

# Artificial Intelligence in Islamic Finance: Maintaining Islamic Ethics with the Maqasid al-Shariah Framework

Muhammad Harits<sup>1\*</sup>, Isman<sup>2</sup>

<sup>1</sup> Faculty of Islamic Studies, Universitas Muhammadiyah Surakarta, Surakarta, Indonesia

## Abstract

*Purpose:* This study aims to analyse the application of AI in Islamic economics, identify emerging ethical challenges, and offer a maqasid al-shariah-based framework as a guide for sharia-compliant AI implementation.

*Methodology:* The method used is a qualitative approach through a literature review to examine previous studies on the integration of AI in Islamic finance.

*Results:* The results show that AI can improve operational efficiency, reduce costs, and expand access to Islamic financial services, especially for the unbanked and underbanked. However, the application of AI faces difficulties in aligning algorithms with sharia principles, particularly in terms of fairness and strict sharia supervision.

*Applications/Originality/Value:* The novelty of this study is the proposal of a conceptual framework based on maqasid al-shariah that can ensure the ethical application of AI in accordance with Islamic values.

**Keywords:** Artificial Intelligence; Islamic Economics; Maqasid al-Shariah; Financial Inclusion; Sharia Finance

## Introduction Section

The presence of Artificial Intelligence (AI) technology has had a significant impact on various aspects of life, including law and religion (Nugroho et al., 2024). AI plays a role in improving operational efficiency, accelerating decision-making processes, and expanding access to Islamic financial services, especially for communities that were previously underserved by formal financial institutions (Bas et al., 2025). However, the application of AI also raises ethical and regulatory challenges, particularly in ensuring that algorithms comply with Islamic principles such as fairness, transparency, and the prohibition of usury (Shalhoob, 2025). Therefore, the integration of AI into the Islamic economy is not only a technical issue, but also a moral and normative one within the framework of maqasid al-sharia.

This research is significant because it offers a deeper understanding of how AI can be used to strengthen the Islamic economic system based on ethical values and social justice. The application of AI has the potential to expand Islamic financial inclusion, increase transparency, and support sustainable development goals in a manner consistent with maqasid al-sharia (Habib, 2025). Thus, this study contributes to the development of an ethical, innovative, and sustainable Islamic economic paradigm in the midst of global digitalisation.

A number of studies have discussed the integration of AI in Islamic finance. For example, a bibliometric study by (Iqbal et al., 2025) found that AI contributes to efficiency, Shariah compliance, and global financial inclusion. In addition, (Sari, 2025) emphasises that AI and blockchain can strengthen transparency and accelerate the digitalisation of Islamic financial institutions. Meanwhile, research by (Mulki Firdaus Alamsyah et al., 2025) highlights the need for an Islamic ethical framework that can guide the responsible use of AI. However, the majority of research is still conceptual and has not explored in depth the relationship between Islamic ethical principles and AI algorithmic design.

Although previous studies have identified the great potential of AI in Islamic economics, there is still a gap in examining how the principles of maqasid al-sharia can be concretely translated into the design, regulation, and implementation of AI in the context of Islamic economics. This study aims to fill this gap with a thematic approach that combines technological, ethical, and sharia aspects.

The main issues raised in this study are how the application of artificial intelligence (AI) can contribute to the development of Islamic economics without violating sharia principles, and what ethical challenges are faced in the integration process. These questions are important to answer so that the development of AI in Islamic economics can be in line with the values of justice, transparency, and moral responsibility as taught in Islam.

This study aims to analyse the opportunities for applying AI in the development of the Islamic economy, identify the ethical challenges that arise in the process of integrating AI with sharia principles, and offer a conceptual framework based on maqasid al-sharia to support the ethical and sharia-compliant application of AI.

Theoretically, this research contributes to expanding the discourse on the integration of Islamic ethics with technological innovation, particularly in the development of AI systems that are in line with the principles of justice and

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\* Corresponding author: [o200240024@student.ums.ac.id](mailto:o200240024@student.ums.ac.id)

social welfare in Islam. Practically, the results of this study can serve as a basis for regulators, technology developers, and Sharia financial institutions to design ethical, transparent, and socially just AI policies and systems in accordance with maqasid al-sharia.

## **Method**

This study uses a qualitative approach with a literature study method (library research). This approach was chosen because the focus of the study is to gain an in-depth understanding of the dynamics of artificial intelligence (AI) application in Islamic economics based on findings and theories that have been examined by previous studies. The qualitative literature method allows researchers to identify patterns, trends, and gaps in research discussing the integration of AI, ethics, and sharia principles without collecting primary data (Lasmiatun & Manteghi, 2025).

This research is descriptive-analytical in nature, describing empirical and conceptual findings from relevant literature, then analysing them to find the relationship between the application of AI and Islamic economic values. The research data is entirely derived from secondary data, obtained through a systematic search of scientific literature in the form of academic journals, research reports, scientific books, and policy documents related to AI and Islamic economics.

## **Result and Discussion**

### **Opportunities for AI Application in Islamic Economics**

#### **Improving the Operational Efficiency of Sharia Financial Institutions**

Artificial Intelligence (AI) has significant potential to improve the operational efficiency of Islamic financial institutions. Through business process automation, AI can help accelerate decision-making, reduce human error, and improve customer experience (Harun et al., 2024; Shahriar, 2025). From the perspective of Islamic financial institutions, AI can be applied in various areas such as risk management, credit analysis, and Sharia compliance. For example, AI can be used to analyse customer data for more accurate credit assessments and to accelerate the financing process (Hamadou et al., 2024; Shahriar, 2025).

Reducing operational costs through the application of AI in Islamic financial institutions can occur in several aspects. First, automating internal processes, such as financing application processing and risk management, can reduce human involvement and the time needed to complete certain tasks. This has the potential to significantly reduce operational costs (Hasan et al., 2020; Sadek et al., 2024).

Second, by adopting AI-based Fintech technology, Islamic financial institutions can offer more diverse and innovative products and services at lower costs. Research shows that the use of technologies such as blockchain and digital payment systems can expand the reach and reduce the cost of delivering services to customers (Sadek et al., 2024). Directly, this cost reduction can be assessed from the perspective of maqasid al-shariah, especially in relation to hifz al-mal (protection of wealth). With greater efficiency, Islamic financial institutions can offer lower service costs and, in turn, increase accessibility for people who need financial services.

The application of this technology must be carried out while still paying attention to the prudential principle and sharia compliance. AI can support stricter and more effective sharia supervision, which in turn can reduce the risk of non-compliance (Hamadou et al., 2024). This is in line with the statement that modernisation through technology must be in accordance with sharia principles to ensure the integrity of financial institutions (Harun et al., 2024; Miah et al., 2023).

The application of AI in Islamic financial institutions promises significant improvements in operational efficiency and cost reduction. However, it is important to maintain a balance between the use of technology and compliance with Sharia principles so that the mission of Islamic financial institutions to provide fair benefits in accordance with Islamic values can be carried out properly.

#### **Improving Access to Islamic Financial Services through AI**

Artificial Intelligence (AI) has great potential in expanding access to Islamic finance for marginalised groups, including the unbanked (those without access to traditional financial institutions) and the underbanked (those with limited access). By utilising AI technology, Islamic financial institutions can overcome the limitations faced by individuals in these groups, including the lack of historical data that often prevents them from obtaining loans. For example, the use of alternative data and machine learning algorithms in credit scoring can help in more inclusive creditworthiness assessments (Dey, 2025; Shittu, 2022) and recognise the payment potential of customers from various economic backgrounds that were previously not taken into account in conventional systems.

AI can create predictive models that empower financial institutions to assess risk more effectively and efficiently. The adoption of such technology has the potential to generate lower transaction costs, enabling Islamic financial institutions to offer more affordable products to marginalised communities (Datta, 2024; Shittu, 2022). Therefore, AI can be used as a tool to increase financial inclusion by reducing the barriers that have been felt by underserved groups (Adewuyi et al., 2023; Najib et al., 2025).

The development of AI for financial applications must be accompanied by attention to the principles of justice ('adl) and equity (tawazun). This requires financial institutions to implement strategies such as fairness auditing or debiasing to

ensure that the models used produce fair results for all groups without reinforcing existing discrimination (Shree & Patidar, 2020). The implementation of a deep ethical framework in the design and use of AI systems can help create greater fairness in the Islamic finance sector, enabling more professional and responsive services to the needs of marginalised communities (Sebastian, 2025; Shittu, 2022).

The application of Islamic economic principles in AI involves not only the application of technology but also requires the integration of ethical values that serve as guidelines in Islamic economics. To ensure ethical financial inclusion, financial institutions must incorporate elements of transparency, accountability, and community participation into the development of their AI systems (Hesami, 2025). By prioritising community involvement in the decision-making process and algorithm implementation, Islamic financial institutions can build public trust and support the sustainability of an inclusive and egalitarian financial system.

The adoption of transparency and fairness standards in the development of AI systems in financial institutions is also crucial to address bias challenges and to ensure that these systems provide balanced benefits (Dey, 2025; Markova-Karpuzova et al., 2024). In addition, strict regulatory oversight and the participation of the Sharia Supervisory Board are also necessary to give meaning and validation to the sharia principles underlying the application of AI in the Islamic economy (Najib et al., 2025).

The application of AI in Islamic financial services has the potential to expand access for marginalised communities while strengthening financial inclusion. However, to ensure that these initiatives are not only beneficial but also fair, it is important to mitigate the risk of bias and ensure that the principles of justice in Islamic economics are integrated into every aspect of technology development and implementation. With a careful approach, AI technology can be a powerful tool for bridging the financial gap and creating a more equitable system for all.

### **Enhancing Transparency and Accountability in Sharia Financial Management**

Artificial Intelligence (AI) has the potential to improve the transparency and accountability of Islamic finance management, particularly in the execution of contracts and risk management. By utilising intelligent algorithms and big data analytics, Islamic financial institutions can monitor compliance with Islamic principles more efficiently. For example, blockchain technology integrated with AI can create immutable transaction records, enabling more transparent audits (Ali et al., 2019; Popescu, 2022). This not only strengthens public trust but also ensures that all transactions are conducted in accordance with the agreed contract.

AI can be used to analyse risk patterns in Islamic financial portfolios. By providing clear and detailed data on risk management, financial institutions can be more accountable in their investment and financing decisions (Keshari, 2025; Scott, 2024). This is in line with efforts to improve governance and accountability in the management of public funds, which is particularly important in the context of the Islamic economy.

AI can also strengthen sharia compliance monitoring without replacing the role of humans, such as the Sharia Supervisory Board. The implementation of algorithms to monitor sharia compliance enables early detection of possible violations in the operations of financial institutions (Sadek et al., 2025; Shahzadi, 2025). For example, AI systems can automatically analyse transactions to ensure that there are no elements of usury (riba) or uncertainty (gharar) involved, thereby making the monitoring process more efficient and objective.

However, it is important to remember that AI should not completely replace human judgement. The final decision must still reflect ethical and sharia considerations that can only be provided by human authorities (Dey, 2025; Ruhliandini, 2025). Therefore, collaboration between AI and the Sharia Supervisory Board is needed to ensure that all recommendations generated by the AI system comply with applicable sharia standards (Haris & Manangin, 2024).

The use of AI in Shariah financial auditing and reporting must align with the principles of trustworthiness and moral responsibility in Islam. The principle of trust requires fund managers to be honest and transparent in all operational aspects (Salim & Susetyo, 2025; Shehu, 2025). In this context, AI applications can help create accurate and real-time reporting systems, so that every stakeholder can access and understand important financial information.

The presence of AI in Islamic finance management offers significant opportunities to improve transparency and accountability. With an integrated approach between technology and ethical considerations, Islamic financial institutions can ensure that their management is not only efficient but also fair and in line with Islamic principles. It is important to balance technological innovation and the role of humans to achieve this goal sustainably.

### **Challenges of Implementing AI in Islamic Economics**

#### **The Compatibility of AI Algorithms and Sharia Principles**

One significant challenge in the application of Artificial Intelligence (AI) in Islamic economics is the compatibility between universal AI algorithms and unique local contexts, particularly in terms of Sharia principles. AI algorithms are often designed without taking into account local values and the uniqueness of Sharia principles, which prioritise fairness, transparency, and responsibility (Sudanto, 2025). Therefore, the application of linear and inflexible algorithms has the potential to violate Sharia principles, such as usury, gharar, and other elements of injustice, which are common phenomena in many conventional financial systems.

To overcome this incompatibility, efforts are needed to reconstruct AI algorithms so that they are more oriented towards the values of *maqasid al-shariah*, namely the objectives of sharia which include the protection of religion, life, reason, lineage, and property (Apriliani & Nuryadin, 2023). This will ensure that the technology is more readily accepted in the Islamic economic system, as it will reflect not only efficiency but also fairness and morality in financial transactions (Salim & Susetyo, 2025). Therefore, modifying algorithms for to include parameters that take into account ethical and sharia values is very important (Sudanto, 2025).

Fatwas and collective *ijtihad* play a crucial role in aligning the use of AI with Islamic culture and economic practices in Indonesia. *Ijtihad jama'i*, or collective decisions by Islamic scholars and intellectuals, can provide a broader and more comprehensive assessment of the application of AI in the context of Sharia (Aulia & Rani, 2021). Developing guidelines for the application of new technologies such as AI requires input from various perspectives, as well as consideration of broader social and economic impacts.

This process also includes ensuring that the AI systems developed not only function as tools for efficiency, but also promote transparency and fairness, which are key principles in Islamic economics (Salim & Susetyo, 2025). In addition, the fatwa issued can help clarify and respond to public doubts about the potential risks of applying new technology, as well as build public trust in AI systems in Islamic finance (Suryanto & Susanti, 2020).

Although AI algorithms have the potential to bring efficiency and innovation, compliance with sharia principles and local contexts is crucial. Reconstructing algorithms based on *maqāṣid al-shariah* values and collaboration between Sharia authorities in the form of fatwas and *ijtihad jama'i* can be a way to integrate AI into the Islamic economy effectively and ethically. This careful and contextual application not only supports innovation but also protects the integrity of Islamic principles and the welfare of society.

### **Limitations of AI in Understanding Islamic Economic Law**

One of the main challenges in applying Artificial Intelligence (AI) in the context of Islamic economics is its limitations in understanding the complexity of Islamic economic law. Shariah law is rooted in moral and ethical values, as well as social and cultural contexts that are closely related to Muslim communities. AI, which operates based on data and algorithms, is unable to capture the nuances and interpretations of laws that are dynamic and contextual (Mhlanga, 2020). For example, although AI can process large amounts of data to make predictions or decisions, it cannot understand or apply *ijtihad* that reflects different Sharia principles depending on the local and cultural context.

The absence of adequate data and information has the potential to cause AI to make decisions that are not in accordance with Sharia principles. For example, when determining compliance with Sharia law in financing, AI algorithms may not consider all relevant aspects, such as the social position of applicants or their economic background, which are very important in the Islamic context (Hartanto et al., 2024). Therefore, AI cannot be fully relied upon to interpret Sharia law accurately.

Limitations in understanding Sharia law pose a significant challenge in the context of applying AI in Islamic economics. AI cannot replace human authority in terms of *ijtihad*, and should be positioned as a tool only. To minimise the risk of error, collaboration between technologists, scholars, and Sharia institutions is key, along with the implementation of effective controls and accountability in every AI-based decision. With a careful and inclusive approach, the application of AI can be aligned with the principles of Islamic economics, increasing efficiency without sacrificing fundamental ethical and moral values.

### **Data Privacy and the Potential for Technology Abuse**

The application of Artificial Intelligence (AI) in Islamic economics poses significant challenges related to the protection of customers' personal data, which must be viewed from the perspective of positive law and Islamic ethics. On the one hand, the use of AI requires the collection and processing of large amounts of data to perform analysis, gain insights, and improve financial services. In the context of positive law, many countries have strict regulations regarding the protection of personal data, such as the General Data Protection Regulation (GDPR) in Europe, which emphasises that data must be treated with care and adequate protection (Nomran et al., 2018).

From an Islamic ethical perspective, the concept of *amanah* (trust) is very important, whereby Islamic financial institutions must be responsible for the data they manage. Violations of personal data protection can be viewed as a form of injustice, which contradicts the principle of justice in Islam (Musa et al., 2020). Therefore, Islamic financial institutions must ensure that they not only comply with applicable laws, but also follow the ethical guidelines set by Sharia.

The collection and processing of big data by AI in Islamic financial institutions has the potential to pose risks to the principles of trust and protection of individual rights. When customer data is collected and used without clear consent, this can result in violations of individual privacy rights, thereby affecting public trust in Islamic financial institutions (Usman et al., 2021). The use of data for non-transparent purposes, such as for consumer behaviour analysis that deviates from the main objectives of Islamic services, has the potential to create injustice and damage the reputation of the institution.

Additionally, the potential misuse of technology for commercial purposes is also an issue that needs to be addressed. For example, if AI is used to manipulate data for financial gain without regard for consumer rights, this is not in line with sharia principles that prioritise the interests of the people and social welfare (Gilani, 2015). Financial institutions must

actively implement oversight mechanisms to prevent data misuse and ensure that services remain within the ethical boundaries defined by Islamic values.

Islamic economics strongly emphasises the importance of justice and public interest in every aspect of life. Therefore, there is concern that if AI is misused for commercial interests that contradict the values of justice in Islam, the impact will be detrimental to society at large. In this context, Islamic financial institutions must discuss and establish clear boundaries regarding the use of AI technology, including how data can be collected, processed, and used (Grassa, 2015b).

It is important to create an ethical framework that regulates the use of AI in the Islamic finance industry, which not only complies with positive law but is also in line with the principles of *maqāṣid al-sharī'ah*. This includes protecting customer interests and ensuring transparency in every action taken by institutions (Mansoor et al., 2020). In addition, the role of the Sharia Supervisory Board is very important in providing fatwas and guidelines for the application of new technologies, ensuring that institutions do not only focus on financial gains, but also contribute to collective welfare (Khalil & Taktak, 2020).

Data privacy and the potential misuse of technology in the application of AI in the Islamic economy are complex challenges. The protection of customers' personal data must be viewed through positive legal regulations and Islamic ethics, where the principles of trust and justice must always be upheld. Sharia financial institutions must be able to synergise the use of AI with the values of justice, benefit, and protection of individual rights, so as not to tarnish their reputation and undermine public confidence in the sharia financial system.

### **Maqasid al-Sharia-Based Framework to Support Sharia-Compliant AI Implementation**

The application of Artificial Intelligence (AI) in the Islamic economy offers many potentials, including increased efficiency, transparency, and innovation in financial services. However, the biggest challenge is how this technology can be implemented without compromising the Sharia values that form the legal basis of Islamic economics. Therefore, it is important to develop a *maqasid al-sharia*-based framework that ensures AI is implemented in a manner that complies with Islamic principles and maintains the welfare of the *ummah*.

### **AI Compliance with Sharia Principles**

To ensure that AI can be applied ethically in the Islamic economic sector, AI algorithms need to be adjusted to comply with *maqasid al-sharia*. *Maqasid al-sharia* aims to protect five main things: religion (*ḥifẓ al-dīn*), life (*ḥifẓ al-nafs*), intellect (*ḥifẓ al-'aql*), progeny (*ḥifẓ al-nasl*), and wealth (*ḥifẓ al-māl*). Thus, every technological application, including AI, must be designed not only based on technical data, but also taking into account Sharia values that focus on the protection and benefit of the people (*maslahah 'āmmah*). AI must be regulated to avoid practices that contradict the prohibitions of usury, *gharar*, and *maisir*, and to ensure that decisions made do not harm society or individuals (Lusiana et al., 2024).

### **Ethical Research and Implementation in the Use of AI**

The application of AI in the Islamic economic sector must pay close attention to ethical aspects. One step to ensure that AI works in accordance with sharia principles is to implement Explainable AI (XAI). XAI enables transparency in the decision-making process carried out by AI, providing assurance that the results obtained are fair, unbiased, and in accordance with the principle of justice (*al-'adl*) in Islamic law. Users and regulators can understand how decisions are made by AI, thus ensuring that these decisions do not conflict with sharia principles (Jedličková, 2024). In addition, the implementation of AI must also consider broader aspects of public interest (*maslahah*). This includes the implementation of policies that ensure that customers' personal data is managed properly and securely. Data management that does not comply with the principles of trust in sharia, such as data misuse or privacy violations, is contrary to the basic values of Islam, which emphasises social responsibility (Reddy, 2024).

### **The Role of the Sharia Supervisory Board (SSB)**

The Sharia Supervisory Board (SSB) plays a crucial role in ensuring that AI is implemented in compliance with Sharia principles. In this context, the DPS can play an active role in providing relevant fatwas and *ijtihad* to ensure that the use of AI remains within the framework of Islamic law. These fatwas must take into account the local context and adapt to the needs of Muslim communities in various countries, ensuring that the technology is not only technically effective but also in line with local values and Sharia culture (Khalil & Taktak, 2020).

The DPS also has a responsibility to assess and monitor the risks that may arise in the application of AI in the Islamic finance sector. By providing clear, Sharia-based guidelines, the DPS can reduce the risk of deviation from Sharia principles and offer *ijtihad*-based solutions that are in line with the objectives of public interest (Handayani et al., 2023).

### **Commitment to Justice and Public Interest**

Within the framework of *maqasid al-sharia*, justice (*al-'adl*) and public interest (*maslahah*) are two main pillars that must be upheld in every policy and practice of Islamic financial institutions, including in the use of AI. Islamic financial institutions must ensure that every AI application not only prioritises financial efficiency but also considers the resulting social impact. AI used in the Islamic economy must be able to increase financial access for the community, reduce social inequality, and strengthen the welfare of the people.

For example, the use of AI in credit risk analysis must ensure that assessments are non-discriminatory and take into account the socio-economic context of customers, not just numerical data. With this approach, Islamic financial institutions can ensure that the decisions made will bring benefits to the wider community and not add to social injustice (Grassa, 2015a).

### **Conculsion**

This study aims to analyse the opportunities for applying Artificial Intelligence (AI) in the development of the Islamic economy, identify the ethical challenges that arise in integrating AI with sharia principles, and offer a conceptual framework based on maqasid al-shariah to support the ethical and sharia-compliant application of AI. The conclusions of this study indicate that the application of AI in the sharia finance sector has great potential to improve operational efficiency, expand financial inclusion, and strengthen transparency and accountability. AI can assist in business process automation, reduction of operational costs, and the development of more innovative and inclusive financial products. However, the main challenges faced are the compatibility of AI algorithms with sharia principles, as well as the limitations of AI in understanding the complexity of Islamic economic law, which is highly dependent on moral and ethical values. Therefore, it is necessary to apply a maqasid al-shariah-based framework to ensure that the application of AI is not only efficient but also fair and in accordance with Islamic principles, with strict supervision from the Shariah Supervisory Board (DPS).

The limitations of this study include its descriptive-analytical nature and reliance solely on secondary data, thus failing to collect primary data that could provide a more in-depth perspective. In addition, this study focuses more on theoretical and conceptual aspects, without discussing in depth the practical application and challenges of implementing AI in the field, particularly in the context of various countries with different Sharia regulations. This study is also limited in exploring the AI technology used in Islamic financial institutions, so it cannot fully evaluate the effectiveness and suitability of the AI algorithms applied. Further research should be conducted to explore the practical application of AI in Islamic financial institutions in various countries, including case studies or field experiments.

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