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Justice on Trial: How Artificial Intelligence is Reshaping Judicial Decision-Making

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Abstract

The integration of Artificial Intelligence (AI) into judicial decision-making processes is reshaping the administration of justice, offering new possibilities for efficiency and consistency while raising critical concerns about fairness and judicial discretion. This research explores the use of AI to support judges in their decision-making processes, focusing on the balance between technological assistance and the human consideration of justice. Additionally, it examines the regulatory frameworks that enable and govern AI's role in the judiciary. Employing a normative juridical research methodology and secondary data from literature reviews, this study finds that AI systems can only assist judges by providing recommendations rather than replacing their judgment. Algorithms and mathematical models cannot fully account for the complex, qualitative factors inherent in the pursuit of justice, such as moral considerations, empathy, and societal context. Currently, AI usage in judicial processes is not explicitly regulated; however, it may be justified under Article 1 Point 8 of Indonesia's ITE Law, which recognizes electronic agents controlled

by humans to achieve specified objectives. The research underscores that AI's potential lies in its capacity to complement human judges by enhancing efficiency and reducing bias in routine tasks, while ultimate decision-making must remain a human responsibility. This study concludes that the responsible use of AI, guided by clear legal and ethical frameworks, can ensure that technological advancements in the judiciary uphold the principles of justice and human dignity.

KEYWORDS *Artificial Intelligence, Justice, Judge's Decision*

Introduction

Currently, the development of the Industrial Revolution 4.0 era is characterized by the massive use of digital technology and artificial intelligence. Therefore, it is necessary to prepare for the Industrial Revolution 5.0 era, which will emphasize more on collaboration between humans and machines. Artificial intelligence (AI) technology has begun to be used in various sectors, including in the field of judicial law.[1] This technology allows computer systems to mimic human intellectual abilities.[2]

Indonesian legislation categorizes AI as an *"Electronic Agent"* due to its character that emphasizes automation in information management. According of the ITE Law, *"an Electronic Agent is a device of an electronic system created to perform an action on certain electronic information automatically organized by a person."* The number of AI systems in use is increasing and their features continue to evolve rapidly. AI can process natural language, identify images and computer vision, objects, people, places, and videos, as well as understand visual content, solve complex problems, develop software, and automate tasks.[3]

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[1] Jie Jing Yao & Peng Hui. "Research on the Application of Artificial Intelligence in Judicial Trial: Experience from China". *Journal of Physics Conference Series.* Vol. 1487, No. 1 (2020). p. 79. 10.1088/1742-6596/1487/1/012013

[2] Rupali Mahind & Patil Amit. "A Review Paper on General Concepts of "Artificial Intelligence and Machine Learning". *IARJSET.* Vol. 4, No. 4 (2017). p. 79-82. 10.17148/IARJSET/NCIARCSE.2017.22

[3] Aldo HB Wendur. "Perlindungan Hukum Terhadap Hak Kekayaan Intelektual di Era Digital dalam Penggunaan Artificial Intelligence." *Lex Administratum* Vol. 12, No. 2 (2024). p. 2.

The ability of machines to carry out activities usually associated with human decision-making is known as artificial intelligence (AI). AI computer systems use a variety of data sets and sensory inputs to make judgments in real time and adjust them later based on new information and experience. When it comes to machine learning, artificial intelligence covers almost all aspects of modern life.[4]

Law enforcement, which has traditionally consisted of police, prosecutors, judges, and lawyers, will undergo a significant transformation in the era of evolving digital technology. The way people interact with the law in the digital age has been changed by technological advancements during the industrial revolution 4.0. Legal professionals and law enforcement officers must also change, in addition to forcing regulators to change the way they act. Justice Aedit Abdullah of the Supreme Court of Singapore cited three reasons: the presence of artificial intelligence, the commodification of law, and ease of communication.[5]

The way artificial intelligence (AI) works involves systems that have been carefully designed. AI, with its complex design and structure, is designed to mimic the human brain's ability to analyze data, reason, solve problems, and make decisions. For example, in the audit process, AI can dynamically collect and determine data, then process it to detect fraud more quickly and accurately than traditional auditors.[6]

Advances in the availability of big data and affordable high computing power have driven the rapid development of AI technology. The term *"artificial intelligence"* was first introduced in the 1950s, when the Dartmouth Summer Research Project on Artificial Intelligence began in 1956.[7] Since then, researchers and innovators have filed nearly 340,000 patents for AI-related

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[4] Melissa Whitney. "Cara Meningkatkan Keahlian Teknis Bagi Hakim dalam Litigasi Terkait AI". *Riset.* (7 November 2019).

[5] Normand Edwin Elnizar. "Artificial Intelegence dalam Industri hukum, Menyongsong Masa Depan Dunia Hukum Tanpa Hakim dan Lawyer". *Hukum Online.* (6 April 2018). https://www.hukumonline.com/berita/a/artificial-intelligence-dalam-industri-hukum--menyongsong-masa-depan-dunia-hukum-tanpa-hakim-dan-lawyer-lt5ac7289c0b372

[6] Anshori. "Gagasan Artificial Intelligence dalam Penerapan Hukum di Era 4.0 Perspektif Penyelesaian Perkara Model Restorasi Justice dan Hukum Progresif". *Legal Studies Journal* 2, no. 2 (2022). https://doi.org/10.33650/lsj.v2i2.4190

[7] Vaidy Rajarman "Father of Artificial Intelligence". *JohnMcCarthy.* Vol. 19, No. 3 (2014). p. 201. 10.1007/s12045-014-0027-9

inventions and have published more than 1.6 million scientific publications on AI.[8]

Artificial intelligence can be utilized in various fields, such as in the healthcare sector. Its ability to analyze and detect various diseases from medical images can help reduce the workload of medical personnel and the need for human resources. The application of deep learning in computer vision to analyze medical images has also shown excellent performance, even in some cases being able to exceed capabilities.[9] The banking industry is using artificial intelligence to enhance security, productivity, and customer satisfaction. Many financial companies have used IBM Watson to provide automated customer service that is more responsive and customized to the company's financial products.[10] AI also plays an important role in fraud detection, such as a counterfeit system that uses machine learning to analyze transaction patterns and spot suspicious actions with a high degree of accuracy.[11] Along with these developments, the legal field is also not spared from the influence of the AI revolution, not only in Indonesia but in various countries.[12]

Currently, ChatGPT is a platform that allows people to talk in text, answer questions, write creatively (such as poetry and fiction), complete scripts, and write long stories with high quality. In addition, we can use this ChatGPT for all kinds of conversations, including legal matters. Consult ChatGPT to get a wealth of information on matters such as criminal, divorce, marriage, custody, land rights, immigration, and others.[13]

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[8] Ari Juliana Gema. "Masalah penggunaan Ciptaan Sebagai data Masukan dalam Pengembangan Artificial intelligence di Indonesia. *Technology and Economics law Journal.* Vol. 1, No. 1 (2022). p. 1.

[9] Roidah Pakpahan. "Analisa Pengaruh Implementasi Artificial Intelligence Dalam Kehidupan Manusia." *JISICOM (Journal of Information System, Informatics and Computing)* 5, No. 2 (2021). p. 511. https://doi.org/10.52362/jisicom.v5i2.616

[10] Xuejie Zhang, et al. "Personalized Digital Customer Services for Consumer Banking Call Centre Using Neural Networks." *International Joint Conference on Neural Networks (IJCNN).* 2020. 10.1109/IJCNN48605.2020.9206709

[11] Wishmy Meinawa Ikhsan, et al. "Fraud detection automation through data analytics and artificial intelligence." *Riset: Jurnal Aplikasi Ekonomi Akuntansi dan Bisnis* Vol. 4, No. 2 (2022). https://doi.org/10.37641/riset.v4i2.166

[12] The Toan Huu Bui and Van Phuoc Nguyen. "The impact of artificial intelligence and digital economy on Vietnam's legal system." *International Journal for the Semiotics of Law-Revue internationale de Sémiotique juridique,* Vol. 36, No. 2 (2023). p. 969.

[13] Awaludin Marwan "Apakah Sarjana Hukum bisa Digantikan dengan Teknologi Kecerdasan Artifisial?." *AL WASATH Jurnal Ilmu Hukum,* Vol. 4, No. 1 (2023). https://doi.org/10.47776/alwasath.v4i1.654

China has already begun utilizing AI in the legal industry; in particular, Hangzhou began using it in 2019. They used an assistant judge program called Xiao Zhi 3.0, or "Little Wisdom," that first helped handle 10 cases of citizens defaulting on bank loans. One judge resolved all the cases in a single hearing, and decisions were available within 30 minutes. These days, the technology is employed to evaluate case materials, record voice testimonies, and use databases to check facts in real-time.[14] Furthermore, the use of AI in Estonia is also applied to judges to improve services and reduce the backlog of cases in the courts. Small civil disputes, such as minor disputes, are resolved by AI judges for cases worth under 7,000 euros. The application of AI systems to process small disputes is considered effective and does not involve the discretion of judges.[15]

The use of AI certainly aims to overcome the accumulation of cases in the court and assist judges in deciding a case quickly, and of course judges must also pay attention to the perspective of justice in every decision made by judges in each case.[16]

Based on the annual report delivered by the Chief Justice of the Supreme Court, H. M. Syarifuddin, on February 20, 2024, at the Jakarta Convention Center, in 2023 the incoming cases were 27,512; at the appellate level court, the incoming cases in 2023 were 57,198; at the first level court, the incoming cases were 2,786,073; and then through the e-court, the incoming cases were 313,947.[17] The number of incoming cases is one of the factors for the need to use AI in the court environment to help judges resolve incoming cases in each court in Indonesia.

The utilization of AI in the court environment was launched on 18 August 2023, where five applications were launched, including the Smart

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[14] Isaac Christipher Lubogo, et al. The Future Lawyer Solving Criminal an Civil Puzzles The Evolution of generation Intelligence. Uganda: Jescho Publishing House, 2023.

[15] Ekinia Karolin Sebayang, Mahmud Mulyadi, and Mohammad Ekaputra. "Potensi Pemanfaatan Teknologi Artificial Intelligence Sebagai Produk Lembaga Peradilan Pidana di Indonesia." *Locus Journal of Academic Literature Review.* Vol. 3, No. 4 (2024). https://doi.org/10.56128/ljoalr.v3i4.311

[16] J.I.N Yaohui and H. E. Hao. "An Artificial-Intelligence-Based Semantic Assist Framework for Judicial Trials." *Asian Journal of Law and Society.* Vol. 7, No. 3 (2020). https://doi.org/10.1017/als.2020.33

[17] Azizah "Tahun 2023 Merupakan Rekor Dengan Jumlah Sisa Perkara Terendah Dalam Sejarah Berdirinya Mahkamah Agung". *Mahkamah Agung.* https://www.mahkamahagung.go.id/id/berita/6175/tahun-2023-merupakan-rekor-dengan-jumlah-sisa-perkara-terendah-dalam-sejarah-berdirinya-mahkamah-agung#:~:text=Dari%20jumlah%20beban%20perkara%20tersebut,dicapai%20dalam%20sejarah%20berdirinya%20Indonesia (Last visited Aug 15, 2024)

Assembly application, Court Live Streaming, Integrated Court Performance Monitoring System application (SATU JARI), Integrated Service application version 2.0 (Lentera 2.0), and Electronic Planning System (E-Iplans) application.[18] Then on August 19, 2024, the Supreme Court also launched five new applications, including the SIAP MA application, e-court application, early detection application, mobile version of the JDIH application, and DIKTUM application.[19]

Previously, through e-courts, artificial intelligence has been used in the legal system, where e-court functions as a form of service to the community in terms of administration in court up to the trial and decision of a case.[20] The use of e-court is only limited to facilitating the legal process, not to assist judges to analyze a case so as to assist judges in a faster decision-making process.

Given the flexibility and efficiency offered by current AI findings, the use of AI technology as a product of judicial institutions in Indonesia may be a necessity of an increasingly modern society. In addition, it cannot be denied that the results of the Corruption Eradication Commission's Integrity Assessment Survey of the Supreme Court in 2022 dropped to 74.61 from 82.72 in the previous year. This is because the KPK named 2 (two) Supreme Court Judges, 3 (three) Substitute Clerks, and 5 (five) employees as suspects in relation to corruption eradication actions carried out by the KPK.[21]

In Indonesia, the conversation about AI and its impact on the law is still underdeveloped. Currently, there are no legal regulations that specifically address the existence of smart robots. However, if we consider it from a legal conceptual point of view, it is possible that AI could be considered and recognized as if it were a new legal subject. Artificial intelligence is a technology system that mimics human thought and behavior to solve issues or carry out activities. AI is already having an impact on a number of areas of human life that were previously limited to those with certain expertise, skills, or

[18] Azizah. "Menuju Usia Ke-78, Mahkamah Agung Luncurkan 5 Aplikasi Baru." *Mahkamah Agung.* https://www.mahkamahagung.go.id/id/berita/5875/menuju-usia-ke-78-mahkamah-agung-luncurkan-5-aplikasi-baru (Last visited Aug 15, 2024)

[19] Azizah "Tegaskan Komitmen Di Hari Jadi Ke-79". Mahkamah Agung Luncurkan 5 Aplikas.i" *Mahkamah Agung.* https://mahkamahagung.go.id/id/berita/6394/tegaskan-komitmen-di-hari-jadi-ke-79-mahkamah-agung-luncurkan-lima-aplikasi. (Last visited Aug 15, 2024)

[20] MA Pengadilan Agama Sumber. "Tentang E-Court". MA Pengadilan Agama Sumber. https://web.pa-sumber.go.id/tentang-e-court/. (Last visited Aug 17, 2024)

[21] Ekinia Karolin Sebayang, Mahmud Mulyadi, and Mohammad Ekaputra. *Op. Cit.* p. 319.

government permits. For instance, the District of Columbia and four other US jurisdictions presently permit the use of autonomous vehicles.[22]

Along with the development of technology, AI can now not only assist in performing human tasks but can also replace them. Eugene Volokh revealed that AI can be considered more trustworthy than human judges if it is able to make written decisions and justifications. He argues that all legal logic can be programmed into AI, so AI has the potential to decide cases. However, this explanation is not enough to officially establish AI's status as a legal subject. Given the conditions and risks associated with AI, it is important to establish clarity on AI's legal status.[23]

Based on this, it can be seen that the use of AI is very necessary in the court environment, given the large number of cases that must be resolved by judges and the need for AI to assist judges to resolve these cases. The use of AI in judges' decisions is highly dependent on how this technology can be integrated while still prioritizing the principles of justice and what regulations are needed to support the use of AI in judges' decisions, considering that until now there are no specific rules governing the regulation of the use of AI in the court environment.

According to Sudikno Mertokusumo, Jeremy Bentham pioneered the utilitarianism school, which aims to ensure the greatest happiness for the greatest number of people (the greatest good of the greatest number).[24] Relying solely on legal texts will not be sufficient to achieve this goal. Artificial intelligence approaches may only represent the law textually and not yet reflect the human aspect of case decisions that involve conscience.

This study aims to investigate the role that artificial intelligence (AI) can play in supporting judges throughout the decision-making process from the standpoint of justice, as well as the laws that must be in place to allow this practice while upholding the notion of justice. The major goals are to advance our understanding of how AI may support courts in making decisions and the laws that must be in place to allow judges to employ AI in their decision-making while upholding the ideals of justice.

Research related to Artificial Intelligence has been studied by several researchers in Indonesia, including research conducted by Denindah Olivia

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[22] Muhammad Dafi Akbar, et al. "Pemanfaatan dan Permasalahan Artificial Intelligence Dalam Kehidupan Manusia Serta Pengaturannya Secara Hukum." *Media Hukum Indonesia (MHI)*. Vol. 2, No. 2 (2024). https://doi.org/10.5281/zenodo.12169651

[23] *Ibid.*

[24] Sudikno Mertokusuma. *Mengenal Hukum: Suatu Pengantar.* Yogyakarta: Liberty Yogyakarta, 2008. p. 80.

entitled "Legal Aspects of Artificial Intelligence on Automated Decision-Making in Indonesia: Lessons from the European Union, the United States, and China" in the 2020 Lentera Hukum Journal. However, the research discusses more "about the status quo of the legal protection of automated decisionmaking in Indonesia. The analysis highlights profiling in an automated decision-making system with the following discussion about personal data protection."[25]

In addition, there is also research from Flora P. Kalalo, Kathleen C. Pontoh "The Use of Artificial Intelligence (AI) in Legal Framework for International Arbitration Practices in Indonesia" which sees "The existence of Artificial Intelligence (AI) and its features greatly facilitates the work of legal practitioners in international arbitration. The use of AI not only can shorten the time in making international treaty documents, but also can also provide a broad legal impact to the public, especially business people who resolve their dispute through arbitration."[26]

Research conducted to see the negative impact of AI has been conducted by Pranadita entitled "The Use of Artificial Intelligence to Reveal Negative Impact of a Product Legally as an Understanded Side" published in Proceding Advances in Social Science, Education and Humanities Research, volume 409 which in his writing states that there needs to be legal responsibility for the use of devices with artificial intelligence and the subject of law is responsible in all related legal aspects.[27]

This study uses a normative juridical method to analyze secondary data from a literature review. We conducted the analysis using primary, secondary, and tertiary legal materials, and also reviewed the use of AI in other countries to assist judges in the judicial process. This aims to solve the problem of accumulating cases in court and achieve substantive justice for the litigants. This research will examine the use of AI in judges' decisions from a justice perspective.

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[25] Denindah Olivia. "Legal aspects of artificial intelligence on automated decision-making in Indonesia: Lessons from the European Union, the united states, and china." *Lentera Hukum*. Vol. 7, No. 3 (2020). 10.19184/ejlh.v7i3.18380

[26] Flora P. Kalalo and Kathleen C. Pontoh. "The Use of Artificial Intelligence (AI) in Legal Framework for International Arbitration Practices in Indonesia." *Arbitration and Alternative Dispute Resolution International Conference (ADRIC 2019)*. Vol. 472 (2020). p. 6. 10.2991/asschr.k.200917.002

[27] Nugraha Pranadita. "The Use of Artificial Intelligence to Reveal Negative Impact of a Products Legally as an Understanded Side." *2nd Social and Humaniora Research Symposium (SoRes 2019)*. Vol. 409 (2020). p. 187. 10.2991/asschr.k.200225.038

Regulation of the Use of Artificial Intelligence in Judicial Decisions

AI, also known as artificial intelligence, can be linguistically defined as "*artificial*," which means non-native, and "*intelligence*," which means intelligence. AI was created with the aim of assisting human activities and work by designing AI to mimic the way humans think and reason. AI has the ability to receive data, process it, and make decisions to complete a task. Simply put, we can define AI as a device or tool that mimics human thinking and reasoning, following human instructions. AI has an advantage over humans in terms of speed and accuracy in executing programs, often better than humans.[28]

AI continues to grow rapidly, as seen from the policies and development plans implemented by various companies and countries around the world. Indonesia is also participating in the development of this technology. AI developments suggest that this technology will play a significant role in human lives in the future. Because AI's capabilities are intimately tied to human life, they will constantly come into conflict with the law. Due to its autonomous nature, AI needs special attention, especially regarding the risks it can pose. As a precautionary measure, the law needs to be at the forefront to prevent unwanted risks or to solve problems that may arise.[29]

Currently, neither the laws of other countries nor Indonesian law have clearly defined the status and position of AI. The position of AI in Indonesian law is still not clearly regulated, which indicates a legal vacuum. This lacuna can be a serious problem if AI causes harm or commits unlawful acts, as it will be difficult to determine the party responsible for the harm. This is further complicated by the fact that AI is autonomous and can act independently. Nonetheless, alternatives such as the use of analogies or the application of pre-existing legal concepts can be considered to regulate AI in the context of Indonesian law.[30]

Judging from the existing regulations in Indonesia, the Civil Code (KUHPer) indirectly allows the analogy of AI with workers. This can be seen

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[28] Imelda Mardayanti Yenni Arfah, and Dedy Dwi Arseto. "Pemanfaatan Artificial Intelligence (AI) dalam Pembentukan Peraturan Perundang-undangan Serta Implikasinya Terhadap Etika dan Keamanan." *Community Service Progress*. Vol. 3, No. 1 (2024): 1-10. https://doi.org/10.70021/csp.v3i1.136

[29] F.L. Amboro and Khusuf Komarhana. "Prospek kecerdasan buatan sebagai subjek hukum perdata di Indonesia." *Law Review*, Vol. 21, No. 2 (2021). http://dx.doi.org/10.19166/lr.v0i2.3513

[30] *Ibid.*

in the relationship between workers and employers regulated in Article 1367 paragraphs (1) and (3) of the Civil Code, which states as follows:

"(1) A person is liable not only for damages caused by his own acts but also for damages caused by the acts of those for whom he is responsible or by goods under his supervision." And (3) Employers and persons who appoint others to represent their affairs are liable for damages incurred by their servants or subordinates in performing the work for which these persons are employed."

Given the "worker" characteristics of AI systems, it is possible to analogize AI as a worker based on this arrangement. In addition, the application and use of AI in daily life increases what humans can actually do, so the impression of AI is getting closer to workers.[31] However, the culture of law enforcers who are not accustomed to technological developments will be one of the obstacles in utilizing AI.[32]

The use of AI for social good and the attainment of the Sustainable Development Goals (SDGs) hold significant potential. While AI can play a role in addressing many pressing social issues, its use also raises concerns regarding human rights violations, such as freedom of expression, privacy, data protection, and nondiscrimination. If developers develop AI-based technologies with attention to universal norms, ethics, and standards, and based on the values of human rights and sustainable development, they can offer great opportunities. The use of artificial intelligence carries several risks:[33]

1. Potential bias in AI systems, as demonstrated by Tay's chatbot uploading offensive and racist content.

2. The vulnerability of AI databases to hackers, which can expose confidential business information and disrupt corporate data.

3. The possible utilization of AI for acts of terrorism, such as through autonomous drones and malicious software that can disrupt economic activity.

Today, AI has been used in many fields such as commerce, healthcare, law, and politics. This shows that AI has been used in many areas of people's lives. AI develops at three levels: Artificial General Intelligence (AGI), often referred to as Strong AI, is capable of tasks equivalent to those of humans;

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[31] *Ibid.*

[32] Dian Latifah, et al. "Reconstruction of E-court legal culture in Civil Law Enforcement." *JILS.* Vol. 7, No. 2 (2022). https://doi.org/10.15294/jils.v7i2.59993

[33] Flora P. Kalalo and Kathleen C. Pontoh. *Op. Cit.* p. 8.

Artificial Narrow Intelligence (ANI), a sort of weak AI; and Artificial Super Intelligence (ASI), a type of AI designed specifically to outperform human capabilities. Since AI is still operated by people, the development of AI is still in a weak stage, but AI may surpass human ability to do things without the need for human command mechanisms.[34]

The legal field provides many opportunities to develop analytics and integrate computational aspects in Artificial Intelligence Legal Models. This model has very unique characteristics, which make the field of AI in law particularly challenging. As described by Edwina L. Rissland in "Artificial Intelligence and Law: Stepping Stones to a Model of Legal Reasoning", such as:

1. The law offers several ways to think about statutes, regulations, instances, and legal principles.
2. The standard of logic and justification in case law is distinct.
3. Legal knowledge comes from a variety of references, such as cases, rules, documentation, scholarly summaries, and expert opinions.
4. Law is subject to criticsm and involves a dynamic debate process.
5. Legal answers can change over time, unlike other disciplines.
6. Legal reasoning uses different types of knowledge, including the common sense of legal knowledge, as well as structural variations in cases and practices.

In the field of justice, AI is utilized with two different approaches. First, rule-based AI systems are utilized to improve administrative effectiveness and advance access to justice by giving information, support, and guidance to parties participating in the litigation process. Second, sophisticated machine learning models mimic the application of knowledge and guidelines to intricate situations, producing wise choices.[35]

Human judges only have restricted access to the client's legal information during the decision-making process. The data entered by programmers and analysts is not accessible to judges, but AI decision-making systems are. Furthermore, AI rulings typically rely on historical data that was used to train

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[34] Denico Doly. "Pemanfaatan Artificial Intelligence Dalam Penegakan Hukum Di Indonesia". *Pusat Analisis Keparlemenan Badan keahlian DPR RI.* https://berkas.dpr.go.id/pusaka/files/info_singkat/Info%20Singkat-XV-19-I-P3DI-Oktober-2023-208.pdf

[35] Monika Zalnieriute and Felicity Bell. "Technology and the judicial role." *The Judge, the Judiciary and the Court: Individual, Collegial and Institutional Judicial Dynamics in Australia (Cambridge University Press, 2021).* (2020), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3492868

the system, whereas judges take into account both past and future events. Algorithms that rely on historical data might not always be suitable for addressing the issues that contemporary decision makers are facing.[36]

When algorithms provide judges with recommendations or judgments, there are questions regarding the judges' capacity to appropriately assess the strength of those proposals and reach well-informed conclusions. Studies like the ones carried out by Shrestha et al. point to the possibility of a hybrid decision-making framework in which human decision-making is aided by algorithm-based decisions.[37]

Despite being a latecomer to using legal technology in the judicial system, China has progressed significantly faster than most other nations. According to Wang and Tian, this is likely due to the higher level of trust in AI in East Asia compared to Western countries. A further factor contributing to the challenge of ensuring prompt justice administration in China is the mismatch between the increasing number of cases and the manpower available.[38]

In 2023, the Indonesian government issued Circular Letter Number 9 of 2023 on Ethics of Artificial Intelligence in response to the rapid development of AI. This document serves as an ethical guide for AI utilization and a reference for businesses in formulating internal policies related to AI. The Circular covers nine ethical values that need to be considered, such as inclusiveness, humanity, security, democracy, transparency, credibility, and accountability; protection of personal data; environmental development and sustainability; and intellectual property rights. This circular letter is crucial to guiding AI use in Indonesia, even if it does not fall under the purview of laws and regulations as defined by the Law on the Formation of Laws and Regulation.[39]

Currently, artificial intelligence technology is not specifically regulated in the legal framework. However, the use of AI now relates to the Electronic

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[36] Ummey Sharaban Tahura & Niloufer Selvadurai. "The Use Of Artificial Intelligence In Judicial Decisionmaking: The Example Of China". *Winter 2022 Int'l J. L. Ethics Tech.* Vol. 3 (2022). p. 6. https://doi.org/10.55574/PYEB5374

[37] Yash raj Shrestha, Shiko M. Ben-Menahem, and Georg Von Krogh. "Organizational decision-making structures in the age of artificial intelligence." *California management review.* Vol. 61, No. 4 (2019). https://doi.org/10.1177/00081256198622

[38] Nu Wang. ""Black Box Justice": Robot Judges and AI-based Judgment Processes in China's Court System." *2020 IEEE International Symposium on Technology and Society (ISTAS).* (2020). 10.1109/ISTAS50296.2020.9462216

[39] Moh Raka Saputra and Tri Setiady. "Implementasi Alternatif Penyelesaian Sengketa dengan Artificial Inteligence di Indonesia Ditinjau Melalui Teori Hukum Progresif." *Dinamika Hukum Terkini.* Vol. 6, No. 3 (2024).

Information and Transaction Law in the context of laws pertaining to electronic systems. AI can be categorized as an electronic system, which is defined as "a series of electronic devices and procedures that function to prepare, collect, process, analyze, store, display, announce, transmit, and/or disseminate electronic information."

However, as stated in Article 1 Point 8 of the ITE Law, some experts contend that AI can be conceived of as an Electronic Agent. "An electronic agent is defined as a device of an electronic system that is made to automatically perform actions on certain electronic information organized by a person." Based on this definition, AI can currently be considered an electronic agent, as it is still operated by humans to achieve certain goals. However, if AI develops beyond the ability of humans to act, then the definition of Article 1 point 8 of the ITE Law may no longer be relevant as a basis for regulating AI in Indonesia.

Electronic agents are subject to regulation under the ITE Law when carrying out electronic transactions. This is because the electronic agent organizer is basically an electronic system organizer, where the electronic agent is part of the electronic system implementation. Therefore, all rights and obligations that apply to electronic system organizers also apply to electronic agents.[40]

The rapid development of AI technology is no longer in line with the scope of regulation in the ITE Law, which is one of the problems in Indonesia. For example, the ITE Law does not yet regulate actions that AI can perform without human instruction. Therefore, new regulations are needed to anticipate and protect the interests of society. This is consistent with the progressive legal theory of Satjipto Rahardjo, which holds that the law exists to serve people, not to serve its own interests. As a result, the law must always be "law in the making." Therefore, it is important for policymakers to immediately formulate regulations that can accommodate all actions involving the use of AI.

Currently, Indonesian law does not specifically regulate the use of Artificial Intelligence. Although in some cases, AI is treated like a legal entity and given legal responsibilities, similar to organizations, companies, or individuals. However, according to Muhammad Tan Abdul Rahman Haris Tantimin, AI cannot be considered a legal subject like a legal entity. This is because a legal entity has a clear purpose in its establishment and involves humans in its scope, whereas AI cannot stand on its own and is always governed

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[40] Angga Priancha & Zahrashafa P. Mahardika, "Pengaturan Hukum Artificial Intelligence Saat Ini". *Hukum Online.* https://www.hukumonline.com/berita/a/pengaturan-hukum-artifical-intelligence-indonesia-saat-ini-lt608b740fb22b7/ (Last visited Sep 7, 2024).

and programmed by humans. In addition, the perfection of decisions made by AI cannot be guaranteed without human involvement, as AI or computers are not completely free from the possibility of system errors.[41]

The Use of Artificial Intelligence in Assisting Judges' Decision-Making Process in the Perspective of Justice

The development of technology today is growing very fast. This certainly applies to the advancement of AI or artificial intelligence.[42] AI is designed as a technology that can assist human activities by mimicking human intelligence. AI in programs aims to answer questions, execute commands, make decisions, and execute them, which requires data input into pre-designed programs. Although the judicial process in Indonesia currently uses AI sparingly, there have been several efforts to optimize its use.[43]

In 1943, Warren McCulloch and Water Pitts created the basic concept of artificial intelligence in their paper, A Logical Calculus of Ideas Immanent in Nervous Activity. The paper covers three main topics. They defined AI as the science of brain psychology and neural functions, the formal analysis of propositional logic, and the theory of Turing computation. They suggested the way neural networks act when given a stimulus. Neural networks can learn and adapt by changing their reactions each time a stimulus is given.

According to Minsky, artificial intelligence is a machine that is capable of performing human-like activities. AI can be utilized for various purposes, such as planning, problem solving, reasoning, idea recognition, thinking enhancement, and others, which can help speed up and streamline work.

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[41] Muhammad Tan Abdul Rahman Haris, and Tantimin Tantimin. "Analisis Pertanggungjawaban Hukum Pidana Terhadap Pemanfaatan Artificial Intelligence di Indonesia." *Jurnal Komunikasi Hukum (JKH)*. Vol. 8, No. 1 (2022). p. 307. 10.23887/jkh.v8i1.44408

[42] Tegar Raffi Putra Jumantoro. "Menilik Pro dan Kontra Pemanfaatan dan Penetapan Status Hukum Artificial Intelligence (AI) dalam Hukum Positif Indonesia." *Journal of Analytical Research, Statistics and Computation.* Vol. 3, No. 1 (2024). https://doi.org/10.4590/jarsic.v3i1.28

[43] Enni Soerjati Priowirjanto "Urgensi Pengaturan Mengenai Artificial Intelligence Pada Sektor Bisnis Daring Dalam Masa Pandemi Covid-19 di Indonesia." *Jurnal Bina Mulia Hukum.* Vol. 6, No. 2 (2022). https://doi.org/10.23920/jbmh.v6i2.355

Furthermore, Russell and Norvig state that AI falls into four categories: systems that can think and act like humans, and think and act rationally.[44]

The development and advancement of AI show that AI will be very important for human life in the future. AI's capabilities are related to human life and therefore will always be connected to the law. With its autonomous nature, AI illustrates that it is a matter of concern as its capabilities are linked to human life.[45]

Various sectors have utilized AI and benefited from its presence. In the legal field, AI has also been able to act as a judge in handling digital cases in China.[46] China has been actively supporting the transition to smart justice, where there are over a hundred robots in court. These robots can retrieve case histories and previous decisions, which makes officers work less. Some robots even have certain specializations, such as commercial law or labor disputes.

As in China since 2019, an AI Judge has been developed in Hangzhou City. This judge has the ability to make recommendations for legal considerations, create legal documents, and provide alerts in the event of human error in issuing verdicts. Judges and prosecutors in criminal law also use the Xiao Baogong Intelligent Sentencing Prediction System, another legal AI platform, to settle disputes involving traffic offenses.[47]

In industry, the application of AI to some processes has proven to be more accurate, efficient, and cost-effective than the use of human labor. If these benefits are applied to the legal field, the use of AI can reduce time and costs in the administration of justice. Technology has also transformed the justice system in various countries. For example, in British Columbia, Canada, an online-based Civil Disputes Tribunal was created to allow parties to connect and initiate proceedings online. In addition, small claims processing is available online through the Northern Ireland Courts and Tribunal Service. Indeed, the UK suggests creating a specific online court system for civil cases worth less than GBP 25,000. AI solicitors also gather information and research legislation relevant to cases. Over 60,000 cases remained unresolved at the end of 2022, a near-record number for the Crown Court in England and Wales. In Estonia, the Ministry of Justice created robot judges to resolve disputes worth under

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[44] *Ibid.*

[45] FL Yudha Amboro and Khusuf Komarhana. *Loc. Cit*

[46] Caixia Zou. "Achievements and Prospects of Artificial Intelligence Judicature in China." *Chinese Studies.* Vol. 11, No. 4 (2022). 10.4236/chnstd.2022.114016

[47] Isaac Christopher Lubogo, et al. *Loc. Cit.*

EUR 7000.[48] Therefore, small cases are more likely to use AI-based judgment.[49] In Brazil, an AI tool called VICTOR is used to analyze a case before a human judge even sees it. There must be a public impact in order to file an appeal with the Brazilian Supreme Court. Each lawsuit would take roughly 40 minutes to process prior to VICTOR. In less than ten seconds, VICTOR operates. Another intriguing feature of VICTOR is this one more thing. Nevertheless, VICTOR can process handwritten, scanned, JPG, PDF, or other types of input and still produce machine-readable text files by using Optical Character Recognition. Furthermore, and this is another intriguing aspect, VICTOR is able to discern legal reasoning (from other texts).[50]

Machine learning algorithms are used to analyze judicial texts. Several other countries have also started using AI systems to help resolve legal cases.[51] Then in the Netherlands, the government there began to utilize AI to serve as a path of convenience for the public in accessing various existing regulations and agreements. Thus, it is possible that the legal world, especially in Indonesia, will also be affected given the time efficiency and accuracy that AI can do.

AI proponents also argue that algorithms can improve fairness in judgment because "AI judges strictly follow precedent, limit undue judicial latitude, prevent bias and personal preferences of individual judges, handle large amounts of information, complete complex calculations, and find statistical representations of varied fact patterns and legal factors."[52]

This may provide a solution to the 'Hungry Judge' phenomenon, where hungry judges tend to make stricter decisions. However, other studies have shown that judges actually issue softer decisions after they have eaten. There are

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[48] Eric Niiler. "Can AI Be a Fair Judge In Court? Estonia Thinks So" *SLS News & Media.* https://law.stanford.edu/press/can-ai-be-a-fair-judge-in-court-estonia-thinks-so/ (Last visited Sep 9, 2024)

[49] Olga Alejandera Alcántara Francia, Miguel Nunez-del-Prado, and Hugo Alatrista-Salas. "Survey of text mining techniques applied to judicial decisions prediction." *Applied Sciences.* Vol. 12, No. 20 (2022). https://doi.org/10.3390/app122010200

[50] Daniel Becker and Isabela Ferrari. "Victor, the Brazilian Supreme Court's Artificial Intelligence: A Beauty or a Beast?." *Regulacao 4.0: Desafios da Regulacao Diante de Um Novo Paradigma Cientifico* (2020). https://sifocc.org/sifocc_documents/victor-beauty-or-the-beast/

[51] Ridho Darman. "Peran ChatGPT Sebagai Artificial Intelligence Dalam Menyelesaikan Masalah Pertanahan dengan Metode Studi Kasus dan Black Box Testing." *Tunas Agraria.* Vol. 7, No. 1. (2024). https://doi.org/10.31292/jta.v7i1.256

[52] Zichun Xu. "Human judges in the era of artificial intelligence: challenges and opportunities." *Applied Artificial Intelligence.* Vol. 36, No. 1 (2022). https://doi.org/10.1080/08839514.2021.2013652

significant differences in the decisions of individual judges. In one instance of "refugee roulette," for instance, just 5% of Colombian petitioners were given asylum by an American judge, yet 88% were granted asylum by a different judge.[53] This shows that judges' decision-making can be influenced by external factors, such as physical condition, rather than objective legal considerations. Nonetheless, support for the use of AI in judges' decisions continues in the hope of eliminating these human biases. However, the effectiveness of using AI in judicial decisions is still debatable.

Legally, the use of AI technology in Indonesia is recognized and supported through Article 28C of the 1945 Constitution which states that science and technology must be utilized to improve the quality of life and welfare of the community. Furthermore, Law No. 11/2019 on the National System of Science and Technology affirms that the government must advance science and technology in order to guarantee the public's right to enjoy its benefits while maintaining religious values and national unity. Thus, the main goal of technological and scientific progress is to improve the welfare, quality of life, and dignity of society.

Artificial intelligence-based applications used in Indonesia in the legal field include e-Court, Electronic Mediation, and Smart Panel.[54] These applications are utilized to automatically select judges by considering factors such as experience, competence, and workload.[55]

According to the Chairman of the Civil Chamber of the Supreme Court (MA) RI, Pri Pambudi Teguh, the use of technology in judicial institutions due to the large number of incoming cases and the small number of judges makes it look unbalanced. Therefore, the Supreme Court made efforts to provide technological assistance through various innovations in the courts, such as e-Court, e-Litigation, electronic mediation, and so on. Everything is used as much as possible to assist the work of judges. Despite the use of technology as a tool that can improve the efficiency and efficiency of judges' work, technology such

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[53] Robert Buckland "AI, Judges and Judgment: Setting the Scene." *M-RCBG Associate Working Paper Series*, No. 220 (2023). https://dash.lib.harvard.edu/handle/1/37377475

[54] Sudarsono & Abdul Halim. "Electronic Signature in the Implementation of Main Duties and Judicial Institution Functions." *Jurnal Hukum Peratun*, Vol. 2, No. 2 (2019). https://doi.org/10.25216/peratun.222019.149-164

[55] Ferinda K. Fachri. "Melihat Posibilitas AI Menggantikan Hakim di Masa Depan, Apa Mungkin?". *Hukum Online*. https://www.hukumonline.com/berita/a/melihat-posibilitas-ai-menggantikan-hakim-di-masa-depan--apa-mungkin-lt653a431cbb9f0/ (Last visited Sep 5, 2024).

as AI must be operated by humans. This involves judges from various judicial environments.[56]

As of right now, AI is only utilized in the legal sector to help with case administration; it isn't yet utilized in court proceedings. Since the court bases his or her decision on personal conviction, the judge still has the final say over sentencing. This is due to the ability to determine a person's guilt, which AI cannot yet do.[57] Nonetheless, some experts argue that in the future, AI has the potential to become more sophisticated and capable of understanding human traits.[58] In this case, AI may be able to provide recommendations regarding the amount of punishment for a defendant based on existing articles of law and jurisprudence.[59] Many factors influence how judges decide cases, such as the composition of the panel of judges, the rules of procedure, the factual circumstances of the case, the substance of the applicable legal rules, the evidence, and the method of assessing the facts, all of which play a role in resolving legal issues in accordance with relevant rules and principles.[60]

In rendering a verdict, the judge must try to find the true truth based on the principle of "for the sake of justice based on the Almighty God." Thus, the decision can be accounted for both to fellow humans and to God Almighty.[61] Judges in deciding cases must be based on conviction and careful consideration in order to be morally and spiritually accountable.

This has made it more difficult for judges to review and decide cases since both the quantity and type of cases appearing in court have increased. Judges must nevertheless resolve cases in line with the tenets of "simple, fast, and low-cost justice" without sacrificing the goals of justice, which are expediency, legal clarity, and justice. The judge's ruling must also be fair in light of the community's perception of justice.

In the judge's decision, the word "justice," which is based on the Almighty God, is very clear. Justice is an important value in human life to

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[56] *Ibid.*

[57] V. F. Lapshin S. A. Korneev, and R. V. Kilimbaev. "The use of artificial intelligence in criminal law and criminal procedure systems." *IOP Conference Series: Materials Science and Engineering.* Vol. 1001, No. 1 (2020). 10.1088/1757-899X/1001/1/012144

[58] Sukanta Ghosh and Amar Singh. "The scope of Artificial Intelligence in mankind: A detailed review." *Journal of Physics: Conference Series.* Vol. 1531, No. 1. (2020). 10.1088/1742-6596/1531/1/012045

[59] Jie Jing Yao & Hui, Peng. *Loc. Cit.*

[60] F.L. Amboro nd Khusuf Komarhana. *Loc. Cit.*

[61] Samuel Saut martua Samosir. "Penerapan Penggunaan Irah-Irah "Demi Keadilan Berdasarkan Ketuhanan Yang Maha Esa" dalam Konteks Pencapaian Keadilan." *Jurnal Supremasi* (2019). https://doi.org/10.35457/supremasi.v9i2.790

achieve prosperity. Justice can be seen as a legal attribute and as an action to determine rights or punishment. The term "fair" is interpreted as an effort to resolve a matter in a balanced manner, to be neutral while still defending and siding with the right, and not to commit arbitrariness against others. Justice is closely related to interactions, both in the form of attitudes and behavior between people. Justice demands that all people are able to provide treatment in accordance with the rights and obligations of fellow human beings, in a non-discriminatory manner but giving what should be received.[62]

Justice is at the heart of the legal system. However, interpreting justice from judges' decisions is not easy. Courts based on the positivism paradigm tend to produce decisions that only fulfill procedural justice. This is because the law is seen as a normative structure. In procedural justice, substantive justice can be contained, but it can also only be procedural justice by ignoring substantive justice. Achieving substantial justice in judges' decisions must be a top priority, not just procedural justice.[63]

There are limits to law enforcement that merely concentrate on the law. Judges frequently resolve issues based solely on the letter of the law, neglecting to consider societal values. The Judicial Power Act mandates that judges consider community values even if they are free to make decisions based only on the law and without bias. Therefore, law enforcement that is only based on the law will produce formal justice, which is justice based solely on the fulfillment of the elements in the article of law, without paying attention to the substantive justice felt by the community. In the practice of law enforcement in Indonesia, judges are still focused on legal certainty based on written rules or laws.[64]

In an effort to achieve substantive truth, judges must consider various considerations, such as sociological aspects, customary law, and applicable positive law. In addition, the judge's conviction must be based on a sense of justice that is balanced with the conditions of the case being handled. Decisions made by AI as a judge tend to be rigid and pay less attention to other humanist

[62] John Rawls. *A Theory of Justice.* Delhi: Delhi S & R Legal Co. 2005
[63] Yunanto. "Menerjemahkan Keadilan dalam Putusan Hakim." *Jurnal Hukum Progresif.* Vol. 7, No. 2 (2019). https://doi.org/10.14710/hp.7.2.192-205
[64] Haryono. "Penegakan Hukum Berbasis Nilai Keadilan Substantif (Studi Putusan MK No. 46/PUU-VII/2012 Tertanggal 13 Februari 2012)." *Jurnal Hukum Progresif,* Vol. 7, No. 1 (2019). https://doi.org/10.14710/hp.7.1.20-39

aspects.[65] In addition, it is important for the decision to include the considerations taken by the Panel of Judges. AI analysis results also have the risk of a black box effect: AI cannot show how it processes data from start to conclusion.[66]

However, AI can still be used in Indonesian courts in various cases, although there are still doubts about the use of AI as a judge. First, AI can assist in the organization and storage of case-related documents and information, similar to the "eDiscovery" system used in US courts to sift through relevant information. Second, it can provide legal recommendations to judges as they decide cases, which includes predicting the likely outcome of cases and responding to relevant legal questions.[67] Third, AI can act as a court assistant, as the Shanghai Criminal Court does through "System 206." Verbal commands can be given to the system to display pertinent data, create trial minutes, identify speakers, confirm trial facts, locate evidence, and offer legal advice.[68]

Artificial Intelligence cannot replace the role of judges in giving decisions, as court decisions contain values that cannot be measured or calculated solely through algorithms or other mathematical methods. AI cannot provide justice, and it cannot consider the merits of a problem. Since AI cannot think like humans, it cannot replace judges. AI's role is to support and not replace human judges.[69] A just verdict must reflect human values drawn from the prevailing norms in society, as well as consider legal certainty and benefits. This can only be achieved through sensitivity of instinct and understanding of the social conditions in society.[70]

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[65] Ray Worthy Campbell. "Artificial intelligence in the courtroom: The delivery of justice in the age of machine learning." *Revista Forumul Judecatorilor* (2023), p. 15. https://ctlj.colorado.edu/wp-content/uploads/2020/08/2-Campbell_06.25.20.pdf

[66] A Aleš Završnik. "Criminal justice, artificial intelligence systems, and human rights." *ERA forum*. Vol. 20, No. 4 (2020). p. 568.https://doi.org/10.1007/s12027-020-00602-0

[67] A. Dory Reiling. "Courts and artificial intelligence." *IJCA*. Vol. 11. 2020. p. 3-4. https://doi.org/10.36745/ijca.343

[68] Han-Wei Liu, Ching-Fu Lin, and Yu-Jie Chen. "Beyond State v Loomis: artificial intelligence, government algorithmization and accountability." *International journal of law and information technology*. Vol. 27, No. 2 (2019). https://doi.org/10.1093/ijlit/eaz001

[69] Widayati. "Implementasi Asas Hukum dalam Pembentukan Peraturan Perundang-undangan yang Partisipatif dan Berkeadilan." *Jurnal Hukum*. Vol. 36, No. 2 (2020). 10.26532/jh.v36i2.11391

[70] Azalia Purbayani Sabana. "Sekelumit Penjatuhan Vonis Hakim Berdimensi Artificial Intelligence (AI)". *MA RI Direktorat Jenderal Badan Peradilan Agama.* https://badilag.mahkamahagung.go.id/artikel/publikasi/artikel/sekelumit-penjatuhan-

The one career that AI cannot replace is the legal profession, according to Riki Perdana Waruwu, Judicial Magistrate of the Legal and Public Relations Bureau. When handling cases, judges consider three aspects of justice: legal justice, moral justice, and social justice.[71]

The concept of justice must be understood in the context of Pancasila, the foundation of the Indonesian state, and then linked to the interests of the Indonesian people as the party who must feel the justice. Legal arrangements based on the Pancasila concept of justice must protect the nation, both by preventing arbitrary actions and by creating humane social conditions and allowing the social process to run naturally. Thus, every Indonesian human being has a broad opportunity to develop their full human potential. This protection means that the sense of justice that exists in the conscience of the Indonesian people must be fulfilled.[72] The application of Artificial Intelligence in judges' decisions faces various challenges related to justice.

Pancasila, the mother of all legal sources, also serves as the foundation of the Indonesian state. Social justice for all Indonesians is the fifth Pancasila tenet. This social justice must be implemented in the content of laws and regulations. Justice is not only formal, but must also be substantive. The essence of legislation is justice. The form of justice in society, nation, and state, which is referred to as social justice or justice in the wider community, is justice that coexists with goodness, both in the form of society and in the form of nation and state.[73]

Chief Justice of the Supreme Court (MA) H. M. Syarifuddin, stated in his speech that in the legal profession, judges play a crucial role as adjudicators who determine the direction of justice. Performing duties as a judge is not an easy thing. A judge not only needs in-depth legal knowledge but also must have a strong "fortress" within himself to face various challenges and temptations that could potentially threaten his integrity. This fortress consists of three main

vonis-hakim-berdimensi-artificial-intelligence-oleh-azaliah-purbayanti-sabana-s-h-m-h-01-08. (Last visited Sep 9, 2024).

[71] Azizah. "Apakah Hakim Bisa Digantikan oleh AI". *Mahkamah Agung.* https://www.mahkamahagung.go.id/id/berita/5933/apakah-hakim-bisa-digantikan-oleh-ai. (Last visited August 23, 2024).

[72] Bahder John Nasution. "Kajian filosofis tentang konsep keadilan dari pemikiran klasik sampai pemikiran modern." *Yustisia.* Vol. 3, No. 2 (2014). https://doi.org/10.20961/yustisia.v3i2.11106

[73] Yunie Herawati. "Konsep Keadilan Sosial Dalam Bingkai Sila Kelima Pancasila (The Concept of Social Justice Within The Fifth Principle Framework of Pancasila)." *Paradigma: Jurnal Masalah Sosial, Politik, dan Kebijakan.* Vol. 18, No. 1 (2014). https://doi.org/10.31315/paradigma.v18i1.2405

pillars: unwavering integrity, superior professionalism, and loyalty to the values of justice and truth. Unwavering integrity means that judges must be able to maintain the morals and ethics of their profession, even in stressful situations. Excellent professionalism requires judges to act with expertise and in-depth knowledge, and maintain high standards in every decision they make. In addition, loyalty to the values of justice and truth is a key foundation that every judge must hold closely to ensure that all decisions made reflect the true principles of justice.[74]

Based on the results of the author's discussion with Supandi, Chairman of the State Administrative Chamber of the Indonesian Supreme Court, who stated that judges not only have intellectual intelligence (IQ) and emotional intelligence (EQ), but also must have spiritual intelligence (SQ). These three things must be present in a judge, which can be reflected in his decision.[75] Therefore, AI cannot directly replace the role of judges in providing decisions that reflect justice.

The justice provided by AI is very rigid, regardless of whether it is in accordance with humanity or morality. Therefore, no device or tool can replace the deciding process. Tools such as AI can help law enforcement carry out the technicalities of litigation administration, such as making decisions in a clear, smooth, and easy-to-understand manner. In the same way that AI can help law enforcement find criminals by tracking the whereabouts of criminals, AI can also shape the law enforcement process by selecting judges that fit the case and adjusting the workload of judges. Nonetheless, intuition and conscience are still needed to decide a case or criminal offense.

AI cannot be considered a legal subject because it does not have consciousness or the ability to make decisions, nor can it be morally responsible for its actions. Legal subjects generally pertain to entities that have a clear purpose and consciousness, whereas AI is merely the result of human creation, organization, and programming. Decisions made by AI also cannot be guaranteed to be perfect without human intervention, so the role of humans remains important in the decision-making process.

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[74] Azizah. "Ketua MA tekankan Pentingnya Memiliki Benteng Bagi Hakim pada Pelepasan Hukumtal". *Mahkamah Agung.* https://www.mahkamahagung.go.id/id/berita/6427/ketua-ma-tekankan-pentingnya-memiliki-benteng-bagi-hakim-pada-pelepasan-humuntal. (Last visited September 9, 2024).

[75] Discussion With Supandi as Chairman of the State Administrative Chamber of the Supreme Court of Indonesia, (2024).

Apart from the issue that AI cannot replace judges in deciding a case, there are several advantages or conveniences that AI can provide in helping judges decide a case:[76]

1. Workload reduction

   The use of artificial intelligence can improve judges' well-being and reduce their cognitive workload. According to John Sweller's cognitive workload theory, judges often experience significant pressure in making the right legal decisions in limited time with a lot of complex data. AI can complete complicated tasks such as document management and jurisprudence analysis quickly and accurately.

2. Improved decision quality

   The application of AI in the justice system has the potential to improve the quality of legal decisions and judges' job satisfaction. AI can help judges make more informed and objective decisions, reduce cognitive biases, and support fair and consistent decision-making. In addition, the use of AI can also help judges make more evidence-based decisions, increase confidence, and reduce mental and emotional stress. This can make judges feel more confident and satisfied, thus improving their professional and emotional health.

3. Efficiency of the judicial process

   The use of AI in the judicial system can improve the efficiency of the judicial process, benefiting judicial operations and the welfare of judges. AI can speed up case resolution, reduce backlogs, and minimize delays. These efficiencies are essential to providing fast and fair access to justice. AI helps optimize resource allocation and case assignment, allowing the justice system to respond more quickly to demands for justice. Increased efficiency can also help judges reduce the pressure of resolving case backlogs.

4. Improved legal resources

   The use of AI can improve judges' access to legal resources and reduce information fatigue. AI provides quick access to databases, literature, and legal documents, allowing judges to find relevant information more easily and quickly, and reducing the time and resources required for searches. This directly reduces the "search cost" of information, allowing judges to make more accurate and evidence-based decisions with less effort. In addition, AI helps judges maintain focus and performance by automating time-

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[76] Zico Junius. "AI Hakim: Merevolusi Peradilan yang Berintegritas, Bermartabat, dan Meningkatkan Kesejahteraan Hakim." *Judex Laguens*, Vol 2, No. 2 (2024) https://judexlaguens.ikahi.or.id/index.php/JL/article/view/49

consuming research tasks. As such, AI can improve access to legal resources and the cognitive health of judges, resulting in a more sustainable and efficient judicial process.

5. Adaptation to the demands of the times

The integration of AI in the justice system reflects a strong commitment to innovation and improved legal services. The implementation of AI is a progressive advancement that gives the justice system tools to improve efficiency, transparency, and fairness. It demonstrates the legal system's efforts to stay connected with technological developments and support a flexible work environment. It also makes judicial work easier, recognizing and validating judges' contributions, thereby increasing their morale and job satisfaction. Recognition from peers and society confirms the value and success of judges' work, increasing a sense of professional pride and accomplishment. Thus, the use of AI in the judiciary not only maintains performance but also rewards and supports judges, making them feel valued and prepared for future challenges.

6. Psychological well-being

By reducing the stress of their work, the psychological health of judges can be improved by the use of AI in the legal system. AI can ease the mental burden on judges, enable more objective data analysis, and focus on positive aspects. This helps judges focus more on effective case resolution and their contributions, increasing their sense of accomplishment and efficiency. In addition, AI can lower judges' work stress levels, positively impacting their psychological well-being. Improving judges' psychological well-being not only increases their commitment and capability, but also impacts the quality of decisions and results in a more efficient justice system and a more productive and fulfilling work environment.

To reduce the risk of using artificial intelligence, certification to a standard that provides a "sense of security" for both creators and users is required. This criterion strikes a balance between the requirement to employ artificial intelligence and the lowest feasible capabilities. In addition, it can defend the government's interests in upholding the rule of law and preserving the general welfare. Furthermore, a "warranty" system is required to govern who is responsible for using artificial intelligence. During the warranty period, the manufacturer bears full responsibility, but after that, the role of the manufacturer becomes more conventional. Therefore, we anticipate a fair distribution of responsibility for using artificial intelligence.[77]

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[77] Nugraha Pranadita. *Op. Cit.* p. 189.

Judicial decision-making through AI still poses challenges for the judicial system, as having to use diverse and flexible logic models is a promising way to address the practice of rational decision-making and justification in a judicial context.[78]

The merging of AI and law in judicial practice will present both opportunities and challenges. Judges can use AI to streamline their case management and concentrate on their primary responsibilities of delivering justice. AI may soon replace judges who lack professionalism and competitiveness.[79]

In the face of intense competition, judges must consider how to advance their professionalism and bring about revolutionary development to avoid being supplanted by AI that is quick to compute, locate, and analyze data. Later breakthroughs in the use of AI in judicial practice are carried out by finding a balance between human intelligence and artificial intelligence so that it can produce decisions that are fast, simple, and also have the value of justice.[80] Although the use of Artificial Intelligence in the decision-making process by judges provides several advantages, there are challenges and concerns related to aspects of justice that must be considered. The limitation of AI in considering moral and social aspects can cause AI-generated decisions to be inconsistent with the public's sense of justice. Therefore, the role of the judge as the final decision maker remains very important in maintaining the aspect of justice in the judicial process.

Conclusion

The use of artificial intelligence in the field of justice has undergone rapid development. This is driven by widespread awareness of the undeniable benefits of the application of AI in justice. Although there are risks that can pose a threat to the integrity of the legal system, the benefits of using AI are unavoidable. AI in the judicial environment in Indonesia only plays a role in assisting judges in providing advice or recommendations on a dispute that must be resolved by a

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[78] Michele Taruffo. "Judicial decisions and artificial intelligence." *Judicial Applications of Artificial Intelligence.* Dordrecht: Springer Netherlands, (1998). https://link.springer.com/chapter/10.1007/978-94-015-9010-5_7

[79] Siying Ren. The Judicial Practice of Artificial Intelligence and the Multi-Gradient Impact on the Legal Profession. *BCP Social Sciences & Humanities.* Vol. 19 (2022): 387-393. 10.54691/bcpssh.v19i.1635

[80] Eka Nanda Ravizki and Lintang Yudhantaka. *Loc. Cit.*

judge, not a role in replacing a judge in deciding a case. Judges in deciding cases must consider three aspects of justice, namely legal justice, moral justice, and social justice, and the value of justice contained cannot be measured or calculated solely through algorithms or other mathematical methods. There are no regulations governing the use of AI in helping judges decide cases in court specifically, but to support the use of AI can be based on Article 1 point 8 of the ITE Law, where in this provision AI is equated with electronic agents, where the technology is operated by humans to achieve certain goals. However, if AI develops beyond the ability of humans to act, then the definition of Article 1 point 8 of the ITE Law is no longer relevant as a basis for regulating AI in Indonesia.

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