AICIEB Annual International Conference on
Islamic Economics and Business , 2025, 306-313

THE IMPLEMENTATION OF ARTIFICIAL INTELLIGENCE IN ZAKAT MANAGEMENT INSTITUTION : ADVANTAGES AND CHALLENGES

Hendra Setiawan[1], *Nur* Syamsudin Buchori[2]

[1,2] SEBI Islamic Institute, Depok, Indonesia

Abstract: The development of technology, especially Artificial Intelligence (AI) opens up opportunities for transformation in zakat management by zakat institutions. This study examines the opportunities for using AI in zakat institutions. This study uses a qualitative method with primary sources derived from in-depth interviews with information technology experts and zakat experts. Secondary sources come from journal analysis and previous research. The results of the study show that zakat institutions face challenges in collecting funds and distributing them to the community. Also, zakat institutions must comply with Islamic sharia in their operations. To face these challenges, zakat institutions need to use efficient and effective information technology. By comparing the advantages and challenges faced, the results of the study show that the application of AI in zakat institutions has many benefits. Among them, donation prediction and muzaki segmentation, mustahik mapping, chatbots for muzaki services, distribution analytics and reports, and anomaly and fraud detection.

Keywords : Artificial Intelligence, Zakat Institution, Information Technology

1 Introduction

Zakat, as a key pillar of Islamic philanthropy, plays a strategic role in alleviating poverty, reducing social inequality, and promoting economic equality. (Reni, 2025). Zakat institutions, as organizations that collect and manage zakat, play a crucial role in achieving these goals. The operational effectiveness of zakat institutions is highly dependent on the capabilities of the zakat institutions (LAZ) in carrying out core functions, from registering beneficiaries, collecting funds, distributing them, to transparent reporting. (Alghifari, 2025) Zakat institutions still face classic challenges such as operational inefficiency, limited reach, low accuracy in targeting beneficiaries, and transparency issues that can ultimately erode public trust. (Mas 'Amah & Panggiarti, 2023)

The rapid development of information technology, especially in the field of Artificial Intelligence Artificial Intelligence (AI) has transformed various sectors of life, including the social and religious sectors. One area that has the potential to apply Artificial Intelligence (AI) is Intelligence (AI) is a zakat collection institution that plays a crucial role in managing and distributing zakat for the welfare of the community. Zakat, as an economic instrument in Islam, requires efficient and accountable management to ensure its beneficiaries reach the right targets. Zakat management faces numerous challenges. (Nugraha et al., 2019)

The Industrial Revolution, marked by massive digitalization, has brought fresh air to the transformation of the social sector, including zakat management. In this context, AI has emerged as a disruptive technology promising solutions to these challenges. AI's ability to analyze large-scale data, machine learning, and learning for prediction, Natural Language Processing for interactions with donors, and computers AI 's vision for data verification has the potential to revolutionize the entire zakat management value chain. In philanthropic organizations, AI has been used to predict donations, automate interactions with donors, and detect anomalies in transactions. (Cagala et et al. , 2021)

The application of AI can optimize the identification of targeted beneficiaries, personalize empowerment programs, improve donor experience and engagement, and ensure more accurate and real- time audits . (Muneeza & Nadwi , 2019)

Despite the enormous potential benefits, integrating AI into the value- and ethically-laden zakat ecosystem is not without challenges. Initial studies have begun to identify potential obstacles, including algorithmic bias that could perpetuate social injustice, sensitive data privacy issues for beneficiaries, the need for significant technological investment, and a digital competency gap within the LAZ itself. There is a philosophical tension between a cold, impersonal, data-driven approach and the principles of humanity, empathy, and sincerity that underlie Islamic philanthropy. (Nugraha et al., 2019)

[1] Corresponding author: hendramasadepan@gmail.com
No. WA: +6281320635075

The use of AI faces a dual challenge: leveraging AI to improve operational efficiency while ensuring compliance with Islamic principles. Institutions using AI must align their innovations with Sharia principles. (Hamadou et al., 2024)

There is a research gap regarding an integrated analytical framework to assess the transformative impact of AI on LAZ governance. Therefore, this article aims to fill this gap by deeply investigating the potential benefits and strategic challenges of adopting Artificial Intelligence for Zakat Institutions.

2 Literature review

The integration of AI into zakat institutions is a new area that presents both substantial benefits and challenges. AI technologies, including machine learning and natural language processing, are increasingly being implemented in Islamic finance to improve donor engagement and operational efficiency. For example, AI-based chatbots offer real- time zakat advice in accordance with Islamic principles, thereby improving donor services and accessibility. (Nugraha et et al. , 2019)

AI is a field of technology that aims to create machines with capabilities similar to human intelligence. This technology has been widely applied in various sectors, such as prediction, healthcare, and security, to improve productivity and service quality. Easy access to cloud computing power , off-the-shelf software, and the availability of data allow for the creation of algorithms that can be tailored to specific needs, although challenges of complexity and cost remain. (Raj, 2024)

AI is a branch of science that aims to automate tasks that typically require human intelligence. This is achieved by programming machines using language structures, allowing them to process new data, discover patterns through learning algorithms, and ultimately provide fast and intuitive solutions. This technology is applied in various fields, through a series of stages including data collection, preparation, training, testing, and model refinement. (Pragyna Karmakar et al. , 2024)

AI is essentially the capacity of machines to express intelligence, an abstract concept studied across many disciplines. As it develops, researchers are increasingly focusing on the aspect of rationality. Rationality here is defined as a system's capability to select the most optimal action to achieve a goal, taking into account criteria and available resource constraints. By emphasizing this decision-making mechanism, the AI approach becomes more applicable and easier to implement in various fields. (Mainzer & Kahle , 2024)

One application of artificial intelligence (AI) technology in philanthropy is the use of AI for donation prediction. With its massive data analysis capabilities, AI can process information from multiple sources to identify donors who are likely to contribute more if given a more personalized or retargeted approach. This approach allows charities to allocate their resources more precisely and efficiently, focusing fundraising efforts on more responsive individuals or groups, while avoiding ineffective approaches to those less likely to donate. This increases the cost-efficiency of fundraising and enables organizations to achieve more optimal results from each interaction. (Batarseh & Freeman , 2021)

AI has the ability to automate various other important processes in donation management. One example is donor verification and background checks, which currently require significant time and human effort. With the help of an AI-based system, these processes can be automated, increasing accuracy and reducing the potential for errors that often occur in manual verification. Furthermore, AI can also analyze each donor's historical donation patterns, allowing for more precise segmentation and a more targeted fundraising strategy. By combining this historical data, charities can understand donation preferences, giving frequency, and typical donation amounts, providing valuable insights for designing more effective campaigns. (Mökander & Floridi , 2021)

Beyond prediction and analysis, AI also offers benefits in reporting and analytics. Charities can leverage various AI-based tools to generate data-driven reports that are not only transparent but also interactive. With easy-to-understand reports that can be tailored to the needs of various parties, such as donors, stakeholders, and organizational administrators, information on the use of funds and the impact of each donation can be presented more clearly and informatively. This, in turn, can increase donor and public trust in the integrity and transparency of charities. Thus, AI not only helps improve operational efficiency but also strengthens long-term relationships between charities and their supporting communities. (Thisarani & Fernando, 2021)

3 Research Methods

This research employs a qualitative method. Primary sources come from two in-depth interviews with information technology experts and zakat experts. The information technology experts are alumni of Informatics from Telkom University and Bandung Institute of Technology (ITB). The zakat experts interviewed are alumni of UIN Sunan Gunung Jati and IIUM Malaysia. The interviews were conducted in Bandung in October 2025.

Interviews are semi-structured, giving researchers the flexibility to delve deeper into relevant topics through open-ended and adaptive questions. A key advantage of in-depth interviews is the researcher's ability to collect comprehensive data, using probing and reflective questions to enhance understanding. This method builds

rapport due to its conversational style, which encourages follow-up questions and clarification. Its informal nature allows participants to express what they consider important. In-depth interviews are highly adaptive, responding to participant feedback and allowing the interviewer to pick up on tone and physical cues. While conducting such interviews through online platforms can pose some challenges, strategies such as ensuring a quality connection, rephrasing questions as needed, and prioritizing visual communication can help address these issues. (Candra Susanto et al., 2024)

This method gives interviewers the flexibility to explore responses in greater depth, allowing for broader follow-up questions beyond the initial question guide. The interview format can be structured, semi-structured, or unstructured, depending on the research objectives and requirements. In-depth interviews allow researchers to delve deeper into a topic. Due to the interactive nature of this approach, interviewers can ask unplanned questions based on respondents' answers. This flexibility helps uncover insights that might otherwise be hidden in quantitative surveys. In-depth interviews offer a deeper understanding of the context behind responses, which is crucial for accurate data interpretation. Researchers can delve into respondents' backgrounds, experiences, and emotions related to the topic, thereby building a more comprehensive and nuanced understanding of the issue at hand. (Creswell & Creswell, 2018)

Secondary sources come from previous research journals, especially those published in the last five years. Research journals were searched on Google scholar with keywords AI, Zakat, Zakat Management.

4 Results and Discussion

The integration of AI into zakat institution operations has fundamentally transformed donor interactions and improved operational efficiency across multiple dimensions. One significant development is the widespread adoption of chatbots , which effectively mimic human conversation, thereby improving service and donor engagement. This technological advancement not only speeds up responses to donor inquiries but also significantly increases user engagement and trust among LAZ donors. AI has significantly impacted donor perceptions and personalized the user experience according to individual preferences. (Ali & Azzafa Nur Jadidah, 2024).

4.1 Private AI and Public AI

There are two types of AI: Private AI and Public AI. Private AI refers to artificial intelligence created and used solely by individuals, charitable institutions, or specific organizations. This type of AI is typically designed for internal use and is not intended for public access. Access to these systems is generally restricted to authorized individuals or groups. The primary motivation for developing private AI is to ensure data security and privacy. For example, in healthcare, patient medical information is highly sensitive and must be closely guarded. Organizations overseeing private AI retain full control over its development, operation, and implementation. This allows them to customize the system to meet specific requirements and align AI functions with their internal goals. Many businesses are leveraging private AI to improve their internal processes, such as big data analytics, business automation, and personalized customer service. (Krishna et et al. , 2023)

Public AI is available to everyone, allowing anyone to access, modify, and contribute to its development. An example is OpenAI , which offers AI APIs and tools to developers worldwide. A key benefit of Public AI is collaboration between various stakeholders to address larger challenges, as seen in open-source projects. This collaborative environment can accelerate technological progress. Public AI is often used for social good, such as developing AI solutions for climate change, disaster prediction, or educational purposes. This type of AI is generally created with the belief that technology should be accessible to everyone, not just a select group. (Ferdian, 2025)

Table 1. Comparison of Private AI and Public AI

Aspect	AI Private	Public AI
Accessibility	Limited to specific users or organizations.	Open to the public and accessible to everyone.
Control	Managed by a growing organization or individual.	Users can contribute or use without restrictions.
Purpose of Use	Focus on commercial and internal interests.	Intended for public, research, or social purposes
Security and Privacy	Data is usually more protected and restricted	Data may be more open, raising privacy concerns
Application Examples	E-commerce recommendation systems, business AI, fintech .	Open source projects, AI for social purposes, public chatbots .

Source: Ferdian, 2025

Private AI provides important benefits for zakat institutions, such as increased efficiency and profitability. However, private AI also presents significant challenges, particularly related to privacy and data management .

Organizations must take decisive steps to protect the extensive data they collect and prevent its misuse. Furthermore, increased reliance on AI technology risks exacerbating inequalities, as large zakat institutions with access to AI resources gain an advantage over smaller businesses and individuals without similar access. (Krishna et al., 2023)

Public AI tools like DALL, Chat GPT, Sider, Bard from Google, and Copilot from Microsoft are gaining widespread popularity due to their ease of use, scalability , and speed. Public AI tools enable businesses to integrate AI capabilities without significant IT overhaul or dedicated infrastructure. Hosted on cloud platforms , these tools offer scalability suitable for organizations of all sizes. Furthermore, public AI services benefit from continuous updates and advancements in AI research, keeping them at the forefront of technology. Subscription-based models make these tools an economical option for businesses just starting their AI adoption journey. These advantages come with challenges, particularly related to data security and privacy. (Ferdian, 2025)

4.2 Benefits of Using AI

4.2.1 Improve Customer Experience

Artificial intelligence can play a crucial role in improving the customer experience by providing more personalized service. AI-based tools, such as chatbots and virtual assistants, facilitate customer interactions by reducing wait times and providing rapid support. AI can offer personalized financial advice tailored to each person's specific needs at a low cost. Virtual assistants enable seamless information exchange and quickly answer routine questions. This allows zakat institutions to allocate resources to address more complex customer issues. (Mohamed Salleh et al. , 2022)

4.2.2 Personal Approach to Donors

AI can redefine how zakat institutions approach donor service. With intelligent virtual assistants, chatbots , and predictive analytics, zakat institutions can provide a faster, more responsive, and more personalized experience for their donors. This personalized approach not only increases satisfaction but can also build customer loyalty, as donors increasingly expect seamless, high-quality service tailored to their specific needs and preferences. (Ali & Azzafa Nur Jadidah, 2024)

personalization is driven by analysis of individual consumer behavior and preferences, allowing zakat institutions to tailor their offerings. For example, AI can monitor spending patterns, predict future financial needs, and provide tailored product recommendations, fostering stronger relationships between zakat institutions and their donors. The potential of these advanced analytical capabilities is evident in emerging markets like Indonesia, where demand for more accessible and individualized financial solutions is growing rapidly. Using these algorithms, zakat institutions can Zakatan can ensure that their services align with consumer expectations and lifestyles, thereby facilitating greater user engagement and loyalty. Institutional services Personalized zakat through AI creates a more responsive financial environment, reflecting the changing landscape of consumer needs and technological advancements. (Laylo , 2023)

4.2.3 Chatbots and Virtual Assistants

Donors from Islamic zakat institutions have become accustomed to using AI-based virtual assistants. For general questions, AI can answer effectively. For more complex or specific questions, human assistance is required. Consumers of Islamic zakat institutions understand the drawbacks of AI, but they still outweigh its advantages. The use of AI in virtual assistants offers advantages such as fast and fairly accurate responses. (Ferdian, 2025)

Chatbots and virtual assistants have emerged as transformative tools in customer service, significantly improving the efficiency and accessibility of services. By simulating human interaction, these AI-based technologies streamline communication and help answer customer questions around the clock. This suggests that human-like features in chatbots can create a more convenient and reliable customer experience. Furthermore, analysis shows that effective integration of conversational agents requires alignment between organizational factors and user needs to ensure they meet consumer expectations . (Pragyna Karmakar et al. , 2024)

Research conducted by Kurniawati et al. (2023) concluded: First, chatbots influence users' trust levels. Chatbots are perceived as human-like entities capable of providing services that meet users' needs and desires.

Second, the trust built through anthropomorphism positively impacts user intent and engagement, motivating them to continue using the technology in the future. These findings suggest that chatbots play a crucial role in shaping user trust, intent, and engagement.

Third, despite positive effects of anthropomorphism, some users remain skeptical of chatbots that function like humans. Consequently, trust has not yet fully formed. It can be concluded that while anthropomorphism fosters a sense of warmth, it does not significantly impact perceptions of chatbot capabilities .

Fourth, AI has transformed interactions through the use of chatbots and virtual assistants. These AI-based tools are able to answer customer questions, resolve issues, and provide recommendations with personalized and efficient service. Available 24/7 and capable of handling multiple inquiries simultaneously, chatbots have significantly improved the customer experience, contributing to increased satisfaction and loyalty. (Kurniawati, 2023)

4.2.4 Operational Efficiency

The implementation of private AI facilitates the streamlining of various processes, resulting in reduced operational time and costs, while improving service quality. However, it is important to critically assess whether the benefits of AI technology outweigh the potential challenges, such as implementation costs and the risks associated with relying on automated systems. In the context of institutionalization, Islamic zakat , AI has the potential to significantly improve financial performance metrics. It also requires careful attention to ensure compliance with ethical standards and religious principles. (Hamadou et al. , 2024)

Integration offers substantial cost-saving opportunities. By automating tasks that previously required human involvement, financial institutions can optimize resource allocation and reduce operational costs. Tasks that were previously slow and prone to human error can now be simplified and accelerated with AI, increasing efficiency in areas such as transaction processing, account management, and data analysis. (Mohamed Salleh et al. , 2022)

Furthermore, AI systems play a crucial role in improving risk management. By rapidly processing large amounts of data, AI can detect patterns or anomalies that might otherwise escape the attention of human analysts. This enables zakat institutions to identify potential risks, such as fraud or transaction irregularities, early on, facilitating timely preventive action. Furthermore, AI contributes to the development of more accurate predictive models, thereby reducing the likelihood of financial losses. (Ferdian, 2025)

4.2.5 Automation of Zakat Institution Processes

The increasing adoption of artificial intelligence (AI) in zakat institutions is revolutionizing the way routine processes are managed across various financial institutions. By automating tasks such as donor inquiries, transaction processing, and account management, zakat institutions can significantly improve operational efficiency while reducing the likelihood of human error. This shift toward automation not only simplifies service delivery, enabling faster response times and greater accuracy, but also frees up employees to focus on more complex responsibilities that require human judgment and creativity. (Zulkifley & Aishath Muneeza , 2024)

4.2.6 Cost Reduction

The integration of AI-based solutions into the operations of zakat institutions plays a crucial role in reducing costs by streamlining processes and improving service efficiency across multiple dimensions. The integration of artificial intelligence enables zakat institutions to automate not only routine tasks such as donor service inquiries and data processing, but also more complex operations, effectively reducing the need for a large and dedicated workforce and minimizing associated operational costs. This transformation is crucial in a sector that places a high premium on efficiency and responsiveness . For example, AI can enhance donor support services by providing instant, high-quality responses to inquiries, thereby improving service quality at a low cost (Farhi et al., 2024).

This automation not only speeds up response times but also results in higher levels of donor satisfaction, as donors receive accurate information without long wait times. The use of AI fosters loyalty because donors are more likely to return to institutions that consistently meet their needs efficiently. In addition to improving direct service interactions, AI systems have the ability to analyze and process vast amounts of data with incredible speed and efficiency, enabling zakat institutions to quickly identify emerging trends, which improves strategic decision-making and significantly reduces the risk of human error. All of these factors ultimately contribute to reduced operational costs over time. (Yuspin et al. , 2022)

4.2.7 Ease of Decision Making

AI algorithms have demonstrated remarkable capabilities in processing and analyzing massive amounts of data, a task nearly impossible for human analysts to perform at the same scale and speed. These algorithms are designed to identify patterns, trends, and correlations that may not be immediately apparent, enabling the extraction of valuable insights that can inform decision-making processes. (Beik et al. , 2021)

One of the most prominent contributions of AI to the Islamic social finance sector is its ability to improve the accuracy of risk assessments. By leveraging machine learning models, zakat institutions can analyze a wide range of data, such as market trends, historical performance, donor behavior, and economic indicators. These models are able to identify potential risks more effectively than traditional methods, enabling zakat institutions to

anticipate and mitigate potential threats in real time . This improved risk forecasting improves institutions' ability to protect assets, secure investments, and optimize their risk management strategies. (Beik et al. , 2021)

The insights generated by AI systems can significantly benefit zakat institutions in improving the effectiveness and efficiency of their operations. By integrating AI into the decision-making process, zakat institutions can not only increase the efficiency of zakat fund allocation but also provide more personalized services to recipients and donors. AI enables zakat institutions to analyze data more deeply, understand donation patterns, and identify the specific needs of zakat recipients. This enables zakat institutions to design more targeted programs and optimize zakat distribution according to priority and urgency. (Ridzuan et et al. , 2025)

4.3 Challenges of Using AI

While public AI platforms offer many benefits, they also pose significant risks, particularly in terms of security and compliance. Utilizing these tools often involves transmitting sensitive zakat institution data to external servers, creating potential vulnerabilities to data breaches and privacy concerns. Furthermore, public AI models, trained on extensive datasets from public sources, offer limited control over data handling and behavior customization . These risks are driving some businesses to explore private AI solutions, which operate securely within internal infrastructure, implement strong encryption, and enforce strict access controls. (Jokhio & Jaffer , 2024)

Private AI provides an alternative for zakat institutions that prioritize security, privacy, and control. This technology is implemented on the zakat institution's internal infrastructure, often equipped with additional protections such as two-factor authentication , end-to-end encryption, and specific data handling policies. Private AI operates within the zakat institution's secure network, so sensitive data remains protected and confidential. Zakat institutions can customize AI models to meet specific needs, train them with proprietary data, and ensure the AI works in accordance with the zakat institution's internal guidelines. With Private AI, zakat institutions have full control over where, how, and how their data is used, enabling them to comply with data management regulations. Additional security layers such as two-factor authentication , encryption, and advanced access controls can be implemented to further protect AI workflows within the organization. (Rabbani et al. , 2022)

While private AI offers security and control, it can present certain challenges. Building and maintaining private AI models requires significant investment in infrastructure, data storage, and skilled personnel. Implementing private AI can take longer than public AI due to the complexity of securing and integrating the system with existing IT frameworks. Limited Access to Innovation. Unlike public AI models that receive frequent updates and advancements, private AI systems may be left behind in accessing the latest AI features or research breakthroughs unless regularly updated. (Ferdian, 2025)

One crucial element of AI adoption is ensuring the reliability of confidence that AI systems operate correctly, fairly, and transparently. Without assurance mechanisms , AI-based decisions can pose significant risks, especially when used in social decision-making contexts. Ethics audits are also recommended as a way to monitor AI's compliance with social and moral norms (Mökander & Floridi , 2021).

5 Conclusion

This research demonstrates that artificial intelligence has strategic potential to optimize zakat management by Zakat Institutions throughout the value chain, from collection and distribution to internal management and reporting. AI can enhance the effectiveness of campaigns and muzaki services through personalization and chatbots , improve the accuracy of mustahik (recipients) determination and program planning through data-driven vulnerability mapping, and strengthen institutional accountability through automated audits and real- time reporting .

This Research findings indicate several potential uses for AI, including donation prediction and zakat (muzaki) segmentation, mustahik (recipients of alms) mapping, chatbots for zakat services, distribution analytics and reporting, and anomaly and fraud detection. However, these benefits can only be realized if several prerequisites are met, such as the availability of integrated and high-quality data, human resource capacity development, a robust data protection framework, mechanisms to control algorithmic bias, and explicit sharia guidelines. Without these, AI has the potential to add new complexities, ranging from inequitable distribution to the erosion of trust due to privacy and transparency issues.

References

Alghifari, G. (2025). The Role of Zakat in Alleviating Poverty: A Multi-Dimensional Analysis and Policy Implications. *JEI: Journal of Islamic Economics* , *3* (1), 18–39. https://doi.org/10.56184/jeijournal.v3i1.494

Ali, S. & Azzafa Nur Jadidah. (2024). The Role of Technology in Optimizing the Collection and Distribution of Zakat and Waqf. *El-Faqih: Journal of Islamic Thought and Law* , *10* (2), 400–414. https://doi.org/10.58401/faqih.v10i2.1495

Batarseh , F. A., & Freeman , L. (2021). A Survey on AI Assurance. *Journal of Big Data* , *8* (1), 60. https://doi.org/10.1186/s40537-021-00445-7

Beik , IS, Swandaru, R., & Rizkiningsih , P. (2021). Utilization of Digital Technology for Zakat Development. In MM Billah (Ed.), *Islamic FinTech* (pp . 231–248). Springer International Publishing . https://doi.org/10.1007/978-3-030-45827-0_13

Cagala , T., Glogowsky , U., Rincke , J., & Strittmatter , A. (2021). *Optimal Targeting in Fundraising : A Causal Machine Learning Approach* (Version 3). arXiv . https://doi.org/10.48550/ARXIV.2103.10251

Candra Susanto, P., Yuntina , L., Saribanon , E., Panatap Soehaditama , J., & Liana, E. (2024). Qualitative Method Concepts: Literature Review , Focus Group Discussion , Ethnography and Grounded Theory . *Siber Journal of Advanced Multidisciplinary* , *2* (2), 262–275. https://doi.org/10.38035/sjam.v2i2.207

Creswell , J. W. , & Creswell , J. D. (2018). Research Design: Qualitative , Quantitative , and Mixed Methods Approaches . *2018* , *5* .

Hamadou , I., Yumna, A., Hamadou , H., & Jallow , M. S. (2024). Unleashing the power of artificial intelligence in Islamic banking : A case study of Bank Syariah Indonesia (BSI). *Modern Finance* , *2* (1), 131–144. https://doi.org/10.61351/mf.v2i1.116

Jokhio , M. N. , & Jaffer , M. A. (2024). Generative AI in Sharia Advisory in Islamic Finance: An Experimental Study. *Business Review* , *19* (2), 74–92. https://doi.org/10.54784/1990-6587.1665

Krishna, S., S, S., Kamalsha , S., Amruth , S., & Jadon , S. (2023). PRIVATE-AI: A Hybrid Approach to privacy-preserving AI. *2023 IEEE/ACIS 8th International Conference on Big Data, Cloud Computing , and Data Science (BCD)* , 170–175. https://doi.org/10.1109/BCD57833.2023.10466330

Kurniawati. (2023). The Influence of Chatbot Anthropomorphism on Trust, Intention , and Engagement of Indonesian State- Owned Bank Customers : Investigation Using the DOI Theory . *International Journal of Applied Business Research* , *5* (2).

Laylo , K. (2023). The Impact of AI and Information Technologies on Islamic Charity (Zakat): Modern Solutions for Efficient Distribution . *International Journal of Law and Policy* , *1* (5). https://doi.org/10.59022/ijlp.83

Mainzer , K. , & Kahle , R. (2024). The Concept of Artificial Intelligence . In K. Mainzer & R. Kahle , *Limits of AI - theoretical , practical , ethical* (pp . 1–7). Springer Berlin Heidelberg . https://doi.org/10.1007/978-3-662-68290-6_1

Mas 'Amah, F., & Panggiarti , EK (2023). THE ROLE OF ZAKAT, INFAK, AND SEDAKAH (ZIS) AS CONTRIBUTORS TO IMPROVING WELFARE FOR COMMUNITIES IN NEED. *SENTRI: Scientific Research Journal* , *2* (4), 929–939. https://doi.org/10.55681/sentri.v2i4.691

Mohamed Salleh , W.N.W., Abdul Rasid, S.Z., & Basiruddin , R. (2022). Optimizing Digital Technology in Managing Zakat. *International Journal of Academic Research in Business and Social Sciences* , *12* (8), Pages 726-733. https://doi.org/10.6007/IJARBSS/v12-i8/14355

Mökander , J., & Floridi , L. (2021). Ethics-Based Auditing to Develop Trustworthy AI *Minds and Machines* , *31* (2), 323–327. https://doi.org/10.1007/s11023-021-09557-8

Muneeza , A., & Nadwi , S. (2019). The Potential of Application of Technology- Based Innovations for Zakat Administration in India. *International Journal of Zakat* , *4* (2), 87–100. https://doi.org/10.37706/ijaz.v4i2.191

Nugraha, F., Permadia , S., Gunawan, AR, & Saeful, E. (2019). Artificial Intelligence Usage in Zakat Optimization . *International Conference of Zakat* , 14–24. https://doi.org/10.37706/iconz.2019.144

Pragyna Karmakar , Satarupa Sinha , & Debrupa Pal. (2024). Artificial Intelligence . *International Journal of Advanced Research in Science , Communication and Technology* , 79–87. https://doi.org/10.48175/IJARSCT-19613

Rabbani, M.R., Hassan, M.K., Khan, S., & Muneeza , A. (2022). A Fintech-Based Zakat Model Using Artificial Intelligence . In M.K. Hassan, M.R. Rabbani, & M. Rashid (Eds .), *FinTech in Islamic Financial Institutions* (pp . 49–63). Springer International Publishing . https://doi.org/10.1007/978-3-031-14941-2_3

Raj, A. (2024). Artificial Intelligence . *International Journal for Research in Applied Science and Engineering Technology* , *12* (11), 646–655. https://doi.org/10.22214/ijraset.2024.64695

Ridzuan, F., Ramli, H., Ibrahim, MHA, Rahim, NCA, Zainuddin, SAB, Aziz, RBC, & Sareya , R. (2025). Artificial Intelligence in Zakat Management : Opportunities and Challenges . In A. Hamdan (Ed.), *Integrating Artificial Intelligence , Security for Environmental and Business Sustainability* (Vol. 598, pp . 77–85). Springer Nature Switzerland . https://doi.org/10.1007/978-3-031-91424-9_8

Thisarani , M., & Fernando, S. (2021). Artificial Intelligence for Futuristic Banking . *2021 IEEE International Conference on Engineering, Technology and Innovation (ICE/ITMC)* , 1–13. https://doi.org/10.1109/ICE/ITMC52061.2021.9570253

Yuspin, W., Wardiono, K., Budiono, A., & Gulyamov , S. (2022). The law alteration on artificial intelligence in reducing Islamic bank's profits and loss sharing risk . *Legality : Scientific Journal of Law* , *30* (2), 267–282. https://doi.org/10.22219/ljih.v30i2.23051

Zulkifley , M. & Aishath Muneeza . (2024). OPTIMIZING ZAKAT DISTRIBUTION IN SELANGOR USING TECHNOLOGY. *International Journal of Islamic Economics and Finance Research* , *7* (2 December), 105–122. https://doi.org/10.53840/ijiefer162