

DIGITAL COMMUNICATION, ARTIFICIAL INTELLIGENCE, AND THE TRANSFORMATION OF LAW ENFORCEMENT IN INDONESIA: CHALLENGES AND REGULATORY RESPONSE

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INFO ARTIKEL	ABSTRAK
Diterima: 15 Maret 2026 Direvisi: 27 Maret 2026 Disetujui: 25 Juni 2026 Tersedia Daring: 01 Juli 2026 Kata Kunci: <i>Kecerdasan Buatan; Komunikasi Digital; Penegakan Hukum; Regulasi; Disinformasi</i>	Perkembangan komunikasi digital yang didukung oleh Artificial Intelligence (AI) telah mengubah dinamika penegakan hukum di Indonesia, namun kajian yang mengintegrasikan pengaruh komunikasi digital, tantangan AI, serta respons regulasi dalam satu kerangka analisis yang utuh masih terbatas. Penelitian ini bertujuan menganalisis pengaruh komunikasi digital terhadap pembentukan opini publik, dampak disinformasi, hoaks, dan deepfake, risiko bias algoritmik dan etika, kesenjangan regulasi, serta strategi adaptif dalam penegakan hukum berbasis AI. Penelitian menggunakan metode penelitian kepustakaan (library research) dengan pendekatan kualitatif deskriptif. Analisis dilakukan menggunakan teknik content analysis melalui pengelompokan data ke dalam lima tema utama, yaitu komunikasi digital dan opini publik, disinformasi dan deepfake, bias algoritmik dan etika AI, regulatory gaps, serta strategi adaptif penegakan hukum berbasis AI. Hasil penelitian menunjukkan bahwa komunikasi digital berperan penting dalam membentuk opini publik terhadap proses hukum; disinformasi, hoaks, dan deepfake mengancam efektivitas serta integritas pembuktian; pemanfaatan AI berpotensi menimbulkan bias algoritmik dan persoalan etika; implementasi AI masih menghadapi kesenjangan regulasi di Indonesia; serta diperlukan strategi adaptif melalui penguatan kerangka hukum, peningkatan kapasitas forensik digital, penerapan human oversight, penguatan literasi digital masyarakat, dan penerapan standar transparansi serta akuntabilitas algoritmik. Penelitian ini memberikan kontribusi teoritis dengan mengintegrasikan perspektif komunikasi digital, kecerdasan buatan, dan penegakan hukum dalam satu kerangka analisis, serta memberikan kontribusi praktis sebagai dasar bagi perumusan kebijakan dan tata kelola AI yang transparan, akuntabel, dan berkeadilan dalam sistem penegakan hukum di Indonesia.

ABSTRACT
Keywords: <i>Artificial Intelligence; Digital Communication; Law Enforcement; Regulation; Disinformation</i>
<i>The rapid development of digital communication supported by Artificial Intelligence (AI) has transformed the dynamics of law enforcement in Indonesia; however, studies that integrate the influence of digital communication, AI challenges, and regulatory responses within a single comprehensive analytical framework remain limited. This study aims to analyze the influence of digital communication on the formation of public opinion, the impact of disinformation, hoaxes, and deepfakes, the risks of algorithmic bias and ethics, regulatory gaps, and adaptive strategies in AI based law enforcement. The study employs a library research method with a qualitative descriptive approach. Analysis was conducted using content analysis techniques through the grouping of data into five main themes namely digital communication and public opinion, disinformation and deepfakes, algorithmic bias and AI ethics, regulatory gaps, and adaptive strategies in AI-based law enforcement. The findings indicate that digital</i>

communication plays an important role in shaping public opinion toward legal processes; disinformation, hoaxes, and deepfakes threaten the effectiveness and integrity of evidence; the use of AI has the potential to generate algorithmic bias and ethical issues; AI implementation still faces regulatory gaps in Indonesia; and adaptive strategies are required through the strengthening of legal frameworks, enhancement of digital forensic capacity, application of human oversight, strengthening of public digital literacy, and the application of algorithmic transparency and accountability standards. This study provides a theoretical contribution by integrating the perspectives of digital communication, artificial intelligence, and law enforcement within a single analytical framework, as well as a practical contribution as a basis for the formulation of transparent, accountable, and just AI policies and governance within the law enforcement system in Indonesia.

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1. Introduction

Advances in information and communication technology have driven significant transformation in global society, particularly through the digitalization of communication marked by growing use of the internet, social media, and Artificial Intelligence (AI)-based technology. This transformation has reshaped patterns of human interaction, constructed social reality, and altered how society processes information. In this context, digital communication plays a strategic role in shaping public opinion, directly impacting various sectors including the legal system. In Indonesia, the rapid and massive flow of digital information has extended the law enforcement process beyond formal spaces, making it increasingly subject to public perception formed through digital media. The use of digital technology in social spaces has shifted communication patterns from physical to more interactive and open digital environments (Bondar et al., 2025).

The phenomenon of the spread of hoaxes, disinformation, and digital content manipulation such as deepfakes has become a serious challenge in law enforcement in the AI era. Research by Panagopoulos and Davalas (2025) shows that deepfake technology has the potential to damage the credibility of the legal system because it can be used to convincingly falsify digital evidence. In addition, Vosoughi et al. (2018) found that false information spreads faster and more widely than true information on social media. This shows that public opinion can be formed prematurely and potentially influence the independence of judicial processes. This condition is reinforced by the findings of Lazer et al. (2018) which affirm that the spread of fake news is a real threat to social stability and democratic institutions, including the legal system.

On the other hand, the development of AI also provides opportunities to support law enforcement, such as through big data analysis, crime pattern detection, and the automation of investigative processes (Septiyandini et al., 2024a). However, the use of AI also raises new issues, such as algorithmic bias, lack of transparency, and the potential for human rights violations. Research by Ariyadi (2025) and Rusmiyati (2025) shows the

existence of algorithmic bias in crime prediction systems that can produce injustice in law enforcement. Furthermore, Aprianti and Damayanti (2025) added by Wibisono et al. (2025) emphasize the importance of an ethical framework and regulation in the use of AI to ensure accountability and fairness in technology-based decision-making.

A number of previous studies have examined the relationship between digital communication, disinformation, and law. Marchanda and Akmaluddin (2023) also Rahma et al. (2024) discussed the dynamics of the spread of fake news and its impact on society. Azmi (2025) and Fitriana (2024) examined patterns of information dissemination on social media. Meanwhile, Kirana and Silalahi (2025) as well as Nurkholisah et al. (2025) highlighted the implications of deepfakes for security and law. Research by Putra et al. (2024) also classified various forms of fake news and their implications for public trust. Research by Wahyudi (2025) shows that regulations related to digital technology are still not fully adaptive to the development of AI.

Nevertheless, a research gap remains in comprehensively integrating digital communication, Artificial Intelligence, and law enforcement, particularly in the Indonesian context. Most studies address these aspects in isolation, leaving the interaction among the three in law enforcement practice incompletely mapped. Research that specifically formulates adaptive strategies for law enforcement officers facing AI-era challenges is likewise limited.

- a. How does digital communication influence the formation of public opinion in the law enforcement process in the era of Artificial Intelligence?
- b. How do disinformation, hoaxes, and deepfake technology affect the effectiveness and integrity of the law enforcement process?
- c. What are the risks of algorithmic bias and ethical issues in the use of Artificial Intelligence in law enforcement?
- d. How do regulatory gaps affect the implementation of Artificial Intelligence in the law enforcement system in Indonesia?
- e. What adaptive strategies are needed to realize transparent, accountable, and just Artificial Intelligence-based law enforcement?

To answer these research questions, this study aims to analyze the influence of digital communication on the law enforcement process in the era of Artificial Intelligence, to identify various challenges arising from the use of digital communication and Artificial Intelligence, and to formulate adaptive strategies to strengthen justice, transparency, and accountability in the law enforcement system in Indonesia. Beyond analyzing digital communication's role in law enforcement, it identifies challenges arising from AI development and formulates relevant, applicable strategies. The study thus aims to analyze that role, identify the challenges, and propose strategies to address them.

The study offers both theoretical and practical contributions. Theoretically, it enriches interdisciplinary scholarship between communication science and law by incorporating an Artificial Intelligence perspective. Practically, it provides a basis for government and law enforcement officers to craft policies adaptive to digital technology developments, while supporting improved digital literacy in navigating the AI-era information landscape.

2. Method

This study is library research using a descriptive qualitative approach. Library research was chosen because it allows researchers to examine in depth various concepts, theories, and scientific findings related to digital communication and the challenges of law enforcement in the Artificial Intelligence (AI) era. According to Sugiyono (2022), a qualitative approach is used to understand social phenomena holistically by emphasizing meaning, not merely numbers. Meanwhile, library research focuses on the analysis of relevant and credible written sources (Mustofa et al., 2023).

The data in this study consist of primary and secondary data. Primary data are in the form of reputable scientific journals, official documents, and legislation related to digital communication and AI. Secondary data include books, scientific articles, and research reports that support the analysis. The use of both types of data aims to produce a comprehensive and balanced study (Creswell & Creswell, 2018). Data collection techniques were carried out through literature study and documentation. Literature study was used to systematically review theories and results of previous research, while documentation was used to collect factual data from official documents such as regulations and reports related to the use of AI in digital communication.

Data analysis used descriptive qualitative analysis with content analysis techniques. The collected data were classified by theme, then analyzed to find patterns, relationships, and meanings relevant to the research focus. The analysis process included data reduction, data presentation, and systematic conclusion drawing so as to produce a complete understanding of the phenomena being studied (Miles et al., 2014).

The data analysis in this study employed content analysis techniques carried out through several systematic stages, namely data collection, classification, coding, and data interpretation. At the data collection stage, all relevant sources were gathered from scientific literature and official documents. Subsequently, the data were classified based on their relevance to the research focus. The coding stage was conducted by assigning codes to data units that had a connection to the main issues of the study. These codes were then grouped into thematic categories. At the final stage, the data were interpreted to identify patterns, relationships, and meanings relevant to the research objectives.

This analysis was then organized into main themes, namely: (1) digital communication and public opinion in law enforcement, (2) disinformation, hoaxes, and deepfake challenges, (3) algorithmic bias and ethical risks in artificial intelligence, (4) regulatory gaps in law enforcement in Indonesia, and (5) ethical and adaptive strategies for the use of artificial intelligence in law enforcement.

3. Result and Discussion

3.1. Digital Communication and Public Opinion in Law Enforcement

The development of digital communication has transformed the way society obtains, produces, and distributes information about various legal events. In the era of Artificial Intelligence (AI), digital communication no longer functions merely as a medium for conveying information, but has evolved into an interactive space that shapes public perception of the law enforcement process. The speed of information dissemination through social media, digital platforms, and AI-based systems causes public opinion to form

even before the legal process has been completed. This condition indicates that digital communication has a significant influence on the independence and legitimacy of the law enforcement process.

This phenomenon can be explained through the network society theory proposed by Castells (2011), which states that modern society is built through digital communication networks that enable information to spread rapidly and across geographical boundaries. In the context of law enforcement, these communication networks accelerate the formation of public opinion on a case, so that the legal process no longer takes place solely in the courtroom but also in the digital space. This finding is consistent with the research of Hutabarat et al. (2022) which explains that the development of communication technology has transformed the relationship between law and technology, while Dwivedi et al. (2023) affirms that AI strengthens the digital communication process through the automation of information production, content personalization, and large-scale data analysis.

The use of AI on digital platforms further reinforces the influence of communication on the formation of public opinion. AI algorithms are capable of identifying user preferences, compiling personalized content recommendations, and expanding the reach of certain information through algorithmic amplification mechanisms. As a result, information about a legal case can quickly go viral and influence public perception of the parties involved. This condition demonstrates that public opinion is often shaped by the intensity of digital information exposure, rather than solely by verified legal facts.

From the perspective of mass communication theory, digital media no longer functions merely as a channel for information dissemination, but also as an actor that constructs social reality through algorithmic systems. Muhammad and Tanggahma (2024) demonstrate that social media has a significant influence on public perception of the judicial system. This is reinforced by Akbar and Rizky (2024) as well as Yatnih (2024) who found that the phenomenon of trial by social media is increasingly common, wherein the public forms judgments about an individual prior to a legally binding court verdict. This situation has the potential to undermine the presumption of innocence, which is a fundamental principle of the criminal justice system.

Beyond shaping public perception, digital communication also provides benefits for law enforcement through improved access to information, transparency, and public participation. AI enables law enforcement officers to analyze large volumes of data, detect crime patterns, and accelerate the identification of relevant information. Septiyandini et al. (2024) explain that the use of AI can improve the operational effectiveness of law enforcement institutions through faster and more accurate data analysis. Digital communication therefore not only serves as a factor influencing public opinion, but also as a strategic instrument supporting the efficiency of the law enforcement process.

Nevertheless, the influence of digital communication on the formation of public opinion also presents challenges to the independence of the legal system. The extremely rapid flow of information causes the public to frequently make assessments based on unverified information. This situation is consistent with the concept of surveillance capitalism proposed by Zuboff (2024), which explains that digital platforms exploit user data to control the distribution of information, thereby indirectly influencing public perception of

an issue, including legal processes. As a result, public opinion pressure can affect public trust in law enforcement officers and potentially create social pressure on legal decision-making processes.

Based on the results of this analysis, it can be understood that digital communication has a dual influence on the law enforcement process in the era of AI. On the one hand, digital communication enhances transparency, accelerates the dissemination of information, broadens public participation, and supports the effectiveness of law enforcement through the use of AI. On the other hand, digital communication also accelerates the formation of public opinion that is not necessarily grounded in legally valid facts, thereby potentially disrupting the independence of the judicial process. Therefore, the influence of digital communication must be counterbalanced by strengthening digital literacy, information verification mechanisms, and transparent AI governance, so that the formation of public opinion remains aligned with the principles of justice, objectivity, and the rule of law.

3.2. Disinformation, Hoaxes, and Deepfake Challenges

The development of Artificial Intelligence (AI) has enhanced the capacity for digital information production in a rapid, automated, and large-scale manner. Beyond facilitating the dissemination of information, this development has also given rise to new threats in the form of disinformation, hoaxes, and deepfake technology, which directly affect the effectiveness and integrity of the law enforcement process. Unlike digital communication, which plays a role in shaping public opinion, disinformation and deepfakes constitute forms of information manipulation that can obstruct the investigative process, obscure legal facts, and erode public trust in the outcomes of law enforcement.

In the investigative process, the effectiveness of law enforcement depends heavily on the accuracy of the information obtained by law enforcement officers. The spread of hoaxes and disinformation requires officers to conduct additional verification of information circulating in the digital space, making the process of establishing facts more prolonged and complex. This condition indicates that the higher the intensity of false information dissemination, the greater the resources required to confirm the validity of information before it can be used as the basis for an investigation. The findings of Vosoughi et al. (2018) show that false information spreads more rapidly than accurate information, while Lazer et al. (2018) explain that fake news has developed into a serious threat to democratic institutions and law enforcement, as it is capable of shaping perceptions that are inconsistent with the facts.

These challenges are further intensified by the emergence of deepfake technology. Unlike hoaxes, which generally take the form of false narratives or news, deepfakes produce manipulated audio, images, and video that are extremely difficult to distinguish from authentic content. In the context of law enforcement, this threatens the integrity of electronic evidence, as visual evidence previously regarded as highly reliable can now be fabricated using AI. Panagopoulos and Davalas (2025) explain that deepfakes have become one of the greatest challenges facing modern legal systems, as they are capable of producing digital evidence that appears authentic despite being the product of technological manipulation.

The existence of deepfakes not only increases the risk of false evidence being introduced, but also complicates the process of proof in court. Law enforcement officers are no longer merely required to establish the origin of electronic evidence; they must also demonstrate that such evidence has not been subjected to AI-based manipulation. Research by Chairani et al. (2024); Haida and Nuriyatman (2024); Hapid et al., 2024; as well as Noerman and Ibrahim (2024) indicates that Indonesia continues to face limitations in digital forensic standards specifically capable of detecting deepfake manipulation. This condition increases the potential for errors in the evidentiary process, which may in turn undermine the attainment of material truth in judicial proceedings.

Beyond its impact on the evidentiary process, disinformation and deepfakes also affect the integrity of law enforcement institutions. The spread of false information concerning investigative processes, arrests, or court verdicts can reduce public trust in law enforcement officers. When inaccurate information is believed more readily than official clarifications, the legitimacy of legal institutions becomes increasingly vulnerable. Therefore, the primary threat posed by disinformation lies not only in the dissemination of false information, but also in its capacity to erode the credibility of legal institutions that form the foundation of the rule of law.

The results of the analysis indicate that disinformation, hoaxes, and deepfake technology have shifted from being merely communication problems to constituting genuine threats to the effectiveness and integrity of law enforcement. These three phenomena slow down the investigative process, increase the complexity of electronic evidence verification, heighten the risk of evidentiary errors, and diminish public trust in law enforcement institutions. The central challenge of the Artificial Intelligence era is therefore not only to control the spread of digital information, but also to preserve the authenticity of information and the integrity of evidence so that the law enforcement process continues to operate objectively, fairly, and reliably.

3.3. Algorithmic Bias and Ethical Risks in Artificial Intelligence

The use of Artificial Intelligence (AI) in law enforcement has evolved from a mere administrative support tool into a technology capable of assisting in data analysis, suspect identification, crime prediction through predictive policing, and the formulation of decision-making recommendations. The use of AI offers high efficiency, as it is capable of processing large volumes of data rapidly and consistently. However, this capability does not automatically guarantee that the decisions produced are objective. AI remains dependent on data quality, algorithm design, and parameters established by humans, and therefore has the potential to produce biased decisions and give rise to ethical issues in the law enforcement process.

The first risk is algorithmic bias. Algorithmic bias arises when AI systems produce decisions that tend to favor or disadvantage certain groups as a result of using historical data that is either unrepresentative or already contains bias. In the context of law enforcement, algorithms trained on historical criminal data have the potential to reproduce previously existing patterns of discrimination, causing certain segments of society to be more frequently categorized as high-risk groups. Lendvai and Gosztonyi (2025) explain that algorithmic bias is one of the most fundamental legal issues in the use of AI, as it can

produce decisions that do not reflect the principle of equality before the law. This finding is reinforced by Han et al. (2024) who demonstrate that AI systems in law enforcement can sustain and even reinforce racial bias when training data are not managed proportionally.

One of the most widely debated AI implementations is predictive policing. This technology uses algorithms to predict the locations, times, and groups estimated to carry a higher risk of criminal activity. Although this approach can improve the efficiency of personnel deployment and resource allocation, its reliance on historical data means that prediction outcomes frequently reflect past law enforcement patterns rather than the current objective conditions of society. Hung and Yen (2023) affirm that the use of predictive policing without adequate oversight has the potential to reinforce systemic discrimination, as algorithms tend to direct the attention of officers toward areas or groups that have previously been more frequently subjected to law enforcement activity. AI therefore not only functions as an analytical tool, but can also influence the direction of law enforcement policy when prediction outcomes are accepted without critical evaluation.

In addition to algorithmic bias, the use of AI also faces issues of insufficient transparency, known as the black box problem. Many AI systems, particularly those employing machine learning and deep learning, produce decisions through computational processes that are difficult to understand even for their own developers. As a result, law enforcement officers and the parties affected are frequently unable to ascertain the reasons why a particular decision or recommendation was generated. (Casper et al., 2024) explain that access to AI outputs alone is insufficient to guarantee accountability, as the internal processes of the algorithm remain impossible to audit comprehensively. This situation gives rise to serious concerns within a legal system that requires every decision to be explainable, accountable, and subject to challenge through applicable legal mechanisms.

The next issue concerns the protection of human rights, particularly the right to privacy and the right to fair treatment. The use of AI technologies such as facial recognition and biometric analysis expands the state's capacity to identify individuals automatically. Although such technologies can enhance the effectiveness of investigations, their use also risks producing false positives that may harm individuals who are not actually involved in criminal activity. Rambe (2025) affirms that the use of AI must continue to respect the principles of proportionality and human rights protection, so that technological innovation does not diminish the fundamental rights of citizens.

From an ethical perspective, the use of AI also raises questions about the accountability of decision-making. When a decision is produced on the basis of algorithmic recommendations, questions arise as to who bears responsibility if that decision causes harm, whether it is the system developer, the technology provider, the law enforcement institution, or the officer who uses AI as the basis for decision-making. This lack of clarity in the allocation of responsibility indicates that the application of AI is not merely a technical matter, but also concerns the principles of good governance. Therefore, legal decisions cannot be delegated entirely to automated systems without human oversight.

When analyzed through the lens of justice theory, the use of AI should support the creation of equal treatment for every individual. However, when algorithms produce decisions based solely on statistical patterns, there is a risk that the human dimension,

social conditions, and the specific context of each case are overlooked. Law enforcement does not aim merely to create legal certainty, but also to realize substantive justice that takes into account moral values, social utility, and the protection of human rights. AI should therefore be positioned as a decision support instrument rather than a substitute for the legal judgment exercised by law enforcement officers.

The results of the analysis indicate that the use of Artificial Intelligence in law enforcement presents a dilemma between enhanced efficiency and the protection of justice principles. The risks of algorithmic bias, low system transparency, potential violations of human rights, and unclear accountability are ethical issues that must be anticipated in every AI implementation. The success of AI use in law enforcement is therefore determined not only by the sophistication of the technology, but also by the ability to ensure that every AI system operates fairly, transparently, and accountably, while continuing to place humans in the role of ultimate decision-makers.

3.4. Regulatory Gaps in Indonesian Law Enforcement

The development of Artificial Intelligence (AI) in law enforcement is progressing far more rapidly than the development of the regulations governing it. Various law enforcement institutions have begun using AI to support data analysis, suspect identification, digital evidence management, and crime pattern prediction. However, the legal system in Indonesia does not yet possess a regulatory framework specifically governing the management of AI in the law enforcement process. This situation gives rise to a regulatory gap, namely the disparity between technological development and the readiness of the legal norms that govern its use. As a result, AI implementation continues to face legal uncertainty for both law enforcement officers and the public as subjects of the law.

One form of regulatory gap is evident in the regulation of electronic evidence. Law Number 11 of 2008 on Electronic Information and Transactions, as amended by Law Number 1 of 2024, has recognized electronic information and documents as valid forms of evidence. However, this regulation remains oriented toward the formal recognition of electronic evidence and has not yet accommodated the development of AI technology capable of producing synthetic digital content such as deepfakes. Consequently, no legal standard specifically governs the mechanisms of authentication, verification, or evidentiary proceedings with respect to digital evidence produced or manipulated using AI. Bessie and Rudy (2024) affirm that the development of digital technology demands the renewal of legal norms in order to provide legal certainty regarding the use of AI-based technology across various sectors, including law enforcement.

Regulatory gaps are also evident in the aspect of legal liability. To date, no provision clearly governs the allocation of responsibility in the event of an error produced by an AI system in the law enforcement process. This lack of clarity raises questions about who is responsible when an AI-based recommendation or decision causes harm, whether it is the system developer, the service provider, the user institution, or the officer operating the technology. Wahyudi (2025) explains that the absence of specific AI regulation means that legal accountability mechanisms still depend on general provisions that have not yet been

able to address the complexity of the relationship between humans and artificial intelligence systems.

A similar problem is found in the area of personal data protection. Law Number 27 of 2022 on Personal Data Protection has provided a legal foundation for the management of personal data; however, its substantive provisions remain focused on data processing in general. AI systems, on the other hand, require large volumes of data as the basis for algorithm training as well as automated decision-making. The absence of provisions specifically governing the use of personal data in AI development creates the possibility of data misuse, particularly if such data are used without valid consent or processed for purposes that differ from those for which they were originally collected. Kirana and Silalahi (2025) as well as Nurkholisah et al. (2025) consider that the strengthening of AI regulation must proceed in tandem with the strengthening of personal data protection, so that technological innovation continues to respect the privacy rights of the public.

Beyond the substantive aspects of law, regulatory gaps also arise from the lack of integration among the various regulations pertaining to AI. Provisions governing electronic information, personal data protection, cybersecurity, and law enforcement remain dispersed across various regulations formulated on a sectoral basis. This condition means that AI implementation potentially gives rise to overlapping authority or normative lacunae when a particular issue is not explicitly governed by any single regulation. As a result, law enforcement officers frequently find themselves applying varying interpretations to the use of AI in practice, making legal certainty difficult to achieve.

From the perspective of progressive law as advanced by Satjipto Rahardjo, law should develop in accordance with the dynamics of society and technological advancement. Regulation must therefore not only function as an instrument that provides legal certainty, but must also be capable of anticipating technological developments that are occurring at a very rapid pace. In the context of AI, a reactive approach to regulation is no longer adequate, as technological change occurs more rapidly than the legislative process. The formulation of regulation must therefore prioritize adaptive principles in order to accommodate technological innovation without diminishing the protection of public rights.

The results of the analysis indicate that the implementation of Artificial Intelligence in the law enforcement system in Indonesia continues to face various regulatory gaps encompassing the aspects of electronic evidence, legal liability, personal data protection, and the harmonization of legislation. These gaps mean that the use of AI does not yet have a comprehensive legal foundation, potentially giving rise to legal uncertainty in law enforcement practice. Therefore, the development of a more adaptive, integrated, and responsive regulatory framework for AI development is necessary, so that its implementation can provide legal certainty while also guaranteeing the protection of human rights and the principles of justice.

3.5. Adaptive Strategies for Transparent and Accountable AI-Based Law Enforcement

The development of Artificial Intelligence (AI) has opened new opportunities for enhancing the effectiveness of law enforcement through its capacity for data analysis, crime pattern identification, and the automation of various investigative and legal administrative

processes. Nevertheless, the use of AI also presents various challenges, including the potential for technological misuse, algorithmic bias, limited system transparency, and a regulatory framework that has yet to optimally govern its implementation. Adaptive strategies are therefore required to ensure that the use of AI not only enhances efficiency, but also upholds the principles of transparency, accountability, justice, and the protection of human rights.

The first strategy is to develop an adaptive and comprehensive regulatory framework for AI development. Existing regulations remain partial and have not specifically governed the use of AI in the law enforcement process, ranging from system development and data use to legal accountability mechanisms for AI-generated decisions. Regulations are therefore needed that can accommodate technological developments while providing legal certainty for law enforcement officers, system developers, and the public. Aprianti and Damayanti (2025) added by Wibisono et al. (2025) affirm that the reformulation of AI regulation is necessary to guarantee the protection of human rights, while Wibisono et al. (2025) emphasize the importance of national policy capable of governing AI implementation in an integrated manner within the Indonesian law enforcement system.

The second strategy is to apply the principle of transparency through the use of Explainable Artificial Intelligence (XAI). One of the main challenges of AI is that its decision-making process is difficult to understand due to the use of complex algorithmic models, commonly referred to as the black box problem. This condition can reduce public trust and complicate the evaluation process in the event of an error in AI use. AI systems used in law enforcement must therefore be capable of explaining the basis of every recommendation or decision they produce, so that the process can be audited and held accountable. Bryson (2018) and Jobin et al. (2019) explain that transparency is an important prerequisite in AI auditing, while Jobin et al. (2019) identify transparency and accountability as the primary principles of global AI ethics governance.

The third strategy is to ensure human oversight in every AI-based decision-making process. Although AI is capable of providing recommendations based on rapid data analysis, legal decisions continue to require consideration of aspects of justice, morality, and the concrete circumstances of each case. AI should therefore be positioned as a decision support system rather than a substitute for the authority of law enforcement officers. Casaburo and Marsh (2024) affirm that human oversight is an essential element for ensuring that the use of AI continues to respect human rights and the principle of due process of law.

The fourth strategy is to enhance the capacity of human resources and the digital forensic capabilities of law enforcement officers. Digital transformation requires officers not only to understand legal aspects, but also to possess competencies in the use of AI, data analysis, algorithm auditing, and electronic evidence verification. The strengthening of this capacity must be supported through continuous education and training, so that officers are able to operate, monitor, and evaluate AI systems in a professional manner. In addition, the development of digital forensic laboratories equipped with AI manipulation detection technology is an important step toward preserving the validity of electronic evidence in judicial proceedings.

The fifth strategy is to improve public digital literacy as part of the effort to create a more resilient law enforcement ecosystem. A public that possesses the ability to recognize valid information, understand the risks of AI misuse, and protect personal data will be better positioned to participate in supporting the law enforcement process. Sari et al. (2021) demonstrate that digital literacy plays an important role in reducing the spread of hoaxes and enhancing the public's ability to verify information received through digital media.

Beyond these strategies, AI implementation in law enforcement requires cross-sector collaboration among the government, law enforcement officers, academics, technology developers, and institutions engaged in the fields of ethics and human rights. Such collaboration is necessary to ensure that every AI-based policy or system developed not only meets technical requirements, but also takes into account legal, social, and ethical dimensions. A collaborative approach also enables the ongoing evaluation and improvement of AI systems in accordance with technological developments and the needs of society.

Based on the foregoing, adaptive strategies toward Artificial Intelligence-based law enforcement must be implemented comprehensively through regulatory strengthening, the application of transparent AI systems, human oversight of every AI-based decision, the enhancement of law enforcement officer capacity, the strengthening of public digital literacy, and cross-disciplinary collaboration. The synergy of these various strategies will create AI governance that not only improves the effectiveness of law enforcement, but also guarantees accountability, justice, and the protection of human rights in facing the development of digital technology.

4. Conclusion

This study demonstrates that digital communication in the era of Artificial Intelligence (AI) has a significant influence on the formation of public opinion in the law enforcement process. The speed of information dissemination through digital media is capable of improving public access to legal information, yet at the same time has the potential to shape public perception before the legal process has been completed. This condition indicates that digital communication has become a factor affecting the independence, objectivity, and legitimacy of law enforcement.

This study also finds that the spread of disinformation, hoaxes, and deepfake technology constitutes a serious challenge to the effectiveness and integrity of law enforcement. AI-based information manipulation not only increases the complexity of the electronic evidence verification process, but also has the potential to reduce public trust in law enforcement institutions. Furthermore, the use of AI in law enforcement presents various risks in the form of algorithmic bias, low system transparency, and ethical issues that may affect justice and accountability in legal decision-making if not accompanied by adequate oversight mechanisms.

From a regulatory perspective, this study demonstrates that AI implementation in the law enforcement system in Indonesia continues to face regulatory gaps. Although various regulations have addressed electronic information and personal data protection, no

comprehensive legal framework yet exists to govern AI management, including accountability mechanisms, algorithmic use standards, and the handling of AI-based digital evidence. This condition means that AI implementation is not yet fully supported by adequate legal certainty.

Based on these findings, adaptive strategies are needed to realize transparent, accountable, and just Artificial Intelligence-based law enforcement. These strategies include the development of an adaptive and comprehensive legal framework to govern the use of AI in law enforcement, the strengthening of digital forensic capacity to detect deepfakes, verify electronic evidence, and address disinformation, as well as the application of human oversight mechanisms so that AI functions as a decision support system rather than a substitute for the authority of law enforcement officers. In addition, the ongoing improvement of public digital literacy is needed to strengthen the public's ability to recognize valid information and reduce the spread of hoaxes, accompanied by the application of transparency, accountability, and algorithm auditing standards as part of responsible AI governance. In this way, the use of AI will not only be capable of improving the effectiveness of law enforcement, but will also continue to guarantee legal certainty, the protection of human rights, and the realization of substantive justice within the Indonesian legal system.

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