



AI in Law: Urgency of the Implementation of Artificial Intelligence on Law Enforcement in Indonesia

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Abstract

Introduction to The Problem: The advancement of Artificial Intelligence (AI) has marked the beginning of an age in digital technology, social economics, human needs, and professional conduct. A previous study shows a significant difference in the level of accuracy between Artificial Intelligence (AI) machines and human advocates in which AI machines turned out to be more accurate than advocates. However, the challenges are related to the inadequacy of laws in responding to the development of AI. Furthermore, Indonesian law enforcement officers lack awareness of the advantages of using AI to support their profession.

Purpose/Objective Study: Hence, this study aims to analyze the urgency of implementing AI for law enforcement in providing legal services and the law enforcement process.

Design/Methodology/Approach: The method used in this research is normative, empirical research with Statute and Conceptual Approach. Furthermore, the data uses primary and secondary data sources. Primary data was obtained through interviews with law enforcement officials. Meanwhile, secondary data sources are primary and secondary legal materials. Furthermore, it will be analyzed qualitatively and presented descriptively.

Findings: Artificial Intelligence (AI) is crucial in assisting in developing services and law enforcement, especially for Indonesian law enforcement, which still relies on manual or conventional means to carry out its duties. Artificial Intelligence (AI) can bring benefits in terms of time efficiency and accuracy in assessing cases urgently needed by law enforcement. In terms of law enforcement's perception of the use of AI, they are placed as assistants who cannot entirely replace the law enforcement profession since Artificial Intelligence (AI) lacks human traits that law enforcement officers must possess.

Paper Type: Research Article

Keywords: Urgency; Artificial Intelligence; Law Enforcement

Introduction

The world is entering the era of the industrial revolution 4.0 (Pers, 2018), which leads to dependence and cannot be separated from using technology in everyday life. Included in Indonesia is characterized by the era of automation and the ease with which reciprocal interactions may be established. This industrial revolution represents a fast change in the production process, formerly by humans and now by machines. The progress of the industrial revolution shifted the emphasis from manual to digitalization or automation (Disemadi, 2021).

Furthermore, one evidence of the beginning of this period is the implementation of many technological advances in various aspects of life, which facilitate people's activities. This extremely considerable rise may be witnessed in everyday life as information technology and artificial intelligence spread throughout the general people (Kominfo, 2018). As a result of technology waves that disturb the social order, a social and economic revolution occurs. They encompass work automation, machine learning, and Artificial Intelligence (AI). This significant transformation presents a significant challenge for administrators to act more swiftly and mitigate the negative consequences. The global use of Artificial Intelligence (AI) creates several opportunities for administrators. With AI technology, standard service delivery, policy formulation, and enforcement systems may experience rapid transformation. For instance, the government sector may apply AI technology to improve the quality of public services, hence increasing citizen trust and improving efficiency and effectiveness in service delivery. Governments may also utilize AI to provide more accurate estimations and to model complicated systems that allow for experimentation with various solutions. policy (Dwivedi et al., 2021; Montoya & Rivas, 2019; Nuryanto, 2021).

AI has aided much human work, as seen by its use in a country's business, industrial, land, and even security sectors (Panjaitan & Effendi, 2019; Sihombing & Adi Syaputra, 2020). That includes the field of law, such as police, attorney, judges, and advocate, where there is a growing collaboration of assistance in performing their duties (Atkinson et al., 2020; Mowbray et al., 2020). AI emphasizes the development of computers and their programs that can operate and mimic human reactions, expand capacity, and plan to grasp and solve issues (Anshori, 2022).

Integrating technology and AI in the legal profession is made possible by using computer programs and other tools that support the operational activities of law enforcers (Fauzi et al., 2023). Recently, researchers have been working on constructing an AI system that can predict court decisions; this research explains how AI can evaluate and understand human rights court decisions with an accuracy value of up to 79% (Aletras et al., 2016).

A business offering the AI platform LawGeex has launched an AI robot experiment in the United States. Twenty professional attorneys competed against LawGeex's AI



robot in four hours to examine five non-disclosure agreements and 30 other legal matters, such as arbitration and damages. The trial results show that LawGeex's AI robot is superior (Xu & Wang, 2021). In terms of accuracy, the team of attorneys has an average of 85 percent, whereas LawGeex has an average of 95 percent. LawGeex's accuracy rate in the contract identification procedure achieved 100 percent, whereas the accuracy gained by the team of attorneys was "only" 97 percent. In terms of time, the quickest AI can complete tasks is within 26 seconds. The typical legal team takes 92 minutes (Manurung & Helianny, 2019).

UMBRA, a legal firm, used the AI system established by Luminance AI for the first time in Indonesia in carrying out due diligence (Firm, 2018; Varkey, 2019). Employing e-courts and other digital applications has demonstrated that law enforcement in Indonesia is moving to even greater use of AI in the future.

However, using AI in law enforcement in Indonesia is still not optimal. The lack of understanding of the benefits of AI by law enforcement and the legal culture that has grown in society makes it difficult for AI to be wholly embraced. According to these findings, this study aims to assess the importance of applying artificial intelligence (AI) for law enforcers (judges, prosecutors, police, and advocates) in providing legal services or law enforcement in Indonesia. This study has the potential to advance the use of technology during the 4th Industrial Revolution, namely through the application of Artificial Intelligence (AI) for the professions of Judges, Prosecutors, Police, and Advocates. This research also supports government programs in the implementation of Making Indonesia 4.0, especially in providing services and law enforcement.

Methodology

The method used in this study is normative-empirical, legal research conducted using legal literature from both primary and secondary legal materials. Meanwhile, empirical research is undertaken with the participation of law enforcement professionals, specifically judges, prosecutors, police, and advocates in Magelang. The approach used in this research is Statute Approach and the Conceptual Approach.

In addition, this study uses data consisting of primary and secondary data. Primary data was obtained through interviews with law enforcers. Meanwhile, the secondary data in this study consist of primary legal materials, namely Law Number 11 of 2019 concerning the National System of Science and Technology, Law Number 48 of 2009 concerning judicial power, Law Number 11 of 2021 concerning Amendments to Law, Number 16 of 2004 concerning the Attorney General of the Republic of Indonesia, Law Number 2 of 2002 concerning Indonesian National Police, Law Number 18 of 2003 concerning Advocates. Secondary legal materials, namely journals, books, and other documents relevant to this research. Furthermore, it will be analyzed qualitatively and presented descriptively.

Results and Discussion

Analyses of the Urgency of AI for Law Enforcers: Police, Attorneys, Judges, and Advocate Perceptions

Artificial intelligence, or AI, is a machine trained to do one or more human functions (Hakim et al., 2021). AI tools surely bring prospects for law enforcement. Automation saves law enforcers time that might be spent aiding clients and doing additional billable work. AI systems enable novel ways of problem-solving, perhaps leading to better decision-making. One potential downside of AI is that if errors arise in such systems, they may be less predictable to humans.

This research was conducted through interviews with respondents to determine the urgency of implementing AI in law enforcement in Indonesia. The interviewees included representatives from the National Police, the Attorney General's Office, District and Religious Court judges, and advocates in Magelang. The overview of the respondent's profile is given in Table 1 below.

Table 1. Profile of Respondents

Respondents	Institution	Representative	Total Respondent
Respondent 1	General Court of Magelang City	Judge	1
Respondent 2	Religious Court of Magelang City	Judge	1
Respondent 3	Attorney General of Magelang City	Attorney	1
Respondent 4	The police of Magelang City	Police	1
Respondent 5	General Court of Magelang Regency	Police	1
Respondent 6	Religious Court of Magelang Regency	Judge	1
	Attorney General of Magelang Regency	Attorney	1
Respondent 7	Magelang City Police	Police	1
Respondent 8	Legal Consultation and Aid Institute	Advocate	1
Respondent 9	Indonesian Advocate Association (Peradi)	Advocate	1

The total number of respondents involved in the research is 9 (nine). The semi-structured interview was used to obtain the primary data. To assess the importance of applying AI in law enforcement in Indonesia, it is important first to define law enforcement and further determine its factors. Furthermore, the questions are divided into 2 (two) types. The first is an evaluative question, which aims to explore the current condition of how law enforcers carry out their roles and functions. Second,



questions are shown to explore the future, and researchers are interested in finding out solutions in law enforcement that have been conducted.

Regarding the indicators used to evaluate law enforcement, researchers used the five law enforcement factors proposed by Soerjono Soekanto. The five law enforcement factors include legal factors, law enforcement factors, infrastructure and facilities factors, community factors, and legal culture elements. Based on Jimly Asshiddiqie's opinion, law enforcement is trying to uphold or function legal norms as guidelines for behavior in traffic or legal relations in the life of society and the state (Moho, 2019). Law enforcement is a series of processes defining values, ideas, ideals, and legal objectives. Based on the interviews' findings, human resources (law enforcers) mastery of law in terms of norms, theory, and legal analysis is critical to ensuring the formation of just law enforcement.

Realizing the objective of law enforcement through AI requires a legal framework that assures and gives legal certainty. Issues concerning the employment of AI include the basis of AI as a legal subject, faults in assessing and deciding cases, data leakage, and other legal liability concerns that may arise. The provisions concerning the use of digital technology or the usage of AI are contained in the ITE Law (Ghazmi, 2021). The characteristics of AI in information processing automation make it equivalent to an "electronic agent" in Indonesian legislation. Article 1 of the ITE Law defines "Electronic Agent" as "a device of an electronic system that is made to perform an action on certain Electronic Information automatically held by a person." Then, the ITE Law states that implementing AI (Electronic Agent) in Indonesia can only be carried out by people, state administrators, business entities, and the community. It means that legal responsibility will be borne by the electronic system operator providing AI services. However, Satjitpto Rahardjo emphasizes that progressive law emphasizes the human aspect, which sees law as a product that is not final but still has to be built continuously (law in the making) (Revena, 2006).

The findings of the interviews also revealed that the facilities and methods of assistance for law enforcement are now relatively restricted. In the examination process, until the drafting of their verdicts, judges, prosecutors, and police utilize simple methods, while advocates continue to serve clients traditionally. That fact is inversely proportionate to the use of AI by law enforcement, while this traditional strategy may be overcome (Dwivedi et al., 2021). AI could potentially replace the analysis and decision-making process for administrative issues. Law enforcement officers may receive support and perform tasks more efficiently (Hakim, 2022; Menpanrb, 2020).

Meanwhile, societal factors and Indonesia's legal culture govern other characteristics that can assist the use of AI in law enforcement practice. The most crucial element of this study. The findings of various surveys on the public's perceptions of law enforcement demonstrate how closely our culture conforms to the trust principle in



its social interactions (Budiarto et al., 2018). Moreover, our society has fostered a culture of compliance with all applicable laws. The applicable law is no longer entirely meant as textual reading as it is written in statutes or other sources of positive law, while legal subjects come into interaction as the consequence of empirical experiences. The legislation has to be connected to concrete conditions. In other words, the law *in abstracto* is connected to the context of actual or concrete events, allowing for the eventual discovery of a solution as to how a legal dispute would be resolved. If the judge adopts this response, it will be deemed to constitute law *in concreto* (Kurniawan et al., 2020). The legal culture shows how the public and law enforcement officials perceive the law and how the law must be enforced. Legal culture is all forms of human cultural behavior that affect or are related to legal issues.

Therefore, it is important to consider the urgency of applying AI for law enforcement which is seen from the effectiveness of law enforcement. According to Soerjono Soekanto, law enforcement is an activity to harmonize the relationship of values outlined in principles and solid views and embody them in attitude, acting as a series of final-stage value descriptions to create social peace in life. He emphasized 5 (five) factors that influence law enforcement, namely (Muhaimin, 2020):

1. Legal factor. A written regulation is interpreted as a law which generally accepted and made by the central government or regional governments.
2. Law Enforcers or the parties who form and implement the law. Each law enforcement profession has its own authority or task powers. For example, the judge is in a very decisive role in making a decision, while the task of other law enforcers is to convince and explain to the judge what and how the legal issues are so that a judge's confidence will be obtained to be able to decide fairly and wisely.
3. Law enforcement supporting facilities. Facilities include, among other things, educated and skilled human resources, good organization, adequate equipment, and sufficient finance. If these things are not fulfilled, it will be difficult for law enforcement to achieve its goals. Highly educated human resources here are law enforcers who are qualified and capable of serving and protecting the community according to their respective duties and fields.
4. Community factors. From a social and cultural point of view, Indonesia is a pluralistic society with many ethnic groups and various cultures. A law enforcer must be familiar with society's social stratification or layering in an environment along with the existing status/position and role arrangements. Knowing and understanding these things can make it easier for law enforcers to identify the values and norms or rules that apply in society.
5. Legal culture factors. Soerjono Soekanto deliberately distinguishes between cultural and social factors because, according to him, the issue of value systems, which is the core of spiritual or nonmaterial culture, is highlighted in his discussion. Cultural factors regulate humans so that they can understand how they should act and determine their attitude when dealing with other people.



Culture includes the values that underlie applicable law, which values are abstract conceptions of what is considered good (so it is embraced) and what is considered bad (so it is avoided).

In line with law enforcement efforts, as expressed by Lawrence M. Friedman, the law must be interpreted as a legal substance (the content of law), legal administration (structure of law), and a culture of law (culture of law). The first element of "legal substance" explains the content rather than the written provisions of law. The second element is that "legal structure" is a form of a system of work procedures and implementation of what is regulated in the substance of the law. Meanwhile, the last element is "legal culture," which is complementary to encourage the realization of "legal certainty" on how the community's legal culture is based on legal provisions and officers.

Although the application of AI can indeed be found in various sectors or industries, in law enforcement, the dynamics are certainly far different. Satjipto Rahardjo, quoted by Muhammad Zulfadli, formulates law enforcement as a process to make legal desires come true. Therefore, it can be said that law enforcement does not merely mean implementing laws. AI must be able to elaborate between the rules in the law and the practices and norms that exist in society, moreover, whether AI can fulfill the sense of humanity or use conscience in analyzing and concluding a decision.

AI struggles to identify appropriate fairness measures that are legally compatible yet static enough to be encoded to assess fairness by law enforcers. Artificial intelligence teaches computers to "think" like humans, utilizing the available facts and desired output (Wachter et al., 2021). Starting around the year 2000, AI and law, like the AI field in general, have shifted away from knowledge-representation techniques and toward machine-learning-based approaches. A number of the most recent uses of AI and law have emerged from legal-technology startups that use machine learning to make the law more efficient or effective in a variety of ways. According to Surden (2019), one useful approach to thinking about the use of AI in law today is to conceptually divide it into three kinds of AI users: administrators of law (those who establish and implement the law, including government officials such as judges, legislators, administrative officials, and police), practitioners of law (those who use AI in legal practice, predominantly attorneys), and those who are governed by law (i.e., the people, businesses, and organizations that are governed by the law and use the law to achieve their ends).

Implications and Potential Risks of AI in Law

Indonesia is a state based on the law as stated in Article 1, paragraph (3) of the 1945 Constitution. So the legal aspect is one of the important and urgent fields in national development in Indonesia (Sung & Hakim, 2019). Article 27, paragraph (1) of the 1945 Constitution of the Republic of Indonesia reads: "All citizens are equal before the law and government and are obliged to uphold the law and government without

exception." The provisions in this Constitution indicate that every citizen shall have a fair and equal right before the law. During public hearings of his case, without undue delay, before a competent, impartial, and independent court is also necessary. Of course, as a state of law, law enforcement must be adequately enforced in order to maintain social order. In certain circumstances, law enforcement in Indonesia is still applying positivist doctrines. Hans Kelsen created this positivist theory, entitled Pure Legal Theory, in which it is explained that the law must be free of non-judicial aspects, or in other words, the law includes no nonjudicial elements. A law is a set of rules that includes obligations, prohibitions, punishments, and directives (Aldyan & Negi, 2022).

According to Ekklesia (2022), This constitutional basis clarifies that the concept of law serves as the foundation for the administration of the Indonesian state. Law is included as both an object and a development subject when seen in connection to the national development framework. A sector must be given priority as a subject of legal development. The law must be created and developed as a subject of development while serving as a tool and a facility that supports attempts at national development. One of them is to accommodate the Sustainable Development Goals (SDGs), create a national digital infrastructure, enhance the quality of human resources, create an innovative ecosystem, and unify norms and policies.

Presently, the government is determined to accelerate the implementation of industrial revolution 4.0 in order to create a manufacturing sector that is also globally competitive. These are the fundamental guidelines set forward by Airlangga Hatyarto for the Creating Indonesia 4.0 initiative at the Ministry of Industry. This program includes ten cross-sectoral national projects to help Indonesia's manufacturing sector develop more quickly (Clarke, 2019).

Technology in Indonesia is based on Law Number 11 of 2019 concerning the National System of Science and Technology, which in Article 1 paragraph (1) number (3) states that "Technology is a way, method, or process of applying and utilizing various scientific disciplines. The knowledge is useful in fulfilling needs, continuity, and improving the quality of human life. This technology will directly attach to life in society, so technological developments in the field of law must be able to keep up with the times (Prasetio & Widodo, 2022).

Through a clear legal basis, it could support the application of technology using Artificial Intelligence. Additionally, AI has been widely applied in all sectors of society. AI is thought to make things easier and to improve growth in a system or work process. Moreover, AI in law is already being used in other nations, such as the United States, Canada, and China. In the United States, for example, there is a DoNotPay program in the form of a robot that serves as a lawyer in a trial (Fachri, 2023). Additionally, in China, experiments on AI have begun to be used in the legal



profession, one of which is the Chinese-made AI Prosecutor. The machine is reportedly built by the Shanghai Pudong People's Prosecutor's Office ([Majeed, 2021](#)).

In addition, Indonesia has also implemented artificial intelligence named Robot LIA (Legal Intelligent Assistant). Robot LIA is the first legal chatbot in Indonesia which was launched on Wednesday, August 7, 2018, and the online law platform first announced the LIA launch. LIA was inaugurated by the Minister of Communication and Informatics ([Aida, 2018](#)). Chatbot Lia is located in Indonesia and aims to help the public get legal information or legal education more easily and sparingly that can be accessed on the lia.hukumonline.com platform ([Pratama, 2018](#)). This LIA robot is depicted as a 23-year-old woman who is smart and also understands the law, so the public can easily consult with Lia's robot about legal issues for free ([Amal, 2018](#)).

AI in the legal field is thought to be capable of assisting practitioners with due diligence and research. Regardless of the presence of AI, it is possible to analyze legal documents and identify a weakness, fault, or deficiency in the document ([Lee et al., 2021](#)). Thus, the use of AI in the legal profession in Indonesia can be realized. According to the interviews conducted by researchers, conventional techniques of enforcing the law in Indonesia are still in use.

Furthermore, the results of interviews with respondents said that Artificial Intelligence (AI) was only assigned or used as an assistant in assisting law enforcement. The role of AI needs to be limited in handling certain cases. For example, in court, the judges have used technology in the trial process, such as e-court and e-mediation. In addition, the use of technology by law enforcement can also be seen from the presence of integrated technology. This technology integrates all law enforcement and with several other public service agencies. For example, integrating the court institution with the Population and Civil Registry Service in the event of a divorce will give the legally divorced parties a new family card and identity card.

However, respondents also said that Artificial Intelligence (AI) may not replace the law enforcement profession. Because AI still has to involve the human role. Some of AI's weaknesses in law enforcement include the human nature of law enforcers in responding to cases, prioritizing one another's rights, and paying attention to other aspects of law enforcement.

Furthermore, other potential risk challenges ahead in the implementation of AI in law such as human resources challenges, technology challenges, issues of data leakage, and legal liability challenges ([Hakim et al., 2021](#); [Machmud et al., 2020](#); [Putranti & Anggraeny, 2022](#); [Sunarti et al., 2021](#)). In conclusion, the application of AI in law enforcement must be accompanied by establishing regulations that aim to avoid all actions or negative impacts arising from the application of AI.

Conclusion

Artificial Intelligence (AI) systems promise to improve societal well-being and increase efficiency in numerous fields, including healthcare, transport, and consumer products. AI systems allow for new approaches to problem-solving, creating the potential for better decision-making. Especially in law enforcement in Indonesia, since law enforcement still uses conventional and manual methods. Artificial Intelligence (AI) is needed only to assist law enforcers in their work. However, Artificial Intelligence (AI) cannot replace humans, especially as law enforcers. AI is only used as an assistant in assisting law enforcement tasks. In addition, many potential risks may arise from implementing AI, namely human resources challenges, technology challenges, issues of data leakage, and legal liability challenges.

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