The Role of Artificial Intelligence in Law Enforcement: Towards a More Accurate and Efficient Justice System

Syahrir Nur Dachlan[1], Donny Eddy Sam Karauwan[2], Nurjana Lahangatubun[3]
[123]School of Law (STIH) Manokwari, Indonesia
Correspondent : syahrirdachlan42@gmail.com[1]

ABSTRACT: This research aims to examine the impact of the use of Artificial Intelligence (AI) in the criminal justice system in Indonesia on human rights and address the misuse of AI algorithms. The method used is normative legal research with secondary data analysis from literature study. The novelty of this research lies in its particular focus on the implications of AI use on human rights in criminal justice and mitigation strategies for algorithm misuse. The contribution of this research is to provide insight into the role of AI in law enforcement as well as regulative and practical recommendations. The results show that AI has great potential in improving the efficiency of the justice system, but also poses a risk of human rights violations if not properly regulated. Therefore, special regulations, transparency in the use of AI by law enforcement, and public education are needed to ensure fairness and safety in its use

Keywords: Artificial Intelligence (AI), Human Rights, Criminal Justice System.

INTRODUCTION

The progress of human civilization in the modern era is reflected in the rapid growth of science and technology as a result of modern human culture. The development of science and technology has made human life simpler and more practical. With the tools created from human intelligence, human daily activities become more effective and efficient.(Danuri, 2019)

The rapid development of technology and the interconnectivity between these developments have created an unprecedented new situation in the industrial era, known as the fourth industrial transformation. One of the technologies that has emerged as part of this phenomenon is artificial intelligence (AI).(Yahya & Hidayat, 2023)

Artificial intelligence (AI) is a technological system programmed to solve problems or perform tasks in a way that mimics the way humans think and act. The presence of AI has penetrated into various aspects of human life that previously could only be done by individuals with specialized

knowledge, training, or government-issued licenses. An example is autonomous cars that have been authorized to operate in four states in the United States, including the District of Columbia.

The presence of this technology in the market is inevitable, with the potential to revolutionize ground transportation and autonomous machines that can perform complex financial transactions. In addition, AI technology also has the potential to be used to detect terrorism threats through facial recognition and document analysis. A simpler example is the ability of a computer chess engine to beat the world's strongest human chess player, as well as Google Translate's ability to produce reasonably accurate English translations.(Amboro & Komarhana, 2021)

In Indonesia, the use of Artificial Intelligence (AI) technology in the criminal justice system may become a desirable necessity in an increasingly modern society, as this technology offers significant flexibility and efficiency. The capabilities of artificial intelligence are not only limited to the field of language, but can also be applied in the field of law.(Zulfikar, 2023) For example, China has successfully developed artificial intelligence for judges in 2017.

It has the ability to adjudicate cases like a human judge, but is limited to copyright disputes, e-commerce product liability claims, and online buying and selling transactions. In addition, artificial intelligence is also used in the profession of advocates who provide legal aid. An example is DoNotPay in the UK, which has provided more than 1,000 legal aids and helped more than 160,000 people resolve legal issues.(Sudirman et al., 2023)

Currently, the role of Artificial Intelligence (AI) in the justice system is limited to assisting in case administration, it has not yet reached the stage where Artificial Intelligence (AI) is directly involved in the trial process. Determining the sentence remains the authority of the judge, as the judge's decision is based on personal beliefs that Artificial Intelligence (AI) cannot have. Nonetheless, there is a view that AI has the potential to become more sophisticated in the future and could provide recommendations on the amount of punishment that should be given to defendants, with reference to codes of conduct and legal principles implied into the AI machine.(Kurniawan, 2023)

The Electronic Information and Transaction Law (UU ITE) provides a legal foundation for data and privacy protection efforts, although in the context of artificial intelligence (AI) technology, its existence demands further study. An important aspect to consider is how data is collected, stored and processed by AI systems, and how the continuity of individual privacy rights is guaranteed in the process. An in-depth analysis of the implementation of the ITE Law in the context of AI is important to ensure that the regulatory framework remains relevant and effective in addressing the dynamics and complexities associated with the use of AI technology in various sectors, including in the legal realm.(Elpina, 2024)

Normatively, there is no regulation that specifically regulates the use of Artificial Intelligence technology. However, in the context of laws related to electronic systems, the use of Artificial Intelligence currently refers to the Law on Electronic Information and Transactions (UU ITE), which explains Artificial Intelligence as part of an electronic system that functions to prepare, collect, process, analyze, store, display, announce, transmit, and/or disseminate electronic information.(Sebayang et al., 2024)

This research aims to fill the gap of previous studies related to the use of Artificial Intelligence in the justice sector. Although there have been several previous researchers who have studied Artificial Intelligence in the justice sector, none of them have specifically examined its impact on human rights and efforts to overcome the misuse of Artificial Intelligence algorithms used in the criminal justice process. For example, research conducted by Muhammad Tan Abdul Rahman Haris, et al related to "Analysis of Criminal Law Liability for Artificial Intelligence in Indonesia" which states that users and creators of Artificial Intelligence are responsible as absolute legal subjects in criminal law.

Meanwhile, research conducted by Ekinia Karolin Sebayang and her colleagues highlighted the use of Artificial Intelligence in criminal justice institutions in Indonesia, which has been carried out by some law enforcers but has not been able to replace the role of judges, because Artificial Intelligence is not considered a legal subject. However, there is a crucial aspect that has not been explored by previous researchers, namely how the use of Artificial Intelligence in the justice sector has an impact on human rights to achieve justice in law enforcement. This research will focus on the implications of the use of Artificial Intelligence in law enforcement on human rights and efforts to overcome the misuse of Artificial Intelligence algorithms used in the criminal justice process. The increasing use of Artificial Intelligence (AI) in law enforcement raises concerns regarding its potential impact on human rights. This research investigates these concerns and explores strategies to mitigate the negative impacts of AI misuse through efforts that ensure fairness, transparency, and accountability in the criminal justice process.

METHOD

The research method used is normative legal research or normative juridical. The analysis method used is descriptive analysis method of qualitative data through induction, deduction, comparison and interpretation with logical thinking. Primary data is collected through surveys and case studies. While secondary data by collecting data from academic journals, papers, reports and other related regulations.

RESULT AND DISCUSSION

Implications of the Use of Artificial Intelligence in Law Enforcement on Human Rights

Violations and deviations from human rights law still occur frequently in Indonesia, despite efforts to enforce and regulate human rights law through several state institutions. Despite the existence of institutions that regulate human rights enforcement, the active role of the community remains crucial. Society has an important role in determining the extent to which human rights law can be properly implemented in Indonesia.(Mardesya & Rasji, 2023)

People's attitudes and behavior affect the enforcement of human rights law, both in respecting these rights and in actions that have the potential to harm many people. In addition to society, the

state must also be responsible for the protection of human rights, although this effort has not yet reached a perfect form or goal.(Sudrajat, 2022) There are obstacles and excuses for states not to fully fulfill their obligations to protect human rights, as many states have not fully performed their role in the protection of human rights.(Ardinata, 2020)

According to Rocky Gerung's view, the concept of social justice for all Indonesians includes the principle of equality before the law which implies that not all individuals are treated equally in the eyes of the law, but the law must be equally accessible to diverse individuals. This principle emphasizes the importance of equal access to the law for all individuals, regardless of personal differences.(Riswandie, 2023)

However, currently, Indonesia is facing a crisis in law enforcement. In practice, law enforcement officials often ignore or are even indifferent to legal justice, leading to a lack of trust from the public in the system. This distrust is caused by a number of factors, including the lack of reflection of social justice in legal instruments, the lack of independence and impartiality of the judiciary, inconsistency and discrimination in law enforcement, and the failure to provide fair legal protection for all citizens.(Jaya & Goh, 2021)

The use of information technology has long been part of efforts to enhance human rights advocacy, from utilizing it to fulfill human rights, to campaigning for human rights, to protecting human rights. For example, in 2016, Microsoft collaborated with the Office of the United Nations High Commissioner for Human Rights to support a program to develop and utilize advanced technologies designed to predict, analyze and respond to critical human rights situations. The use of cloud computing and big data analysis are also examples of utilizing technology to prevent human rights crises. Thus, information technology can help prevent cases of human rights violations and also fulfill human rights.(Najicha, n.d.)

In Indonesian positive law, as stipulated in the ITE Law, artificial intelligence (AI) is classified as electronic systems and electronic agents. When looking at the properties of AI and the definition of electronic systems in the ITE Law, there are many similarities and compatibilities. One of the ways AI works is to collect data, process it, even analyze it, and then display and transmit electronic information, as described in "Article 1 Point 5 of the ITE Law". Furthermore, the basis for classifying AI as an electronic agent is not much different from classifying AI as an electronic system. This is because the suitability of AI's actions and behavior is related to the definition of an electronic agent, which is a device of an electronic system that aims to perform actions automatically on an electronic system based on a person's command, which is in accordance with the characteristics of AI itself as described in "Article 1 Point 8 of the ITE Law".(Haris & Tantimin, 2022)

In the context of regulation in Indonesia, although the ITE Law attempts to adapt to the development of AI technology, the definition of AI is still a source of debate and various interpretations. AI is considered an object of law and classified as electronic systems and electronic agents, but AI is not yet recognized as a subject of law. Therefore, legal protection and responsibility for the use of AI still require further attention.

Freedom and privacy are essential elements of human dignity. Respect for human dignity means that each individual must be treated with dignity by respecting his or her autonomy. According to Kateb (2011), human autonomy is reflected in the protection of individual freedoms and rights, with privacy being the most important individual right today. The use of artificial intelligence technology without careful ethical consideration may violate the principles of respect for human dignity. The lack of clear regulations and sanctions can undermine human dignity as the owner of the right to freedom and privacy.(Pabubung, 2023)

In the context of human dignity, artificial intelligence has great potential to erase the boundaries of privacy that are the right of every individual. This relates to the use of personal data that could be misused or taken without the permission of the individual concerned. Artificial intelligence falling into the hands of authoritarian leaders could threaten the freedom that is the logical outcome of the existence of human dignity.(Pabubung, 2023)

Countries need to come together to create regulations aimed at countering the exploitation of artificial intelligence that could threaten the principles of human dignity. Major technology companies also need to publicly declare their adherence to regulations that protect human dignity. From an ethical standpoint, consideration of human dignity should always be a top priority at every stage of development, as technological development should aim to improve the quality of human life.

Efforts to Address the Misuse of Artificial Intelligence Algorithms in the Criminal Justice Process

Indonesia's current legal framework provides a strong foundation for integrating AI into its legal system in a comprehensive manner. Several existing laws and regulations regulate various aspects of AI, among others:(Disemadi, 2021)

1. Law Number 11 of 2019 on the National System of Science, Knowledge, and Technology
2. Law Number 11 of 2008 on Electronic Information and Transactions as amended by Law Number 19 of 2016
3. Law Number 27 of 2022 on Personal Data Protection
4. Presidential Regulation No. 133 of 2017 on the Amendment to Presidential Regulation No. 53 of 2017 on the State Cyber and Crypto Agency
5. Presidential Regulation Number 95 of 2018 on the Implementation of Electronic-Based Government
6. Government Regulation No. 82/2012 on the Implementation of Electronic Systems and Transactions

In fact, there are still many data thefts that are used by individuals to commit other criminal acts, such as online fraud.In fact, the ITE Law has not been able to become a reference in applying artificial intelligence technology in the judicial process because there are still terms that can be interpreted differently.

Suggestions on measures to reduce the impact of each risk are provided, along with recommendations on how to verify or validate these measures. Social harms mentioned include loss of trust, fraud, breach of privacy and confidentiality, dependency, and loss of employment. Ethical Risk Assessments should also consider the possibility of abuse, risks related to stress and fear (and how to mitigate them), failure of control (and the associated psychological impact), changes in responsibility, as well as the dangers associated with specific robotic applications. Particular attention is paid to robots that can learn and the implications of an increased presence of robots, and the standard emphasizes that the ethical risks associated with the use of robots should not exceed the risks of similar activities if performed by humans.(Raharjo, 2023)

While artificial intelligence (AI) has a remarkable ability to process data and recognize complex patterns, it can only operate according to human instructions. This poses a risk of losing important information as some Internet service providers may apply AI filters that are too strict, causing useful information to be truncated. To address this, efforts need to be made to set more thoughtful standards for the use of AI filters so as not to sacrifice valuable information.(Bahram, 2023)

In addition, AI does not have an intrinsic understanding of human moral values, so it cannot automatically assess whether the information being processed complies with ethical, legal, and moral standards. Therefore, it is important for AI developers and users to be ethically responsible in the use and development of AI, and to continuously review and update relevant guidelines in the face of evolving ethical challenges as technology advances.(Haryono et al., 2023)

AI can be categorized into three types, namely Artificial Narrow Intelligence (ANI), Artificial General Intelligence (AGI), and Artificial Super Intelligence (ASI). ANI, also referred to as limited intelligence, is related to specific tasks that it can perform well, such as playing chess against world-class players, predicting markets, performing autonomous driving, and image and language recognition. The second type of artificial intelligence is AGI, also known as "Strong AI" or human-equivalent intelligence.(Karim et al., 2020)

AGI is at a higher level of AI development that attempts to mimic the performance of the human brain, but is still controversial in terms of responsibilities and other components found in the human brain. The third type of AI is ASI, which is a futuristic representation of when AI exceeds the capacity of the human brain in terms of creativity, social skills, and wisdom. This development poses a unique challenge that could provide great benefits to humans, but also has great potential risks.(Zebua et al., 2023)

The misuse of artificial intelligence technology in malware crime (Malware-AI) is the dark side of emerging technological advances.(Rachmadie, 2020) The problems that arise are complex and affect various aspects in one action. Law, as an instrument of social reform, must be able to adjust to the developments that occur in society, especially in the technological domain. Therefore, the regulation of the use of technology should be an indicator of progress for developing countries, and should be regulated with a specific legal foundation.(Fatmawati & Raihana, 2023)

While there are many benefits to the application of technology in policing, there are also some potential drawbacks that are worth noting. One of the main concerns is the risk associated with

the use of artificial intelligence algorithms themselves. If the algorithms are not carefully designed and tested, the results or conclusions produced could be discriminatory or unfair.(Nurirwan Saputra, n.d.) In addition, there is a risk of errors in the determination of the final outcome, which could lead to innocent individuals being wrongly targeted by law enforcement. Of course, this phenomenon is undesirable in the context of our country.(Sunarso et al., 2022)

Other concerns relate to the potential misuse of technology in surveillance, such as the use of facial recognition technology which is often the subject of controversy because it can violate human rights.(Syadida et al., 2023) The application of technology in justice is also faced with a major challenge, namely the high cost of implementing new technology. Law enforcement agencies need to allocate resources for the purchase and maintenance of the technology to be used. In addition, the use of increasingly sophisticated technology requires specialized training for law enforcement officials in order to utilize it effectively.(Fauzi et al., 2023)

However, the benefits of technology in the judiciary cannot be ignored. Technology has the potential to improve the effectiveness of judicial performance in order to improve collective security within the Indonesian state. The use of technology can also help prevent and solve crimes, resulting in reduced levels of criminal activity. Ultimately, technology has had a significant impact on the judiciary, and its use will likely continue to increase in the coming years.(Irawan & Hasan, 2024)

For example, China successfully developed artificial intelligence for judges in 2017, but it is limited to copyright disputes, e-commerce product liability claims, and online buying and selling transactions. In addition, artificial intelligence is also used in the profession of advocates who provide legal aid. As for DoNotPay in the UK, it has provided more than 1,000 legal aids and helped more than 160,000 people resolve legal issues.

It is important to ensure that technology is used responsibly. Law enforcement agencies should be transparent about their use of technology, with clear guidelines in place to prevent misuse. With careful planning and implementation, technology can be an invaluable tool in supporting police performance.(Al Faraby, 2024)

Based on this, efforts to overcome the occurrence of algorithms in the judicial process, namely:

1. In legal substance, overcoming Artificial Intelligence algorithms in the criminal justice process must be done by making rules that specifically regulate the use of AI in court where it will become the basis for applying the law. There are regulations that regulate the regulatory mechanisms related to the use of Artificial Intelligence in the judiciary to ensure data security and law enforcement.
2. In terms of legal structure, law enforcement must be transparent in using the technology used to ensure a fair judicial process for the community. Law enforcers have a role in judicial cases.
3. In terms of legal culture, the public as justice seekers must know about the use of Artificial Intelligence in the judiciary and participate in trials of the use of Artificial Intelligence in order to provide a sense of trust to the public regarding the use of Artificial Intelligence in the judicial process.

CONCLUSION

The results show that AI has great potential in improving the efficiency of the justice system, but it also carries the risk of human rights violations if not properly regulated. Efforts to integrate AI into the legal system must prioritize respect for human dignity, autonomy, and privacy. Therefore, special regulations, transparency in the use of AI by law enforcement, and public education are needed to ensure fairness and safety in its use. Suggestions for future research could discuss public perceptions and attitudes.

REFERENCE

Al Faraby, A. H. (2024). PERKEMBANGAN TEKNOLOGI INFORMASI DAN TRANSAKSI ELEKTRONIKA (ITE) DI INDONESIA (Suatu Kajian Dari Peran Penyidik Kepolisian Dalam Menangani Penyalahgunaan Informasi Dan Transaksi Elektronika (ITE)). *Meraja Journal*, *7*(1), 48–62.

Amboro, F. L., & Komarhana, K. (2021). Prospek Kecerdasan Buatan Sebagai Subjek Hukum Perdata Di Indonesia. *Law Review*, *21*(2), 145–172.

Ardinata, M. (2020). Tanggung jawab negara terhadap jaminan kesehatan dalam perspektif hak asasi manusia. *Jurnal Ham*, *11*(2), 319–332.

Bahram, M. (2023). TANTANGAN HUKUM DAN ETIKA (REKAYASA SOSIAL TERHADAP KEBEBASAN BERPENDAPAT DI DUNIA DIGITAL). *SENTRI: Jurnal Riset Ilmiah*, *2*(12), 5092–5109.

Danuri, M. (2019). Perkembangan dan transformasi teknologi digital. *Jurnal Ilmiah Infokam*, *15*(2).

Disemadi, H. S. (2021). Urgensi regulasi khusus dan pemanfaatan artificial intelligence dalam mewujudkan perlindungan data pribadi di Indonesia. *Jurnal Wawasan Yuridika*, *5*(2), 177–199.

Elpina, E. (2024). Analisis Hukum Terhadap Implementasi Teknologi Kecerdasan Buatan (AI) dalam Sistem Informasi Bisnis. *Digital Transformation Technology*, *4*(1), 9–16.

Fatmawati, F., & Raihana, R. (2023). Analisis Yuridis Terhadap Artificial Intelligence Pada Tindak Pidana Penyebaran Malware Di Indonesia. *Innovative: Journal Of Social Science Research*, *3*(2), 12190–12201.

Fauzi, A. A., Kom, S., Kom, M., Budi Harto, S. E., Mm, P. I. A., Mulyanto, M. E., Dulame, I. M., Pramuditha, P., Sudipa, I. G. I., & Kom, S. (2023). *Pemanfaatan Teknologi Informasi di Berbagai Sektor Pada Masa Society 5.0*. PT. Sonpedia Publishing Indonesia.

Haris, M. T. A. R., & Tantimin, T. (2022). Analisis Pertanggungjawaban Hukum Pidana Terhadap Pemanfaatan Artificial Intelligence Di Indonesia. *Jurnal Komunikasi Hukum (JKH)*, *8*(1), 307–316.

Haryono, T. A., Kurniati, Y., & Hernawati, R. A. S. (2023). The Balance Between Professional Ethics and Legal Perspectives in Medicine. *Formosa Journal of Social Sciences (FJSS)*, *2*(4), 629–642.

Irawan, H., & Hasan, Z. (2024). Dampak Teknologi Terhadap Strategi Litigasi dan Bantuan Hukum: Tren dan Inovasi di Era Digital. *Innovative: Journal Of Social Science Research*, *4*(2), 4600–

4613.

Jaya, F., & Goh, W. (2021). Analisis yuridis terhadap kedudukan kecerdasan buatan atau artificial intelligence sebagai subjek hukum pada hukum positif Indonesia. *Supremasi Hukum*, *17*(02), 1–11.

Karim, A., Bangun, B., Purnama, I., Harahap, S. Z., Irmayani, D., Nasution, M., Haris, M., & Munthe, I. R. (2020). *Pengantar teknologi informasi*. Yayasan Labuhanbatu Berbagi Gemilang.

Kurniawan, I. (2023). Analisis Terhadap Artificial Intelligence Sebagai Subjek Hukum Pidana. *Mutiara: Jurnal Ilmiah Multidisiplin Indonesia*, *1*(1), 35–44.

Mardesya, N., & Rasji, R. (2023). Tinjauan Mendalam tentang Filsafat Hukum: Mengurai Akar Pemikiran di Balik Sistem Hukum. *Journal on Education*, *6*(1), 10190–10200.

Najicha, M. (n.d.). *Implementasi Perlindungan Hak Asasi Manusia dalam Pemanfaatan Teknologi Kecerdasan Buatan: Implementasi Hukum dan Prinsip-Prinsip Pancasila sebagai Panduan Moral dan Etika.* Diambil.

Nurirwan Saputra, P. T. I. U. P. Y. (n.d.). *Implementasi Artificial Intelligence (AI) dalam Kehidupan*.

Pabubung, M. R. (2023). Era Kecerdasan Buatan dan Dampak terhadap Martabat Manusia dalam Kajian Etis. *Jurnal Filsafat Indonesia*, *6*(1), 66–74.

Rachmadie, D. T. (2020). Regulasi Penyimpangan Artificial Intelligence Pada Tindak Pidana Malware Berdasarkan Undang-Udang Republik Indonesia Nomor 19 Tahun 2016. *Recidive: Jurnal Hukum Pidana Dan Penanggulangan Kejahatan*, *9*(2), 128–156.

Raharjo, B. (2023). Teori Etika Dalam Kecerdasan Buatan (AI). *Penerbit Yayasan Prima Agus Teknik*, 1–135.

Riswandie, I. (2023). PERLINDUNGAN HUKUM BAGI MASYARAKAT MARGINAL DALAM PERSPEKTIF ASAS "EQUALITY BEFORE THE LAW." *Sultan Adam: Jurnal Hukum Dan Sosial*, *1*(2), 298–310.

Sebayang, E. K., Mulyadi, M., & Ekaputra, M. (2024). Potensi Pemanfaatan Teknologi Artificial Intelligence Sebagai Produk Lembaga Peradilan Pidana di Indonesia. *Locus Journal of Academic Literature Review*, *3*(4), 317–328.

Sudirman, L., Antony, A., Lie, C., & Celline, C. (2023). IMPLIKASI ARTIFICIAL INTELLIGENCE TERHADAP PELAYANAN BANTUAN HUKUM BAGI PENYANDANG DISABILITAS. *ADIL: Jurnal Hukum*, *14*(2), 112–138.

Sudrajat, S. A. (2022). Hak Asasi Manusia (HAM) Sebagai Bentuk Kebijakan Politik Dalam Pelaksanaan Perlindungan. *Definisi: Jurnal Agama Dan Sosial Humaniora*, *1*(1), 17–28.

Sunarso, H. S., Sh, M. H., & Kn, M. (2022). *Viktimologi dalam sistem peradilan pidana*. Sinar Grafika.

Syadida, M. Q., Supriantoro, N. C., & Sugianto, M. S. (2023). Konseptualisasi Badan Pengawasan dan Perlindungan AI Sebagai Pemenuhan Perlindungan Hukum Teknologi di Indonesia. *PEMULIAAN HUKUM*, *6*(1), 1–18.

Yahya, M., & Hidayat, A. (2023). Implementasi Artificial Intelligence (AI) di Bidang Pendidikan Kejuruan Pada Era Revolusi Industri 4.0. *SEMINAR NASIONAL DIES NATALIS 62*, *1*, 190–199.

Zebua, R. S. Y., Khairunnisa, K., Hartatik, H., Pariyadi, P., Wahyuningtyas, D. P., Thantawi, A.

M., Sudipa, I. G. I., Prayitno, H., Sumakul, G. C., & Sepriano, S. (2023). *Fenomena Artificial Intelligence (Ai)*. PT. Sonpedia Publishing Indonesia.

Zulfikar, P. (2023). Pengaruh Teknologi Artificial Intelligence (AI) terhadap Perkembangan Pendidikan Hukum di Indonesia. *Journal on Education*, *6*(1), 10716–10722.