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The Development of Artificial Intelligence and Its Impact on Human Rights Protection from An Ethical and Legal Perspective

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Abstract: The development of artificial intelligence (AI) has brought about major changes in various sectors of life, from public services to the legal system. Amid the benefits of efficiency and accuracy offered, the use of AI poses serious challenges to the protection of human rights. Risks such as privacy violations, algorithmic discrimination, decision-making without accountability, and digital surveillance are urgent issues that need to be addressed legally and ethically. The study examines the impact of the use of AI on human rights by emphasizing aspects of algorithm transparency, data bias, privacy rights, legal vacuum, and the global technology gap. This study uses a normative legal method with a statutory regulatory approach and a conceptual approach, referring to various national legal instruments such as the 1945 Constitution, Law No. 39 of 1999 concerning Human Rights, and Law No. 27 of 2022 concerning Personal Data Protection, as well as international standards such as the Universal Declaration of Human Rights, ICCPR, OECD AI Principles, and EU AI Act. The results of the study reveal that existing regulations are not sufficient to address the complexity of AI, so a special law is needed that comprehensively regulates artificial intelligence. In addition, the integration of human rights principles, technology ethics, and public policy is a strategic step to ensure that technological innovation does not ignore human values. Thus, AI can be developed responsibly, fairly, and oriented towards respect for human dignity.

Keywords: Artificial Intelligence, Human Rights, Privacy, Technology Ethics.

INTRODUCTION

The development of artificial intelligence (AI) technology has become a transformative phenomenon in the global landscape that affects various sectors of human life (Zaenudin & Riyan, 2024). AI is no longer just a futuristic concept, but has become a real instrument used in the health sector, transportation, education, military, and even the legal system (Mahendra, et al., 2024). AI's ability to process large amounts of data, recognize patterns, and make algorithm-based decisions makes it a very efficient and adaptive tool (Hasibuan & Nasution, 2025). This technical superiority makes AI an inseparable part of modern life, even starting to replace many human roles in making significant decisions (Pakpahan, 2021). However, the presence of AI also raises deep questions about its impact on basic human values, especially human rights (HAM).

The benefits of using AI do seem promising in terms of efficiency, speed, and objectivity in decision making (Masrichah, 2023). This system is capable of providing data-based and automated public services that accelerate public access to justice, health, and education (Sawitri, 2025). However, the implementation of this technology also carries the risk of human rights violations if not regulated by an adequate legal and ethical framework. Algorithmic decisions can lead to discrimination, mass surveillance, privacy violations, and procedural deviations that have critical impacts on individuals and vulnerable groups (Syahril, TL, Murdiono, & Asriyani, 2024). The complexity of AI systems that are difficult for laypeople to understand further exacerbates the problem of transparency and accountability in their use (Ridwana, 2025).

Ethical and legal approaches are very urgent to anticipate and overcome the various risks of human rights violations caused by AI (Wahyudi, 2025). The use of AI without moral and legal guidance will open up opportunities for inequality, social exclusion, and violations of the basic principles of democracy. The concepts of justice, human dignity, and individual freedom must always be the reference in every development and application of advanced technology. A strong ethical framework can guide the behavior of AI developers and users to be socially responsible (Septiana & Sopingi, 2025). Meanwhile, legal regulations will ensure the existence of sanctions, legal protection, and accountability mechanisms that can be legally enforced (Silalahi, Purba, & Nasution, 2025).

Artificial intelligence can generally be defined as the ability of a computer system to perform tasks that usually require human intelligence, such as speech recognition, natural language processing, decision-making, and self-learning (Farwati, Salsabila, Navira, & Sutabri, 2023). According to the Oxford Dictionary, AI is the theory and development of computer systems that are able to carry out tasks that usually require human intelligence (Martaseli & Maragita, 2023). Institutions such as the European Commission define AI as systems that exhibit intelligent behavior by analyzing the environment and taking action to achieve certain goals (Kushariyadi, et al., 2024). The evolution of AI starts from simple rule-based systems to highly complex and adaptive machine learning and deep learning systems (Sulartopo, Kholifah, Danang, & Santoso, 2023).

The application of AI has expanded to various sectors that have direct implications for the basic rights of individuals. In the health sector, AI is used for disease diagnosis and hospital management; in the legal sector, it is used in criminal risk assessment and administrative decision-making; while in the private sector, it is used for digital advertising and product recommendations (Inzaghi, Cahyani, Valenda, Ananda, & Pratama, 2024). The use of these systems opens up great opportunities to improve the quality of services and accessibility for the community. However, AI intervention in human decision-making also raises serious problems, especially if the algorithm used is biased or based on discriminatory data (Zebua, et al., 2023). When the system lacks transparency and there is no clear accountability mechanism, violations of individual rights are very likely to occur (Mecca, 2025).

The concept of human rights is based on universal principles such as human dignity, equality, freedom, and non-discrimination (Yusuf, Ruhia, Nuladani, & Zaman, 2023). International instruments such as the Universal Declaration of Human Rights and the International Covenant on Civil and Political Rights affirm that everyone has the right to protection of privacy, freedom of expression, and fair legal treatment (Junaidi, et al., 2023). In the digital era, human rights protection must be expanded to include new issues such as personal data management, digital surveillance, and automated decisions that impact a person's life. As technology begins to determine a person's access to employment, health services, or even physical freedom, the urgency of legal regulations that guarantee the protection of these rights increases.

Threats to human rights in the AI era are systemic because these systems can replicate and reinforce existing social inequalities. The data used by algorithms often reflects structural

biases, such as discrimination based on race, gender, or economic status. When AI is used for surveillance or crime prediction purposes, the potential for violations of privacy rights and the presumption of innocence becomes very real. AI can also be used to carry out massive information manipulation that affects freedom of speech and democratic processes. These risks require not only technical handling but also ethical evaluation and a clear legal framework.

Ethical theories such as deontology, utilitarianism, and virtue ethics offer useful approaches to assessing the morality of using AI. Deontology emphasizes the moral obligation to treat humans as ends, not just tools, so that AI systems should not treat individuals as mere data objects. Utilitarianism evaluates actions based on the greatest benefit to the greatest number of people, but must still be balanced so as not to sacrifice minority groups. Meanwhile, virtue ethics emphasizes the importance of the character and good intentions of developers and users of technology. The principles of fairness, accountability, and transparency are the ethical foundations that must be realized concretely in every stage of the AI life cycle.

International institutions have developed ethical approaches to the use of AI, such as the OECD Principles on Artificial Intelligence, which emphasize the need for inclusive and human welfare-oriented AI systems. The European Union has also formulated the AI Act as a comprehensive regulation to regulate the use of this technology based on risks and objectives. These principles can be an important reference for other countries, including Indonesia, in formulating national policies. This global approach emphasizes the importance of cross-sectoral and multidisciplinary AI governance, and emphasizes basic rights as the main foundation of every technological innovation.

The national legal framework in Indonesia contains a number of provisions that can be used as a basis for protecting human rights from the negative impacts of AI. Article 28F of the 1945 Constitution guarantees the right to communicate and obtain information, while Article 28G protects the right to a sense of security and protection of privacy. Law No. 39 of 1999 concerning Human Rights provides a fairly broad normative framework, including the right not to be discriminated discriminatory and the right to legal protection. The existence of Law No. 27 of 2022 concerning Personal Data Protection also provides new relevant legal instruments to regulate the collection, processing, and storage of personal data by AI systems. However, all of these legal instruments do not specifically regulate the unique characteristics of AI, which are dynamic and complex.

METHOD

This study uses a normative legal method, which is a legal research method that is based on the study of applicable legal norms, both those written in laws and regulations and in recognized general legal principles. This study is not based on empirical data in the field, but rather focuses on the study of legal literature and analysis of relevant legal provisions to answer the problems caused by the use of artificial intelligence (AI) on the protection of human rights (HAM). In its implementation, this study uses two approaches, namely the statutory regulatory approach and the conceptual approach. The statutory regulatory approach is used to study positive legal regulations governing human rights and information technology, such as the 1945 Constitution of the Republic of Indonesia, Law Number 39 of 1999 concerning Human Rights, Law Number 27 of 2022 concerning Personal Data Protection, as well as international provisions such as the Universal Declaration of Human Rights, ICCPR, and OECD AI Principles. Meanwhile, the conceptual approach is used to examine ideas and theories about technological ethics, moral responsibility in the use of AI, and the concept of human rights protection in the digital era. Through these two approaches, this study seeks to develop a comprehensive framework for understanding the need for regulations and policies that guarantee the use of AI in a fair, transparent manner and uphold human values.

RESULT AND DISCUSSION

Legal and Ethical Issues in the Use of Artificial Intelligence

Algorithmic transparency is a crucial issue that has emerged as the use of artificial intelligence (AI) in decision-making increases, which directly impacts individual rights. Many AI systems operate with complex and closed logic, so the public does not have access to how the system works. This closedness gives rise to what is known as the black box phenomenon, a condition in which decisions made by an AI system cannot be traced by humans, including the developer itself. It is dangerous when used in legal systems and public administration because it can obscure accountability. Fair law enforcement requires a verifiable explanation for every decision, as guaranteed by Article 28D paragraph (1) of the 1945 Constitution concerning legal certainty and equal treatment before the law. To address this challenge, an explainable AI (XAI) approach is urgently needed so that the system can provide rational and human-understandable justification for every decision.

Data bias is a structural problem in the use of AI that can perpetuate discrimination against certain groups. Inequality in data representation gives rise to algorithmic models that are only accurate for the majority of the population, while minority groups tend to be misunderstood or treated unfairly. The bias can be found in AI-based job recruitment systems, predictive criminal justice, and even credit scoring systems. Discriminatory actions that arise from algorithmic bias contradict Article 28I paragraph (2) of the 1945 Constitution, which states that everyone is free from discriminatory treatment on any basis and has the right to protection against discriminatory treatment. Law No. 39 of 1999 concerning Human Rights, Articles 3 and 4, emphasize that the right not to be discriminated against is part of basic rights that cannot be reduced under any circumstances (non-derogable rights). The absence of a correction mechanism for AI's systemic bias can make discrimination automatic and hidden.

The right to privacy is one of the rights most vulnerable to violations by the use of AI, especially in digital surveillance and the massive collection of personal data. AI systems are used to analyze online habits, record physical movements through facial recognition cameras, and predict individual behavior with social scoring-based algorithms. This practice is often carried out without the explicit consent of the individual and can be used by state authorities or corporations to limit the right to freedom of expression and movement. Article 28G paragraph (1) of the 1945 Constitution states that everyone has the right to protection of themselves, their families, their honor, their dignity, and their property under the authority of the state. Law No. 27 of 2022 concerning Personal Data Protection provides legal strengthening for privacy through Articles 20 to 22, which regulate the right to automated decisions, including the right to obtain an explanation and to file an objection to the results of automated processing, as well as protection from high-risk profiling data processing.

The absence of specific regulations on artificial intelligence creates a legal vacuum in determining the limits of responsibility and supervision of the systems used. AI operates with high autonomy, but there is no explicit legal basis that determines who is responsible in the event of a violation of rights or legal losses. Existing legal instruments, such as the ITE Law and the PDP Law, do not explicitly regulate legal responsibility for damage or wrong decisions from AI systems. Article 28H paragraph (4) of the 1945 Constitution guarantees the right to legal protection from risks caused by technology. Meanwhile, countries such as the European Union have issued the EU AI Act in 2024, which classifies the risks of using AI and sets out legal obligations for developers and users of the technology. The principles of the OECD AI Guidelines also encourage countries to create legal systems that ensure the safety, accountability, and transparency of AI.

Indonesia is currently in the early stages of building a comprehensive regulatory framework for AI. Weak institutional structures and minimal cross-sectoral policies make supervision of this technology very limited. The absence of a special supervisory body that handles AI has led to overlapping authority between technical ministries and data protection

agencies. The systemic risks posed by AI cannot be handled sectorally because they have broad and cross-sectoral impacts, including legal, social, and economic. The country needs to establish an independent regulatory institution or form a special AI authority, as the European Union has done through the European AI Board. This step is critical to provide institutional clarity and ensure consistent implementation of human rights-based policies.

Technological globalization has accelerated the penetration of AI from developed countries to developing countries, including Indonesia, but has not been accompanied by an increase in adequate local monitoring capacity and understanding. The dominance of technology by multinational corporations from countries such as the United States and China has created a structural dependency that poses a risk to national digital sovereignty. The AI systems used by agencies or business sectors in Indonesia are generally based on foreign technology that cannot be changed, checked, or adapted according to local values. This technological inequality has given rise to a new form of global injustice that has an impact on the neglect of the digital rights of people in developing countries. The lack of technological independence widens the gap in human rights violations that are difficult to control.

The digital divide also exacerbates the inequality of human rights protection between urban and rural areas. People who have less access to digital literacy tend not to realize that their data has been used or analyzed without permission. Low awareness of digital law hinders individuals' ability to demand their rights or file objections to AI-based decisions. This problem underscores the importance of a social justice-based approach in formulating AI policies. Law No. 39 of 1999, Article 9 emphasizes that everyone has the right to improve their quality of life, including in facing technological challenges. The state is obliged to educate and expand legal access so that all citizens have equal protection from the risks of digitalization.

The current national legal system is still reactive to technological developments and does not yet have an anticipatory mechanism for the risks posed by AI. Normative regulations tend to lag behind the pace of innovation, so that applicable regulations are ineffective in preventing violations. Principle-based regulations, such as those offered in the risk-based regulation approach in the EU AI Act, can be a reference for creating a flexible legal framework, but are still oriented towards protecting human rights. The formulation of regulations must involve public participation, technology experts, and cross-disciplinary stakeholders to ensure the relevance and legitimacy of the resulting policies. Laws must be proactive and inclusive, anticipating the negative impacts of technology without inhibiting innovation that benefits humanity.

Protection of human rights in the era of artificial intelligence requires a multidimensional approach that includes law, ethics, technology, and public policy. The state has a constitutional and international obligation to ensure that technological developments do not reduce human dignity and the basic rights of every citizen. Article 28I paragraph (5) of the 1945 Constitution emphasizes that the protection, advancement, enforcement, and fulfillment of human rights are the responsibility of the state, especially the government. Implementation of the principles of justice, non-discrimination, privacy, and participation is crucial so that AI can be used to strengthen, not weaken, the human rights system. Technology should be a tool to liberate humans, not replace fundamental human values.

Legal and Ethical Analysis of the Use of AI in the Framework of Human Rights Protection

Indonesian laws and regulations have provided several legal bases for the protection of human rights that can be used as references in facing the challenges of the use of artificial intelligence (AI). Articles 28F and 28G of the 1945 Constitution guarantee the right to information and protection of privacy, which are crucial points in digital systems. Law No. 39 of 1999 concerning Human Rights explicitly regulates the right not to be discriminated against, the right to justice, and the right to feel safe from intervention by other parties. Law No. 27 of

2022 concerning Personal Data Protection has established basic principles for the processing of personal data that are highly relevant to the use of AI. However, none of these regulations specifically mention the responsibilities, limitations, or control mechanisms for the use of AI. The absence of explicit regulations makes it difficult for law enforcement officers and policymakers to respond to violations originating from intelligent systems whose decisions are not easily traced.

The limitations of national legal instruments are a major obstacle to ensuring justice for individuals affected by algorithmic decisions. Many cases related to data bias, mass surveillance, and automated decision-making do not have a strong legal basis to be resolved through formal legal processes. The criminal justice system, public administration, and other state institutions do not yet have operational standards or technical guidelines that can address the challenges of using AI. The aspect of legal responsibility (liability) is unclear when losses occur due to intelligent system decisions, especially when the system is made by a third party. This ambiguity increases the space for impunity and weakens legal protection for citizens. Existing legal instruments need to be strengthened and further developed to respond to the dynamic and disruptive development of technology.

Expanding the interpretation of human rights norms is needed so that the principles contained therein can reach new dimensions due to technological advances. Concepts such as privacy, non-discrimination, freedom of expression, and fair treatment must be reinterpreted to remain relevant amidst changes in the way humans interact through digital systems. The Constitutional Court and other judicial institutions have an important role in expanding the scope of legal interpretation through decisions that are responsive to technological issues. A progressive legal approach is key to addressing this challenge so that citizens' rights are not sidelined for reasons of efficiency and progress. The law needs to move with the times, but still maintain humanitarian values as the main foundation. This effort also requires academic support and civil society participation in voicing the protection of digital human rights.

The practice of using AI in the justice sector raises serious ethical challenges, especially in the predictive justice model. This system is used to estimate the risk of recidivism, classify prisoners, or even recommend sentences based on historical data. The risk of injustice is very high if the system is based on biased data or does not consider the humanitarian aspect. Legal ethics demand that every judicial decision must consider the uniqueness of the individual and provide a fair defense space. Reliance on AI risks reducing the role of judges to mere system verifiers, not as enforcers of substantive justice. Decisions that should be moral and humane turn into numbers that do not always reflect justice.

In the health sector, AI is used for automatic diagnosis, patient monitoring, and efficient allocation of medical resources. This application does improve the quality of service, but also raises ethical dilemmas when medical decisions are based entirely on system recommendations that do not necessarily understand the complexity of the patient's condition holistically. The patient's rights to information, autonomy, and consent are crucial to affirm in this practice. In the security sector, the use of facial recognition systems and data-based crime predictions poses a threat to civil liberties and the right to the presumption of innocence. In education, the use of AI to assess student behavior, potential, and determine access to facilities can create an unfair evaluation system if not supplemented by human intervention. Ethics in all three sectors demand accountability, distributive justice, and respect for the dignity of the individual that cannot be fully delegated to machines.

A global ethical approach to the use of AI has been developed by several international institutions, such as the OECD and the European Union. The OECD AI Principles emphasize the importance of human-centered, fair, transparent, and responsible AI. The EU AI Act establishes a risk classification based on the potential impact of technology on the safety and fundamental rights of individuals. Systems that are considered high-risk are required to undergo ethical and legal due diligence before being used. This approach can be an inspiration

for Indonesia to build a more robust national ethical and legal framework. International standards such as these also encourage countries to commit to universal human rights values in every technological innovation. Ethics are not only a matter of personal morality, but must also be an integral part of public policy and corporate practice.

Regulation that is adaptive to technology is an unavoidable need, considering that AI is developing rapidly and its impacts cannot always be predicted. A legal system that is too rigid will lag far behind the pace of innovation, while a system that is too loose will open up loopholes for human rights violations. Specific and risk-based regulations such as those offered by the European Union should be considered for contextual application in Indonesia. The state needs legal instruments that are preventive in nature, not just reactive to violations that have occurred. Technology audit mechanisms, ethics testing, and independent oversight must be part of the process of creating and implementing AI. Human rights protection must be a primary parameter in every regulation that is formed.

The formation of a Law on Artificial Intelligence in Indonesia is an important recommendation to address the current legal vacuum. This law can contain provisions on technology supervision, risk classification, developer accountability, and guarantees of people's digital rights. The process of forming a law must involve the participation of civil society, academics, the private sector, and stakeholders from the human rights field. This legislation also needs to regulate an independent AI supervisory institution that has the authority to assess the suitability of the system before it is widely used. In the long term, this regulation will be an important foundation for Indonesia in building a safe, fair, and inclusive digital ecosystem. The AI Law not only regulates technology but also strengthens the state's commitment to protecting human rights in the digital era.

The integration of human rights principles, ethics, and technology is an important step in building a responsive and responsible national policy. Principles such as the precautionary principle, public participation, and intergenerational justice should be the main foundations in the formulation of technology policies. The government needs to encourage collaboration between the fields of law, information technology, philosophy, and sociology to design a comprehensive and value-based system. Policies that are only technocratic will fail to address the human dimension that is at the heart of the AI issue. The existence of a holistic policy framework allows the country to stay on the path of technological innovation without sacrificing the rights and dignity of its citizens. This integration will create a digital system that is pro-human and ensures the sustainability of justice amidst the technological revolution.

CONCLUSION

The conclusion of this discussion shows that the development of artificial intelligence (AI) has a significant impact on the protection of human rights (HAM), both positively and negatively. AI has the potential to accelerate public services, increase the efficiency of the legal system, and provide data-based solutions in various sectors such as health, education, and security. However, on the other hand, the use of AI that is not transparent, algorithmically biased, and has minimal accountability poses a serious threat to the rights to privacy, non-discrimination, and legal certainty. The lack of regulation, weak oversight mechanisms, and the absence of a special institution that regulates AI in Indonesia further exacerbate the risk of human rights violations. The legal instruments currently available are not responsive enough to the complexity and autonomous nature of AI, so the interpretation of human rights norms needs to be expanded to reach the digital realm more comprehensively. Suggestions that can be given include the need to establish a special law on artificial intelligence that substantially integrates the principles of human rights, technology ethics, and the legal responsibilities of developers and users of AI systems. The government must establish an independent supervisory institution that has the authority to test, audit, and supervise the implementation of AI, especially those used in the public sector and vital services. The policy formulation process

must involve multidisciplinary participation from legal, technology, human rights experts, and civil society to ensure that any AI-based decision does not ignore the values of justice, transparency, and accountability. In addition, education and digital literacy for the public are key to raising awareness of digital rights so that citizens are able to demand protection from violations that occur due to the use of smart technology.

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