are cyber security risks that need to be considered, such as hacker attacks or data manipulation that can threaten the integrity of the system. Another consideration is that the use of AI algorithms can lead to unintended bias or discrimination in decision-making, which can threaten principles of justice and human rights.

These conditions demand a swift and appropriate response from the government to address new challenges arising from technological advancements. The need for more comprehensive and detailed regulations becomes increasingly urgent to ensure that the use of AI technology in law enforcement is not only effective but also fair, transparent, and in line with fundamental legal principles. Without timely updates, the risks of legal uncertainty and potential misuse of AI technology in criminal law may increase, threatening the integrity of the judicial system and individual rights.

In the development of a new regulatory framework to accommodate the use of AI technology in crime prevention in Indonesia, several aspects need to be considered. Firstly, there is a need for a comprehensive review of existing regulations to identify deficiencies and gaps in regulating the use of AI technology in the realm of criminal law. Subsequently, clear and detailed rules and guidelines need to be formulated to govern various aspects of AI technology usage, including but not limited to data collection, storage, and analysis, as well as algorithm implementation and cybersecurity. Additionally, effective oversight mechanisms are required to monitor and evaluate the implementation of these regulations. This may involve the establishment of a specialized body or institution responsible for overseeing the use of AI technology in law enforcement, as well as the development of reporting systems and

enforcement mechanisms to ensure that the established rules are properly followed by law enforcement agencies.

Therefore, there is a need for an update to the ITE Law, which currently does not specifically regulate the use of AI technology in the context of law enforcement, leading to gaps and legal uncertainties in its utilization. Provisions are needed to regulate the use of AI technology in its various aspects, ranging from data collection and processing to the use of algorithms for analysis and law enforcement purposes. Thus, existing regulations can accommodate the latest technological advancements and anticipate challenges and risks that may arise in its utilization. There is a need for provisions that strengthen the protection of individual data privacy in the context of AI technology usage. The use of AI technology often involves the collection and analysis of personal data, so existing regulations must provide adequate protection for individual personal data and prevent its misuse.

There is also a need for regulations governing ethical aspects and principles of justice in its use to avoid the potential for bias or discrimination in AI-based decision-making and to ensure that the use of AI technology in law enforcement remains in line with fundamental legal values and human rights. Thus, the revision of the ITE Law can address legal uncertainties, protect data privacy, and ensure that the use of AI technology in law enforcement remains consistent with fundamental legal principles and humanitarian values.

In addition to revising the ITE Law, the government can also establish government regulations or other implementing regulations to regulate the use of AI technology in law enforcement in more detail, to adjust regulations with technological developments and the increasingly complex law enforcement needs. These regulations are expected to specifically address procedures for data collection and processing in the context of AI technology usage by law enforcement agencies, data security standards to be complied with, as well as oversight mechanisms and accountability to be applied by relevant agencies. Additionally, these regulations can address ethical standards in the use of AI algorithms for decision-making, transparency in AI technology usage, and mechanisms for dispute resolution related to the use of AI technology in law enforcement. These regulations can also provide greater flexibility for the government to adjust regulations with ongoing technological advancements.

With legal updates related to the use of AI technology in crime prevention in Indonesia, it is hoped that a more comprehensive and responsive regulatory framework can be created to address technological advancements and maintain a balance between technological innovation and the protection of individual rights. These legal updates are expected to help reduce legal uncertainties that may arise in the use of AI technology in law enforcement. With clearer and more detailed rules, law enforcement agencies will have stronger guidelines to regulate and oversee the use of AI technology in various aspects of law enforcement. Additionally, legal updates are expected to strengthen privacy protection and human rights in the use of AI

technology so that people can feel safer and more protected in the increasingly complex digital environment. Thus, legal updates related to the use of AI in crime prevention in Indonesia can provide a solid foundation for effective, transparent, and fair law enforcement in this digital era.

CONCLUSION

The impact of the utilization of Artificial Intelligence (AI) technology in the criminal law enforcement process in Indonesia has significant implications for the effectiveness and transparency of the legal system. The use of AI in crime detection, analysis, and prediction can help improve law enforcement efficiency but also poses various challenges related to responsibility identification, privacy, and ethics. Legal uncertainties arising from the use of AI technology also demand a swift and appropriate response in developing regulations that are suitable for the context and ongoing technological developments.

The effectiveness of regulations in Indonesia in addressing the use of AI technology for criminal law enforcement still has room for improvement. Although some regulations exist, they do not specifically govern the use of AI technology in the context of law enforcement. It creates the need for more comprehensive and detailed legal updates to accommodate the development of AI technology and anticipate potential risks and challenges.

BIBLIOGRAPHY

Ahmad, A. (1970). PERKEMBANGAN TEKNOLOGI KOMUNIKASI DAN INFORMASI: AKAR REVOLUSI DAN BERBAGAI STANDARNYA. *Jurnal Dakwah Tabligh*, *13*(1), 137–149. https://doi.org/10.24252/jdt.v13i1.300

Azzahra, A., Savandha, S. D., & Olubisi, M. G. (2024). Effective Strategies for Corporate Governance and Risk Management in the Public Sector: Preventing Corruption and Abuse of Authority. *Asian Journal of Engineering, Social and Health*, *3*(4), 911–919. https://doi.org/10.46799/ajesh.v3i4.366

Carrillo, M. R. (2020). Artificial intelligence: From ethics to law. *Telecommunications Policy*, *44*(6), 101937.

Dahria, M. (2008). Kecerdasan Buatan (Artificial Intelligence). *Jurnal SAINTIKOM*, *5*(2).

Desiani, A., & Arhami, M. (2006). *Konsep Kecerdasan Buatan* (D. Hardjono, Ed.). Andi.

Ghatge, S. K., & Parasar, A. (2023). Application of Artificial Intelligence (AI), Internet of Things (IoT), and Big Data in Healthcare, Finance, and Transportation. *PriMera Scientific Medicine and Public Health*, *2*(2023), 27–36.

Hania, A. A. (2017). Mengenal Artificial Intelligence, Machine Learning, Neural Network, dan Deep Learning. *Jurnal Teknologi Indonesia*.

Kankanhalli, A., Charalabidis, Y., & Mellouli, S. (2019). IoT and AI for smart government: A research agenda. In *Government Information Quarterly* (Vol. 36, Issue 2, pp. 304–309). Elsevier.

Khan, M. A. (2024). Understanding the Impact of Artificial Intelligence (AI) on Traditional Businesses in Indonesia. *Journal of Management Studies and Development*, *3*(02), 146–158.

Kusumawardani, Q. D. (2019). HUKUM PROGRESIF DAN PERKEMBANGAN TEKNOLOGI KECERDASAN BUATAN. *Veritas et Justitia*, *5*(1), 166–190. https://doi.org/10.25123/vej.3270

Kusumawati, R. (2018). Kecerdasan Buatan Manusia (Artificial Intelligence); Teknologi Impian Masa Depan. *Ulul Albab Jurnal Studi Islam*, *9*(2), 257–274. https://doi.org/10.18860/ua.v9i2.6218

Mergel, I., Dickinson, H., Stenvall, J., & Gasco, M. (2024). Implementing AI in the public sector. *Public Management Review*, 1–14.

Mikhaylov, S. J., Esteve, M., & Campion, A. (2018). Artificial intelligence for the public sector: opportunities and challenges of cross-sector collaboration. *Philosophical Transactions of the Royal Society a: Mathematical, Physical and Engineering Sciences*, *376*(2128), 20170357.

Muzykant, V., Burdovskaya, E., Muzykant, E., & Muqsith, M. A. (2023). Digital Threats And Challenges To Netizens Generation Media Education (Indonesian Case). *Медиаобразование*, *1*, 97–106.

Nurjanah, A., Salsabila, I. N., Azzahra, A., Rahayu, R., & Marlina, N. (2024). Artificial Intelligence (AI) Usage In Today's Teaching And Learning Process: A Review. *Syntax Idea*, *6*(3), 1517–1523. https://doi.org/10.46799/syntax-idea.v6i3.3126

Pendey, B. (2023). Artificial Intelligence And Cyber Security. *Journal Transnational Universal Studies*, *1*(2), 93–99. https://doi.org/10.58631/jtus.v1i2.15

Singh, M., Joshi, M., Tyagi, K. D., & Tyagi, V. B. (2024). Future Professions in Agriculture, Medicine, Education, Fitness, Research and Development, Transport, and Communication. In *Topics in Artificial Intelligence Applied to Industry 4.0* (pp. 181–202). Wiley. https://doi.org/10.1002/9781394216147.ch10

Stahl, B. C., Rodrigues, R., Santiago, N., & Macnish, K. (2022). A European Agency for Artificial Intelligence: Protecting fundamental rights and ethical values. *Computer Law & Security Review*, *45*, 105661.

Stuurman, K., & Lachaud, E. (2022). Regulating AI. A label to complete the proposed Act on Artificial Intelligence. *Computer Law & Security Review*, *44*, 105657.

Sutojo, T., Mulyanto, E., & Suhartono, V. (2011). *Kecerdasan Buatan*. Andi Offset.

Yudoprakoso, P. W. (2019). KECERDASAN BUATAN SEBAGAI ALAT BANTU PROSES PENYUSUNAN UNDANG-UNDANG DALAM UPAYA MENGHADAPI REVOLUSI INDUSTRI 4.0 DI INDONESIA. *Simposium Hukum Indonesia*, *1*(1), 450–461. https://api.semanticscholar.org/CorpusID:198723944