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Legal Uncertainty in Criminal Enforcement with the Use of Artificial Intelligence Technology in Indonesia

Bambang Ahmad Indarto
Universitas Ngudi Waluyo

*Corresponding Author:
bambangahmadindarto@gmail.com

Abstract

Abstract. The use of Artificial Intelligence (AI) technology in law enforcement is a major highlight in the context of information technology development in Indonesia. The impact of using AI raises various challenges that need to be addressed immediately, such as difficulties in determining responsibility, privacy issues, and ethical implications. Even though several regulations already exist, the effectiveness of regulations in Indonesia in dealing with AI technology applications for criminal law enforcement still requires improvement. The urgency to update the law is becoming increasingly urgent, especially in accommodating developments in AI technology and overcoming emerging legal uncertainties. Comprehensive legal reform is needed to ensure that law enforcement using AI technology can be carried out effectively and by basic legal principles.

Keywords: *Artificial Intelligence, Law Enforcement, Legal Uncertainty*

1. 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, 2012). The growth of the digital economy and the presence of giant technology companies have also changed the business landscape significantly. The Indonesian government is also increasingly paying attention to the importance of investment in information technology to increase public sector efficiency and encourage innovation.

One technology that is increasingly dominating and frequently used in various fields is Artificial Intelligence (AI) technology. AI refers to the computer systems development 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. For example, in the healthcare sector, AI is used to analyze medical data and support disease diagnosis. Meanwhile, in the financial sector, AI is used for risk analysis and fraud detection. The existence of AI provides the prominent possibility 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 and 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 that is of concern to several countries (Sutojo et al., 2011). AI currently in Indonesia is a new challenge that must be faced from various existing impacts and concerns about threats from new technological developments. 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. 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.

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

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 regarding the legal status of AI may result in difficulties in determining liability and paying compensation in such cases. Additionally, in a law enforcement context, if AI is used to monitor and analyze criminal activity, questions about privacy and fairness may arise because AI has no understanding of the social or ethical context that might influence decision-making. Therefore, a clear and comprehensive legal framework is needed to address these uncertainties and ensure that the use of AI in legal contexts occurs fairly and safely.

2. LINTERATURE REVIEW

Artificial Intelligence

Artificial Intelligence is a simulation of human intelligence that is modeled on a machine and programmed like a human. Artificial intelligence is the provision of machines such as computers that use the ability to exhibit behavior that is claimed to be intelligent as if it were potentially displayed by humans. AI is an internet system that is capable of doing work that usually requires human power or human intelligence to complete the work (Kusumadewi, 2003).

Artificial intelligence has been an innovation in science since the 1940s and 1950s. The capabilities of new electronic machines have been able to store large amounts of information and process them at very high speeds, rivaling human capabilities. This computer science is specifically focused on developing intelligent behavioral automation in computer intelligent systems. The system shows characteristics related to intelligence in behavior that can imitate some functions of the human brain, such as understanding language, knowledge, thinking, problem-solving, and so on. The importance of artificial intelligence has become clear to countries since the 1970s. State leaders who recognize the potential of artificial intelligence hope to gain long-term support for a resource that requires intensive investment. Japan became the first country to do this by developing an ambitious program in artificial intelligence research. Although the computer science field of artificial intelligence had begun to be investigated in the 1930s and 1940s, many academics at that time were developing new concepts in computing (Liu et al., 2018).

Artificial Intelligence (AI) refers to a machine or intelligent device, usually in the form of a computer, that is capable of completing a task that requires human intelligence to perform. Another definition states that artificial intelligence is a branch of computer science that aims to make machines, especially computers, capable of completing work with the same or even better level of performance than humans can (Gabriel, 2016). Artificial intelligence is a computer science discipline that exploits the ability of computers to act intelligently like humans. In essence, these three definitions state that AI involves the ability of machines to imitate or even surpass human abilities in completing various tasks.

Artificial intelligence has useful purposes:(Negnevitsky, 2005)

1. Making machines smarter
2. Form an understanding related to intelligence
3. Forming a machine that has more benefits

The main scope of AI is:(Widnyana, 2010)

1. Expert System

   Computers are used as tools to store knowledge from experts so that computers can solve problems using knowledge similar to experts.

2. Natural Language Processing

   Users can communicate with computers using everyday languages, such as English, Indonesian, or other regional languages.
3. Speech Recognition

   Humans can interact with computers using voice.
4. Robotics and Sensor Systems

   AI includes the use of sensor systems such as vision systems, tactile systems, and signal processing systems which, when combined with Artificial Intelligence, form a broader system known as robotics.
5. Computer Vision

   Computers are used to interpret images or visible objects.
6. Intelligent Computer Aided Instruction

   The computer acts as a tutor who can provide training and learning to the user.
7. Playing Games

   Playing games using rules, space search, and alternative determination techniques in solving problems, which often involve Heuristic techniques, is an interesting field of study in Artificial Intelligence.

The use of AI in legal action has become increasingly significant, with applications aiding in evidence analysis, prediction of legal decisions, and legal research. AI systems can be used to analyze massive legal data to identify relevant trends or patterns, speed up the legal research process, and assist in case strategizing. Additionally, facial and voice recognition technology can be used to authenticate individual identities in judicial processes. However, challenges related to data privacy, algorithmic bias, and non-transparent legal decisions remain major concerns that require careful regulation and oversight.

Criminal act

The definition of criminal acts contained in the Criminal Code (KUHP) by legislators is often called *strafbaarfeit*. The term *strafbaarfeit* itself comes from Dutch and consists of 3 (three) words, namely *straf* which means punishment, *baar* which means can and *feit* which means action, event, violation, and deed. So, *strafbaarfeit* is an event

that can be punished or a punishable action. Several legal experts provide opinions regarding the definition of *strafbaarfeit*, namely:

1. Simons defines "strafbaar feit" as an unlawful act carried out intentionally by someone who is responsible for his actions and has been regulated as an act punishable by law (Marpaung, 2005).
2. Pompe stated that "strafbaar feit" is a violation of legal norms committed either intentionally or unintentionally by the perpetrator, where the imposition of punishment is necessary to maintain legal order (Andrisman, 2009).
3. Hasewinkel Suringa defines "strafbaar feit" as behavior that is generally rejected in a particular social life and is considered behavior that must be eliminated by criminal law using coercive means regulated in law (Ilyas, 2012).
4. According to Bambang Poernomo, "strafbaar feit" is a form of sanction law that strengthens norms outside criminal law, where criminal law already exists in other legal fields (Moeljatno, 2015).
5. Roeslan Saleh understands "strafbaar feit" as an action that is contrary to the desired legal provisions, where the main condition is the existence of regulations that prohibit it (Prasetyo, 2011).
6. Moeljatno explains "strafbaar feit" as a criminal act that violates legal prohibitions and is punishable by certain penalties (Lamintang & Lamintang, 2014).
7. Teguh Prasetyo formulates that "criminal acts" are acts that are prohibited by legal regulations and are threatened with criminal penalties, both active and passive acts (Renggong, 2017).
8. Wirjono Prodjodikoro uses the term "strafbaar feit" to refer to actions that can be subject to criminal penalties and are carried out by perpetrators who are the "subjects" of criminal acts (Amrani & Ali, 2015).

The elements of *strafbaarfeit* are:

1. Actions carried out by humans;
2. Threatened with criminal charges;
3. An unlawful act;
4. Done in error;

5. By people who can carry out accountability.

Legal certainty

Legal certainty is one of the goals of law and it can be said that legal certainty is part of efforts to realize justice. Legal certainty itself has a concrete form, namely the implementation or enforcement of law for an act that does not look at the individual who commits it. With legal certainty, everyone can predict what they will experience if they carry out a certain legal action (Wantu, 2011).

Legal certainty is also needed to realize the principle of equality before the law without discrimination. Legal certainty will provide a guarantee that someone can act by the rules in applicable law and vice versa. Without legal certainty, an individual cannot have standard rules to act. There are 4 (four) basic things that are closely related to the meaning of legal certainty, namely: (Margono, 2019)

1. Law is a positive phenomenon that refers to legislation.
2. Laws are made based on existing facts, indicating that laws are drawn up based on reality.
3. The facts regulated in the law must be formulated clearly to avoid confusion in interpretation and easy implementation.
4. Positive law must be stable and not easily changed.

There are several requirements for legal certainty in Jan M. Otto's view, namely:(Otto & Moeliono, 2003)

1. Legal certainty provides clear, consistent, and easily accessible legal rules, which are issued by the state government.
2. Various authorities or governments can apply legal rules consistently, and all must submit and obey them.
3. The majority of a country's population tends to agree with the contents of the regulations issued by the government and their behavior will be adjusted to these regulations.
4. Judges have independence in applying legal rules consistently, without taking sides, to uphold justice.

5. Judicial decisions can be implemented concretely, ensuring effective application of the law.

Thus, legal certainty is the implementation of the law by its contents, ensuring that society can carry out existing rules. In understanding the importance of legal certainty, attention is needed to the fact that this value is closely related to positive legal instruments and the role of the state in implementing these legal rules effectively.

3. RESEARCH METHOD

This research uses a normative juridical research method with a statutory and analytical approach, as well as a qualitative descriptive analysis approach. Through a legislative approach, this research will explore the legal framework that regulates the enforcement of criminal acts using Artificial Intelligence (AI) technology in Indonesia. A qualitative descriptive analysis approach is used to describe and analyze the legal uncertainties that arise in the application of AI technology in law enforcement, including related challenges, problems, and implications. Thus, this research aims to provide an in-depth understanding of how law and AI technology interact in the context of criminal enforcement in Indonesia, as well as to identify steps that can be taken to overcome emerging legal uncertainties.

3. RESULTS AND DISCUSSION

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

AI was created to provide intelligence and intelligence to carry out tasks like those carried out by humans related to reasoning, thinking, knowledge, decision-making, and problem-solving. AI can use its knowledge and think like a human to solve existing problems. So AI that thinks and acts like humans can also carry out legal actions. In the ITE Law, there are no specific regulations regarding the definition or use of AI. If you look at Article 1 number 1 of the ITE Law, legal subjects consist of senders, recipients, people, business entities, and the government. So AI is not classified as a legal subject.

Salmond stated that in legal theory, an individual is someone whom the law views as having the ability to have rights and obligations. Every individual who has this ability is considered a legal subject, even though he is not human. Salmond explains that during slavery, humans were not considered legal subjects or individuals by the law itself. On the other hand, even though they are not humans, legal subjects determined by law are considered legal subjects or individuals who have rights and obligations that are equal to humans.

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

Another impact is the use of AI in enforcing criminal acts, namely misuse of data. AI requires access to large amounts of individual data to train its algorithms, which can threaten individual privacy if the data is not processed properly or is accessed unlawfully. Misuse of this data may include unauthorized or unauthorized use of the data for unlawful purposes, such as unwanted or discriminatory surveillance. In addition, the use of AI in law enforcement also has the potential to strengthen bias in algorithms. AI algorithms tend to make decisions based on existing training data, which may reflect biases present in that data. This may result in discrimination or injustice in legal decisions, such as unfair racial or social profiling or disproportionate treatment of individuals.

For example, in enforcing criminal acts in Indonesia, the use of AI in driving is the use of autopilot, which if an error occurs can result in criminal acts and losses. Even

though autopilot is designed to increase safety and comfort in driving, potential errors or failures in this technology can result in criminal acts and losses. For example, in the case of a vehicle accident involving autopilot, the question of who is responsible for the accident becomes complicated. Are the drivers who use the autopilot feature, the vehicle manufacturers who develop the technology, or even the regulatory system that allows the use of autopilot the responsible parties? In addition, the failure of AI technology to detect emergencies or changes in road conditions can cause accidents that have the potential to result in loss of life or property, which may be treated as a criminal offense.

Then the use of facial recognition technology in an AI-based monitoring and identification system for criminals based on police data raises concerns regarding individual privacy and the potential for misuse of data, as well as the tendency of algorithms to trigger racial or social bias in the identification of criminals. Apart from that, the use of AI-based facial recognition technology in public security systems, such as at train stations or airports. Although this technology is intended to improve security by detecting individuals involved in criminal activity, there is the potential for error in face identification. AI systems can incorrectly identify individuals who were not involved in the crime as suspects, or conversely, fail to identify the actual perpetrator. Mistakes of this kind can result in criminals escaping scrutiny, while innocent individuals can become victims of injustice or discrimination.

The cases above give rise to legal uncertainty and confusion in determining responsibility for enforcing criminal acts in Indonesia. Legal uncertainty arises because there are no clear enough regulations regarding the use of AI technology in law enforcement so that often decisions or actions taken by law enforcement authorities can give rise to controversy and different interpretations. In addition, liability concerns arise due to the difficulty of establishing who is responsible for errors or failures of AI technology in law enforcement processes, whether it is the manufacturer, the user, or the AI technology itself.

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

Currently, there are no regulations in Indonesia that specifically regulate the use of AI in law enforcement. Although there is an ITE Law that regulates the use of current technology, this regulation focuses more on technical aspects and electronic transactions rather than addressing the use of AI technology in law enforcement. So, there is legal uncertainty and a legal vacuum regarding how AI should be regulated and supervised in legal enforcement. Existing regulations do not provide clear enough guidance regarding the responsibilities, authorities, or limits on the use of AI by law enforcement agencies. It leaves room for abuse, uncertainty, and potential violations of human rights and individual privacy in AI technology operations in law enforcement.

It is different from other countries such as the United States and several European countries which have issued a Criminal Justice Information Services (CJIS) Security Policy that regulates data security and privacy standards in the use of AI. Then, the European Union issued the General Dara Protection Regulation (GDPR) which regulates the privacy and protection of personal data, including data used in AI. Then China has The Cybersecurity Law of the People's Republic of China which regulates data and information security, including data used in AI.

So it can be concluded that there are no 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 completely overcome the challenges and issues that arise along with the development of AI technology. There is a lack of clarity regarding responsibility and accountability in the use of AI technology by law enforcement agencies. It creates the potential for abuse of power and violations of human rights, as well as increasing the risk of injustice in the law enforcement process.

Regulations in Indonesia are still facing ineffectiveness with recent challenges emerging where existing regulations are not yet fully able to address challenges such as data privacy, security, and justice related to the use of AI in law enforcement. The use of AI technology in law enforcement often involves the collection, storage, and analysis of individuals' data. However, existing regulations do not provide adequate protection for

the data privacy of individuals involved in this process. This can result in potential misuse of personal data by law enforcement agencies or other parties, as well as raise concerns about violations of privacy and human rights. The use of AI technology in law enforcement is vulnerable to cyber security risks, such as hacker attacks or data manipulation. Existing regulations cannot ensure that adequate security measures are implemented in all stages of the use of AI technology by law enforcement agencies, from data collection to analysis. The use of AI technology in law enforcement can introduce bias in decision-making or suspect identification. Existing regulations have not effectively addressed this problem and need to strengthen monitoring and assessment mechanisms that ensure that AI technology application is carried out fairly and non-discriminatorily.

Legal Reform to Ensure the Prevention of Crime by Utilizing AI Technology in Indonesia

Considerations for the need to update existing regulations regarding the use of AI technology in dealing with criminal acts in Indonesia are that AI technology has experienced rapid development in recent years, producing various new applications that can be used in law enforcement, such as big data analysis, facial recognition, and automatic text analysis. This also means that the current use of AI technology poses a risk of privacy breaches if not regulated appropriately. In addition, there are cyber security risks that need to be considered, such as hacker attacks or data manipulation that can threaten system integrity. Another consideration is that the use of AI algorithms could lead to unintentional bias or discrimination in decision-making, which could threaten the principles of justice and human rights.

This condition demands a fast and appropriate response from the government to face new challenges that arise along with technological advances. The need for more comprehensive and detailed regulations is becoming increasingly urgent to ensure that the use of AI technology in law enforcement is not only effective but also fair, transparent, and by fundamental legal principles. Without timely updates, the risk of legal uncertainty and potential misuse of AI technology in criminal law contexts may increase, threatening the integrity of the justice system and the rights of individuals.

In developing a new regulatory framework to accommodate the use of AI technology in dealing with criminal acts in Indonesia, several things need to be considered, namely the 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. After that, it is necessary to develop clear and detailed rules and guidelines that regulate various aspects of the use of AI technology, including but not limited to data collection, storage, and analysis, as well as algorithm implementation and cyber security. Then, an effective supervisory mechanism is also needed to monitor and evaluate the implementation of these regulations. This could include the creation of a dedicated agency or agency responsible for overseeing the use of AI technology in law enforcement, as well as the development of reporting systems and enforcement mechanisms that can ensure that established rules are followed appropriately by law enforcement agencies.

So it is necessary to update the ITE Law, which currently does not specifically regulate the use of AI technology in the context of law enforcement, so there are gaps and legal uncertainty in its use. Provisions are needed that regulate the use of AI technology in various aspects, from data collection and processing to the use of algorithms for analysis and law enforcement purposes. So that existing regulations can accommodate the latest technological developments and anticipate challenges and risks that may arise in their use. There needs to be provisions that strengthen the protection of individual data privacy in the context of the use of AI technology. The use of AI technology often involves the collection and analysis of personal data, so existing regulations must provide adequate protection for individuals' data and prevent misuse of that data.

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 by legal values and fundamental human rights. So, that updating the existing ITE Law can overcome legal uncertainty, protect data privacy, and ensure that the use of AI technology in law enforcement remains by fundamental legal principles and human values.

In addition to correcting the ITE Law, the government can also form government regulations or other implementing regulations to regulate the use of AI technology in law enforcement in more detail to adapt regulations to technological developments and

increasingly complex law enforcement needs. The regulation is expected to specifically regulate data collection and processing procedures in the context of the use of AI technology by law enforcement agencies, data security standards that must be complied with, as well as monitoring and accountability mechanisms that must be implemented by relevant agencies. In addition, these regulations can regulate ethical standards in the use of AI algorithms for decision-making, transparency in the use of AI technology, as well as dispute resolution mechanisms related to the use of AI technology in law enforcement. These regulations can also provide greater flexibility for the government in adapting regulations to ongoing technological developments.

With legal reforms related to the use of AI technology in enforcing criminal acts in Indonesia, it is hoped that a regulatory framework that is more comprehensive and responsive to technological developments can be created and can maintain a balance between technological innovation and the protection of individual rights. It is hoped that these legal updates will help reduce legal uncertainty that may arise in the use of AI technology in the context of 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. Apart from that, legal reforms are also expected to strengthen the protection of privacy and human rights in the use of AI technology, so that people can feel safer and more protected in an increasingly complex digital environment. Thus, legal reforms related to the use of AI in enforcing criminal acts in Indonesia can become a solid foundation for effective, transparent, and fair law enforcement in this digital era.

4. CONCLUSION

The impact of using Artificial Intelligence (AI) technology in the criminal 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 increase the efficiency of law enforcement but also raises various challenges related to the identification of responsibility, privacy, and ethics. The legal uncertainty that arises as a result of the use of AI technology also demands a fast and

appropriate response in developing regulations that are appropriate to the context and ongoing technological developments.

The effectiveness of regulations in Indonesia in dealing with the use of AI technology for criminal law enforcement still has room to be improved. Although several regulations already exist, they do not specifically regulate the use of AI technology in the context of law enforcement. This raises the need for more comprehensive and detailed legal updates to accommodate developments in AI technology and anticipate risks and challenges that may arise.

Legal reform is a significant step in ensuring that dealing with criminal acts using AI technology in Indonesia can be carried out effectively and by basic legal principles. With regulations that are clearer, more detailed, and responsive to technological developments, it is expected that the use of AI technology in law enforcement can make a positive contribution to creating a legal environment that is fairer, more transparent, and just for all Indonesian society.

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