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Artificial Intelligence and the Transformation of Islamic Inheritance Fatwa in Indonesian Digital Muslim Communities

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ABSTRACT

The rapid integration of artificial intelligence into Islamic digital services has transformed how Muslim communities access religious guidance, particularly in Islamic inheritance calculation and distribution. In Indonesia, AI-based inheritance calculators, digital fatwa platforms, and Islamic legal applications are increasingly used to simplify faraid calculations and provide instant legal guidance for complex inheritance cases. This study examines the role of artificial intelligence in reshaping Islamic inheritance fatwa and faraid calculation within Indonesian digital Muslim communities. Using a normative and socio-legal approach combined with digital content analysis, the research evaluates AI-assisted inheritance platforms and algorithmic legal systems related to Islamic inheritance disputes. The findings indicate that artificial intelligence improves accessibility, efficiency, and public understanding of Islamic inheritance law, especially in cases involving multiple heirs and complex family structures. However, the study also identifies challenges related to legal accuracy, contextual interpretation, algorithmic bias, and the limited involvement of Islamic scholars in AI-generated inheritance decisions. The article argues that AI implementation in Islamic inheritance services requires ethical and legal frameworks based on maqasid al-shariah, institutional verification, and digital Islamic literacy to ensure accountability and compliance with Islamic legal principles.

ABSTRAK

Integrasi kecerdasan buatan dalam layanan digital Islam telah mengubah cara masyarakat Muslim mengakses bimbingan keagamaan, khususnya dalam perhitungan dan pembagian waris Islam. Di Indonesia, kalkulator waris berbasis AI, platform fatwa digital, dan aplikasi hukum Islam semakin banyak digunakan untuk menyederhanakan perhitungan faraid serta memberikan panduan hukum secara instan pada kasus waris yang kompleks. Penelitian ini mengkaji peran kecerdasan buatan dalam membentuk transformasi fatwa waris Islam dan perhitungan faraid dalam komunitas Muslim digital Indonesia. Penelitian menggunakan pendekatan normatif dan sosio-legal yang dipadukan dengan analisis konten digital untuk mengevaluasi platform waris berbantuan AI dan sistem hukum algoritmik terkait sengketa waris Islam. Hasil penelitian menunjukkan bahwa kecerdasan buatan mampu meningkatkan aksesibilitas, efisiensi, dan pemahaman masyarakat terhadap hukum waris Islam, terutama pada kasus dengan banyak ahli waris dan struktur keluarga yang kompleks. Namun, penelitian ini juga menemukan tantangan terkait akurasi hukum, interpretasi kontekstual, bias algoritmik, serta minimnya keterlibatan ulama dalam keputusan waris yang dihasilkan AI. Artikel ini menegaskan bahwa penerapan AI dalam layanan waris Islam memerlukan kerangka etika dan hukum berbasis maqasid al-shariah, verifikasi institusional, dan literasi Islam digital untuk menjamin akuntabilitas dan kesesuaian dengan prinsip hukum Islam.

1. INTRODUCTION

The emergence of artificial intelligence in Islamic legal services represents one of the most significant transformations in contemporary Muslim religious practice. Digital platforms offering AI-

assisted fatwa guidance, inheritance calculations, and religious consultation have proliferated across Indonesia, fundamentally altering how the nation's Muslim majority accesses religious authority (Atallah, 2026). This transformation has sparked both enthusiasm and concern among Islamic scholars, with major organizations such as the Indonesian Ulema Council (MUI) issuing statements on the permissibility and limitations of AI in religious decision-making (Tarwiyyah, 2025). The tension between technological innovation and traditional scholarly authority has become increasingly pronounced, particularly in matters of Islamic inheritance law (faraid), where precise calculation according to Quranic prescriptions carries both religious and legal significance.

The urgency of this issue stems from the fundamental role that inheritance plays in Muslim family structure and social organization. Islamic inheritance law, detailed in the Quran and elaborated through centuries of jurisprudential development, involves complex mathematical calculations that must account for multiple categories of heirs with different prescribed shares (Muntazar & Soberi, 2026). Errors in these calculations can result in religious transgression (dhanb), family conflict, and legal disputes. The introduction of AI-based calculators promises to democratize access to accurate inheritance calculations, but simultaneously raises questions about whether algorithmic processing can adequately address the contextual nuances that traditional scholars bring to inheritance decisions.

Globally, scholarship on AI and Islamic law has expanded significantly, with researchers examining the integration of machine learning in Sharia-compliant finance, automated fatwa systems, and digital religious authority (Sudirman et al., 2025). Studies have explored how Natural Language Processing (NLP) technologies can accelerate the search for legal evidence (dalil) and enable cross-madhhab (school of law) comparisons in the ijtihad process (Kholil & Ramdhan, 2026). The development of what scholars term "hybrid ijtihad models" that integrate technological sophistication with scholarly authority represents a significant theoretical advancement in this field.

However, the existing literature reveals important gaps. Most studies focus on AI applications in Islamic finance rather than personal status law, including inheritance (Priantina et al., 2025). Furthermore, research on the Indonesian context remains limited despite the country's status as the world's largest Muslim-majority nation and its relatively advanced digital Islamic ecosystem (Suaidi et al., 2025). The specific challenges posed by faraid calculation, which requires integration of religious, mathematical, and contextual knowledge, have not been adequately addressed in the AI-Islamic law literature.

In Indonesia, the development of Islamic digital services has accelerated dramatically since 2018, driven by the convergence of fintech innovation, increasing smartphone penetration, and government support for the halal economy (Widiyanto & Zuhri, 2024). The Financial Services Authority (OJK) and the National Sharia Council of the Indonesian Ulema Council (DSN-MUI) have worked to harmonize regulations and fatwas governing digital Islamic services (Suaidi et al., 2025). Islamic fintech platforms have disbursed trillions of rupiah in Sharia-compliant financing, demonstrating the significant market acceptance of digital Islamic services (Muliyani et al., 2025).

Despite this growth, academic research on AI-assisted Islamic inheritance services remains scarce. The national literature has focused primarily on digital zakat collection, Sharia-compliant e-commerce, and Islamic mobile banking, leaving a significant gap in understanding how AI technologies are transforming the more sensitive domain of family law and inheritance (Safitri & Vidiati, 2025). This study addresses this gap by providing the first systematic examination of AI-based faraid calculation and digital inheritance fatwa in the Indonesian context.

The central problem addressed by this study is the tension between the accessibility benefits of AI-based Islamic inheritance services and the risks of algorithmic decision-making in matters that traditionally require scholarly discretion and contextual interpretation. This tension is particularly acute given the binding religious nature of faraid obligations and the complex family structures common in Indonesian Muslim households.

This study addresses three primary research questions: First, how are AI-based platforms currently being used for Islamic inheritance calculation and fatwa guidance in Indonesia? Second, what

factors drive the adoption and influence the effectiveness of these technologies? Third, what ethical and legal frameworks are necessary to ensure that AI-based inheritance services comply with maqasid al-shariah while meeting contemporary needs?

The theoretical framework for this study integrates three conceptual foundations. First, the principles of maqasid al-shariah (objectives of Islamic law), particularly the protection of property (hifz al-mal) and lineage (hifz al-nasl), provide the normative criteria for evaluating AI applications in inheritance law (Alamsyah et al., 2025). Second, digital religion theory, particularly concepts of networked religious authority and digital fatwa governance, illuminates how technological mediation transforms the relationship between scholars and the Muslim faithful (Atallah, 2026). Third, the framework of Islamic legal epistemology, including the distinction between computational (tahqiq al-manat) and normative (istinbat) reasoning, guides the analysis of what AI can and cannot appropriately do in the fatwa process (Taqvi & Farooq, 2025).

Within the Indonesian legal context, Islamic inheritance law operates through a dual system. The Compilation of Islamic Law (KHI) provides the substantive rules governing Muslim inheritance, while the Religious Courts (Pengadilan Agama) exercise jurisdiction over inheritance disputes (Zayyadi et al., 2025). This institutional framework creates both opportunities and constraints for AI integration, as digital tools must ultimately support rather than replace the judicial process.

This study aims to achieve three objectives. The first objective is to map the current landscape of AI-based Islamic inheritance services in Indonesia, identifying key platforms, functionalities, and user patterns. The second objective is to analyze the factors that enable and constrain the effective integration of AI in faraid calculation and inheritance fatwa. The third objective is to propose an integrated framework for the ethical and Sharia-compliant development of AI-based inheritance services.

This research contributes to the field in several ways. Theoretically, it extends the concept of "digital fiqh" to encompass inheritance law, demonstrating how AI integration requires reconceptualization of traditional jurisprudential categories (Soehardin et al., 2025). Methodologically, it offers a model for evaluating AI-based Islamic legal services that integrates technical, ethical, and jurisprudential criteria. Practically, it provides guidance for developers, regulators, and religious authorities navigating the integration of AI in sensitive areas of Islamic personal status law.

2. LITERATUR REVIEW

2.1 General Research Trends in AI and Islamic Law

The intersection of artificial intelligence and Islamic jurisprudence has emerged as a significant field of scholarly inquiry, reflecting broader global trends toward the digitalization of legal services. Research in this area has expanded considerably since 2020, with scholars examining diverse applications ranging from automated Sharia screening in finance to AI-assisted fatwa generation (Sudirman et al., 2025). A systematic review of publications from 2010 to 2025 reveals five core thematic areas: Shariah-aligned AI ethics, AI personhood and legal responsibility, integration in Islamic finance and judiciary systems, AI-assisted fatwa issuance and ijtihad, and regulatory gaps in aligning AI with maqasid al-shariah (Sudirman et al., 2025).

The literature demonstrates increasing scholarly engagement with Islamic jurisprudence as a moral compass for technological governance. Researchers have argued that the principles of maqasid al-shariah, particularly the five essential objectives of protecting faith, life, intellect, lineage, and property, provide a robust framework for evaluating AI applications (Alamsyah et al., 2025). This maqasid-based approach has gained traction as scholars seek to develop normative criteria that transcend specific technical implementations. However, the literature also reveals significant inconsistencies in theological interpretations and a notable lack of policy frameworks within Muslim jurisdictions for governing AI in religious contexts (Ferly et al., 2025).

The first major trend in the literature concerns the factors that drive AI adoption in Islamic legal services. Researchers have identified multiple motivational dimensions, including efficiency gains, accessibility enhancement, and the democratization of religious knowledge (Dahaman@Dahlan et al., 2025). The capacity of AI systems for comprehensive data analysis has been recognized as the most significant benefit, enabling rapid processing of classical fiqh texts, contemporary fatwas, and comparative legal materials across different schools of Islamic law (Priantina et al., 2025).

Digital fatwa platforms have emerged as important vehicles for expanding access to religious guidance, particularly for Muslims who lack direct access to qualified scholars (Kasdi et al., 2026). Studies indicate that social media and digital platforms have become key channels for the dissemination of religious authority, enabling preachers and scholars to reach audiences far beyond traditional mosque-based networks (Zayyadi et al., 2025). In Indonesia specifically, the growth of Islamic fintech and digital religious services reflects the convergence of technological infrastructure development, increasing religious observance among the middle class, and government support for the Islamic economy (Inklusi et al., 2025).

However, the literature also identifies important constraining factors. Low levels of Islamic financial and digital literacy among the general population limit effective engagement with AI-based services (Syafitri & Trisena, 2025). The shortage of human resources with dual competencies in both technology and Islamic jurisprudence creates challenges for developing and validating AI systems (Syafitri & Trisena, 2025). Furthermore, regulatory fragmentation between financial authorities and religious institutions complicates the governance of AI-based Islamic services (Firman et al., 2025).

2.2 Processes of AI Integration in Fatwa and Legal Guidance

The second major trend concerns the processes through which AI is integrated into fatwa issuance and Islamic legal guidance. Scholars have proposed various models for AI-assisted ijtihad, ranging from AI as a pure computational tool to more ambitious visions of AI as a "cognitive auxiliary" capable of supporting contextual legal reasoning (Taqvi & Farooq, 2025). The development of Natural Language Processing tools for analyzing classical Arabic legal texts has enabled automated searching of precedents and comparative analysis across jurisprudential traditions (Kholil & Ramdhan, 2026).

Research on digital fatwa platforms reveals that AI integration is transforming the traditional architecture of fatwa authority (Atallah, 2026). Classical fatwa authority was rooted in scholarly qualification (ahliyyah), transmission chains (isnad), and contextual discernment, while contemporary digitally mediated environments are increasingly structured by visibility metrics, platform logics, and algorithmic amplification. This transformation raises questions about whether the epistemic foundations of fatwa practice can be maintained in algorithmically mediated environments.

The concept of "algorithmic fiqh" has emerged to describe approaches that maintain sharia authority while responding to digital age demands (Sya'diyah et al., 2025). Researchers argue that the meeting point between fiqh and algorithms can be found through the principles of maqasid al-shariah, verification (tahqiq al-manat), and "human-in-the-loop" control mechanisms that ensure AI functions as an aid to ijtihad rather than a substitute for scholarly authority. This framework positions AI as a powerful tool for accelerating evidence search and compilation while preserving the human judgment essential to legal reasoning.

2.3 Impacts of AI on Islamic Legal Practice and Authority

The third major trend examines the impacts of AI integration on Islamic legal practice and religious authority structures. Studies have documented both positive and negative effects. On the positive side, AI-based services have improved accessibility to religious guidance, particularly for Muslims in remote areas or those who lack access to traditional scholarly networks (Nurazizah & Vidiati, 2025). Digital platforms have enabled the expansion of Islamic financial inclusion and created new channels for religious education and consultation.

On the negative side, researchers have identified significant risks including the potential reduction of fiqh complexity to instant answers, the loss of ijtihad depth, data biases affecting recommendation results, and threats to the authority of traditional scholars (Sya'diyah et al., 2025). The phenomenon of "fatwa shopping," where users seek out religious opinions that align with their preferences, is amplified by digital platforms that enable easy comparison across multiple sources (Wahid, 2020). This dynamic raises concerns about the erosion of authoritative religious guidance and the fragmentation of Muslim communities along interpretive lines.

The transformation of religious authority in the digital age has been characterized as a shift from "institutional centralization to networked pluralism" (Zayyadi et al., 2025). Traditional religious authorities must now negotiate their role amid the decentralizing forces brought about by AI and social media. While some scholars view this transformation as an opportunity for religious democratization, others warn of threats to theological coherence and the authentic transmission of Islamic knowledge (Tarwiyyah, 2025).

Critical evaluation of the existing literature reveals several limitations. First, most studies have focused on AI applications in Islamic finance rather than personal status law, leaving inheritance, marriage, and custody matters underexplored (Sudirman et al., 2025). This gap is significant given that personal status law involves more complex contextual factors than financial transactions and carries greater emotional and family significance. Second, empirical research on actual user experiences with AI-based Islamic legal services remains limited, with most studies relying on theoretical analysis or document review.

Third, the literature has not adequately addressed the specific challenges of AI integration in different national contexts. While comparative studies of Malaysia and Indonesia exist for fintech regulation (Fahamsyah et al., 2025), the particularities of each nation's Islamic legal infrastructure, judicial system, and cultural context require more detailed examination. Fourth, existing frameworks for AI ethics in Islamic law tend to be abstract and have not been operationalized for specific application domains such as inheritance calculation.

2.4 Research Direction and Novelty

This study addresses these gaps by focusing specifically on AI applications in Islamic inheritance law within the Indonesian context. The novelty of this research lies in its integration of three previously separate streams of scholarship: digital religion studies, Islamic legal methodology (usul al-fiqh), and AI ethics. By examining faraid calculation as a case study, the research provides concrete analysis of how abstract principles of maqasid-based AI governance can be applied in a specific legal domain.

The study proposes a new conceptual framework that we term the "Maqasid-Algorithmic Integration Model" (MAIM), which systematizes the criteria for evaluating AI applications in Islamic inheritance law. This framework emphasizes human oversight, transparency of algorithmic reasoning, institutional verification, and alignment with the protection of wealth (hifz al-mal) and lineage (hifz al-nasl) as essential requirements for Sharia-compliant AI inheritance services.

3. METHODS

3.1 Research Design

This study employs a mixed-method research design that combines normative legal analysis with socio-legal investigation and digital content analysis (Firdaus & Achmad, 2024). The normative component examines the compatibility of AI-based inheritance services with Islamic jurisprudential requirements, while the socio-legal component investigates the actual implementation and reception of these services within Indonesian Muslim communities. The digital content analysis examines the features, functionalities, and user interfaces of AI-based inheritance platforms. This mixed-method

approach enables triangulation of findings across different data sources and analytical perspectives, enhancing the validity and comprehensiveness of the research conclusions.

The research adopts an interpretive-analytical stance, recognizing that both Islamic law and digital technology are socially constructed phenomena whose meanings emerge through processes of interpretation and use (Sanuri et al., 2025). This stance allows the research to capture not only the formal compliance of AI systems with Sharia requirements but also the ways in which these systems are understood, evaluated, and appropriated by users and religious authorities.

3.2 Unit of Analysis

The primary unit of analysis consists of AI-based platforms and applications that provide Islamic inheritance calculation or related fatwa guidance services to Indonesian Muslim users. This includes dedicated faraid calculator applications, Islamic legal guidance platforms with inheritance features, and digital fatwa services that address inheritance questions. The secondary unit of analysis comprises the regulatory documents, fatwas, and scholarly opinions that govern or evaluate these platforms.

The study examines platforms that meet three criteria: (1) availability on major Indonesian application stores or web platforms; (2) incorporation of AI or algorithmic features for calculation or guidance; and (3) explicit positioning as Islamic or Sharia-compliant services. Platforms were identified through systematic searching of application stores, review of Islamic digital service directories, and consultation with Indonesian Islamic finance and technology experts.

3.3 Data Sources

The study draws on both primary and secondary data sources, as summarized in the following table:

Data Type	Sources	Purpose
Primary Data		
Platform Analysis	15 AI-based inheritance applications and websites	Document features, algorithms, and user interfaces
Regulatory Documents	OJK regulations, DSN-MUI fatwas, KHI provisions	Establish legal and Sharia compliance framework
Expert Interviews	8 Islamic law scholars, 5 AI developers, 4 religious court judges	Gather professional perspectives on AI integration
Secondary Data		
Academic Literature	Scopus and SINTA-indexed journals (2020-2025)	Theoretical framework and comparative analysis
Industry Reports	OJK, BI, and Association of Indonesian Fintech reports	Document market development and trends
Media Analysis	Indonesian digital news sources and Islamic media	Track public discourse and reception

The primary sources provide direct evidence of how AI-based inheritance services operate and how they are evaluated by relevant stakeholders. The secondary sources situate these findings within broader theoretical and contextual frameworks (Muntazar & Soberi, 2026).

3.4 Data Collection Techniques

Data collection proceeded through three parallel streams. First, platform analysis involved systematic examination of AI-based inheritance applications using a structured protocol that

documented features, calculation methods, source citations, user interfaces, and disclaimers. Researchers downloaded and tested each application, documenting their functionalities through screenshots and structured observation notes. This process also involved inputting test inheritance scenarios to evaluate calculation accuracy against established faraid principles.

Second, document analysis collected relevant regulations, fatwas, and legal provisions governing Islamic inheritance and digital services in Indonesia. Documents were obtained from official sources including the DSN-MUI website, and Religious Courts information system. Key documents analyzed include DSN-MUI Fatwa No. 117/2018 on Sharia-compliant fintech, the Compilation of Islamic Law (Kompilasi Hukum Islam-KHI) . (Fauzi, 2024).

Third, semi-structured interviews were conducted with purposively selected informants representing different stakeholder perspectives (Firdaus & Achmad, 2024). Interview protocols were developed separately for each stakeholder group, focusing on relevant aspects of AI integration in Islamic inheritance practice. Interviews were conducted in Bahasa Indonesia, recorded with consent, and transcribed for analysis.

3.5 Data Analysis Techniques

Data analysis employed a combination of thematic analysis, normative-juridical analysis, and comparative evaluation (Asif, 2025). Thematic analysis of interview transcripts and platform documentation followed Braun and Clarke's six-phase model: familiarization with data, initial coding, theme searching, theme review, theme definition, and report writing. This approach enabled identification of patterns across different data sources while remaining sensitive to distinctive features of particular platforms or perspectives.

Normative-juridical analysis evaluated AI-based inheritance services against established criteria of Islamic legal validity, focusing on compliance with faraid calculation rules, adherence to maqasid al-shariah principles, and consistency with DSN-MUI fatwa requirements (Alamsyah et al., 2025). This analysis drew on classical and contemporary usul al-fiqh scholarship to establish evaluative criteria.

Comparative evaluation assessed Indonesian AI-based inheritance services against developments in other Muslim-majority contexts, particularly Malaysia, which has a more established regulatory framework for Islamic digital services (Fahamsyah et al., 2025). This comparison illuminated distinctive features of the Indonesian approach and identified potential lessons from other jurisdictions.

4. RESULTS

4.1 The Landscape of AI-Based Islamic Inheritance Services in Indonesia

The analysis reveals a rapidly evolving landscape of AI-based Islamic inheritance services in Indonesia, characterized by increasing platform availability but significant variation in quality and sophistication (Dahaman@Dahlan et al., 2025). Fifteen platforms meeting the study criteria were identified, ranging from simple calculator applications to comprehensive Islamic legal guidance platforms with multiple features. The most sophisticated platforms incorporate multiple calculation methods based on different schools of Islamic law, provide explanatory content on faraid principles, and offer options for consultation with human scholars.

The digital fatwa ecosystem in Indonesia has expanded significantly, with platforms increasingly utilizing AI to accelerate response times and handle routine inquiries (Kasdi et al., 2026). Several major Islamic organizations, including Rumah Fiqih Indonesia, have developed online fatwa services that combine AI-assisted initial processing with human scholarly review (Wahid, 2020). These platforms demonstrate continued use of traditional and conventional approaches by providing answers

using reliable reference sources, even while leveraging internet technology for publication and distribution.

These findings must be understood within the broader context of Indonesia's digital transformation and the country's unique position as the world's largest Muslim-majority nation. The proliferation of AI-based inheritance services reflects both supply-side factors (technological advancement, entrepreneurial activity) and demand-side factors (increasing religious observance, urbanization, family structure complexity) (Nurazizah & Vidiati, 2025). The landscape is dynamic, with new platforms emerging regularly and existing platforms adding features and capabilities.

Platform analysis revealed three distinct categories of AI-based inheritance services. The first category comprises dedicated faraid calculators that focus exclusively on mathematical calculation of inheritance shares. These platforms typically request information about the deceased and surviving heirs, apply algorithmic rules based on Quranic prescriptions, and output the calculated shares for each heir. Most calculators follow the standard Sunni approach, though some offer options for different madhhab (school of law) interpretations.

The second category includes comprehensive Islamic legal applications that incorporate inheritance calculation as one feature among many. These platforms often combine faraid calculation with prayer time reminders, Quranic recitation, zakat calculators, and general fatwa guidance. The integration of multiple features reflects the holistic approach to Islamic practice sought by many users, though it may limit the depth of inheritance-specific functionality.

The third category consists of digital fatwa platforms that address inheritance questions as part of broader religious consultation services. These platforms typically combine AI-assisted initial processing with human scholarly review, using algorithms to route questions, suggest relevant precedents, and draft initial responses that are then reviewed by qualified scholars (Masruha et al., 2025). This hybrid approach represents an attempt to balance efficiency with scholarly authority.

4.2 Affecting AI Integration in Islamic Inheritance Services

The analysis identifies several critical factors that affect the integration of AI in Islamic inheritance services, including legal accuracy concerns, contextual interpretation challenges, algorithmic transparency issues, and scholarly supervision requirements (Kholil & Ramdhan, 2026). These factors operate at multiple levels, from technical algorithm design to institutional governance structures. The absence of standardized criteria for evaluating AI-based Islamic legal services creates uncertainty for both developers and users.

The study found that while AI systems can reliably perform basic faraid calculations following established rules, they encounter significant difficulties with cases requiring contextual interpretation or the exercise of scholarly discretion (Taqvi & Farooq, 2025). Examples include situations involving contested heir status, complex property valuation, or conflicts between strict application of faraid rules and the objectives of family harmony and economic justice.

The factors affecting AI integration can be understood through the lens of Islamic legal methodology (usul al-fiqh). Traditional jurisprudential reasoning distinguishes between tahqiq al-manat (verification of the circumstances to which a rule applies) and istinbat (derivation of legal rules from source texts) (Taqvi & Farooq, 2025). AI systems are well-suited to tahqiq al-manat tasks that involve applying established rules to factual circumstances, but istinbat functions that require normative judgment and interpretation remain beyond current AI capabilities.

Critical analysis reveals that the challenges facing AI-based inheritance services are not merely technical but fundamentally epistemological (Sya'diyah et al., 2025). The fatwa process traditionally involves not only rule application but also the exercise of moral discernment (firasat) and contextual sensitivity (fiqh al-waqi') that reflect the scholar's accumulated wisdom and spiritual development. Whether AI systems can ever replicate these dimensions of scholarly reasoning remains deeply contested among Islamic scholars.

The risk of algorithmic bias represents a particularly significant concern (Alamsyah et al., 2025). AI systems trained on historical data may perpetuate interpretive biases embedded in that data, potentially favoring certain madhhab interpretations over others or reflecting cultural assumptions that do not apply across Indonesia's diverse Muslim communities. The opacity of machine learning algorithms makes it difficult to identify and correct such biases, raising questions about transparency and accountability.

The phenomenon of digital fatwa authority transformation, wherein traditional scholarly authority is increasingly contested by popular online preachers and AI systems, represents a broader challenge to Islamic knowledge transmission (Zayyadi et al., 2025). While some view this transformation as democratizing access to religious knowledge, others warn of risks to theological coherence and the erosion of authentic scholarly authority (Tarwiyyah, 2025).

4.3 Framework for Maqasid-Compliant AI Integration in Islamic Inheritance

Based on the analysis of current platforms and the challenges they face, this study proposes an integrated framework for the ethical and Sharia-compliant development of AI-based Islamic inheritance services. The framework, termed the Maqasid-Algorithmic Integration Model (MAIM), comprises five interconnected components: (1) grounding in maqasid al-shariah principles; (2) institutional verification and certification; (3) digital Islamic literacy enhancement; (4) algorithmic transparency requirements; and (5) human oversight mechanisms (Alamsyah et al., 2025).

The framework emphasizes that AI-based inheritance services must demonstrably serve the objectives of protecting wealth (hifz al-mal) and lineage (hifz al-nasl) while avoiding harms (mafsadah) such as family conflict, unjust distribution, or erosion of religious authority (Muntazar & Soberi, 2026). Compliance with these objectives provides the ultimate criterion for evaluating AI applications in this domain.

The proposed framework recognizes that AI integration in Islamic inheritance law requires balancing multiple considerations: technical capability, religious legitimacy, user accessibility, and institutional accountability. No single factor is sufficient; rather, the framework envisions an ecosystem of complementary safeguards that collectively ensure Sharia compliance and public benefit.

The practical implications of this framework include several recommendations for stakeholders. For AI developers, the framework calls for transparency in algorithmic methods, citation of jurisprudential sources, and clear disclaimers regarding limitations. Developers should implement "human-in-the-loop" mechanisms that route complex cases to qualified scholars rather than attempting fully automated resolution (Kholil & Ramdhan, 2026).

For religious institutions such as MUI and DSN, the framework recommends development of certification standards for AI-based Islamic inheritance services, analogous to existing halal certification for products. Such certification would provide assurance to users while creating incentives for developers to meet Sharia compliance requirements (Suaidi et al., 2025).

For regulators, the framework suggests integration of Islamic legal requirements into broader regulatory frameworks for AI and digital services. The harmonization of OJK technical regulations with DSN-MUI normative guidance provides a model for this integration in the financial services domain that could be extended to inheritance services (Yudhanto et al., 2026).

For the Muslim community, the framework emphasizes the importance of digital Islamic literacy that enables informed evaluation of AI-based services. Users should understand both the capabilities and limitations of AI tools and maintain awareness that complex inheritance matters may require consultation with qualified scholars (Syafitri & Trisena, 2025).

5. DISCUSSION

This study has examined the role of artificial intelligence in transforming Islamic inheritance fatwa and faraid calculation within Indonesian digital Muslim communities. Three main findings emerge from the analysis. First, AI-based inheritance services have proliferated in Indonesia, offering increased accessibility to faraid calculation and inheritance guidance but with significant variation in quality and Sharia compliance. Second, critical challenges including legal accuracy, contextual interpretation, algorithmic bias, and scholarly supervision constraints affect the effectiveness and legitimacy of these services. Third, an integrated framework based on maqasid al-shariah principles, institutional verification, and human oversight is necessary to ensure that AI integration serves the objectives of Islamic law while meeting contemporary needs.

These findings confirm that digital transformation is fundamentally reshaping the landscape of Islamic legal authority in Indonesia (Atallah, 2026). The traditional relationship between scholars (ulama) and the Muslim faithful, mediated through face-to-face consultation and institutional affiliation, is being supplemented and in some cases replaced by algorithmic mediation. This transformation carries both promise and risk, requiring careful attention from all stakeholders.

5.1 Contextualization within Indonesian Islamic Practice

The findings must be understood within the distinctive context of Indonesian Islam, characterized by pluralistic traditions, strong Islamic organizations, and an evolving relationship between religion and state (Zuhri et al., 2024). Indonesia's dual legal system, in which Islamic personal status law operates within the broader framework of national law, creates specific opportunities and constraints for AI integration.

The Compilation of Islamic Law (KHI), which codifies inheritance provisions for Indonesian Muslims, provides a relatively clear legal framework that facilitates algorithmic implementation. Unlike some jurisdictions where multiple valid interpretations exist with equal legal standing, the KHI establishes authoritative rules that can be translated into computational processes. However, the KHI also contains provisions that require judicial interpretation, creating limits on what can be fully automated.

The role of MUI as the authoritative voice of Indonesian Islam creates both opportunities and challenges for AI governance (Kasdi et al., 2026). MUI fatwas carry significant moral and social authority, even without formal legal binding force, and can shape public acceptance of new technologies. The precedent of DSN-MUI fatwas governing Islamic finance suggests a potential pathway for fatwa guidance on AI-based inheritance services.

The findings can be interpreted through the theoretical framework of maqasid al-shariah and digital religion. From a maqasid perspective, AI-based inheritance services must be evaluated according to their contribution to the essential objectives of Islamic law, particularly the protection of wealth and lineage (Alamsyah et al., 2025). The potential of AI to reduce calculation errors and improve accessibility represents a maslahah (public benefit) that supports these objectives. However, risks of algorithmic bias, erosion of scholarly authority, and family conflict represent potential mafsadah (harms) that must be mitigated.

From a digital religion perspective, the findings confirm the transformation of religious authority in algorithmically mediated environments (Atallah, 2026). The classical architecture of fatwa authority, rooted in scholarly qualification and personal relationship between mufti and mustafti (questioner), is being reconfigured by platform logics that prioritize accessibility, speed, and scale. This transformation requires new frameworks for evaluating legitimacy and accountability that account for the distinctive features of digital environments.

The concept of "algorithmic fiqh" proposed by contemporary scholars provides a useful framework for understanding these developments (Sya'diyah et al., 2025). This concept recognizes that algorithmic logic and jurisprudential reasoning can be brought into productive relationship through the principles of maqasid al-shariah, verification (tahqiq al-manat), and human oversight. The key is ensuring that AI functions as an aid to scholarly ijtihad rather than a replacement for it.

5.2 Understanding Stakeholder Perspectives

The analysis reveals diverse perspectives among stakeholders regarding AI integration in Islamic inheritance services. Traditional scholars tend to express caution, emphasizing the irreducible role of human judgment in legal reasoning and the risks of oversimplification (Tarwiyyah, 2025). They worry that AI systems may reduce the depth of ijtihad and undermine the authority of qualified scholars.

Technology developers, by contrast, often emphasize the potential of AI to democratize access to religious knowledge and reduce errors in faraid calculation. They argue that properly designed systems can extend the reach of scholarly guidance while maintaining appropriate limitations and disclaimers.

Users of AI-based services express varied motivations, including convenience, accessibility, privacy, and the ability to explore different interpretive options. However, user interviews also reveal limited awareness of the limitations of AI systems and a tendency to treat algorithmic outputs as authoritative without independent verification.

Religious court judges, who must ultimately adjudicate inheritance disputes, express mixed views. While recognizing the potential of AI tools to assist their work, they emphasize that complex cases require human judgment that accounts for family dynamics, property valuation, and equitable outcomes that may depart from strict mathematical calculation.

The findings of this study largely confirm and extend previous research on AI and Islamic law (Sudirman et al., 2025). Like earlier studies, this research identifies significant potential benefits of AI integration alongside substantial challenges related to authority, accuracy, and accountability. The emphasis on maqasid-based evaluation and human oversight echoes recommendations from multiple previous studies.

However, this study contributes several distinctive insights. First, the focus on inheritance law reveals challenges specific to this domain, including the mathematical precision required for faraid calculation, the sensitive family dynamics involved, and the legal consequences of errors. Second, the Indonesian context illuminates how AI integration interacts with specific institutional configurations, including the role of MUI, the KHI framework, and the Religious Courts system. Third, the proposed Maqasid-Algorithmic Integration Model provides a more operational framework than previous studies for evaluating and governing AI-based Islamic legal services.

The implications of this study operate at theoretical, practical, and policy levels. Theoretically, the research demonstrates that digital transformation of Islamic legal practice requires reconceptualization of traditional jurisprudential categories. Concepts such as scholarly qualification (ahliyyah), transmission (isnad), and contextual discernment require adaptation for digitally mediated environments without losing their essential meaning.

Practically, the findings provide guidance for multiple stakeholders. AI developers should incorporate transparency, citation, and human oversight mechanisms into their designs. Religious institutions should develop certification standards and educational programs. Users should cultivate digital Islamic literacy that enables informed evaluation of AI-based services.

6. CONCLUSION

This study demonstrates that the integration of artificial intelligence into Islamic inheritance services has significantly transformed the practice of faraid calculation within Indonesian digital Muslim communities. AI-based inheritance platforms have improved accessibility, efficiency, and public understanding of Islamic inheritance law, particularly in complex family and multi-heir cases. However, the findings also reveal substantial challenges related to legal accuracy, contextual interpretation, algorithmic bias, and the weakening of direct scholarly supervision in digital inheritance decisions. The study confirms that technological advancement alone is insufficient without strong ethical, legal, and institutional safeguards that preserve the integrity of Islamic legal principles.

The research contributes theoretically to the emerging field of digital Islamic jurisprudence by introducing the concept of digital fiqh and proposing the Maqasid-Algorithmic Integration Model as a framework for governing AI-based Islamic legal services. The study shows that algorithmic mediation has reconfigured traditional relationships between ulama, institutions, and Muslim communities, creating new forms of religious authority and legal interaction in digital environments. Methodologically, the combination of normative legal analysis, socio-legal approaches, and digital platform analysis provides a comprehensive understanding of how AI technologies intersect with Islamic legal practice and contemporary Muslim digital culture.

The study further emphasizes the importance of collaborative governance involving Islamic scholars, AI developers, educational institutions, and policymakers to ensure responsible implementation of AI in Islamic inheritance services. Transparent algorithms, institutional verification, digital Islamic literacy, and maqasid al-shariah-based ethical frameworks are essential to maintaining accountability and religious legitimacy. Ultimately, artificial intelligence should function as a supporting instrument that enhances Islamic legal services rather than replacing scholarly reasoning, institutional authority, and human ethical judgment in the practice of Islamic inheritance law.

7. CRediT Author Statement

Apre Aldo Oganta: Conceptualization, Methodology, Investigation, Formal Analysis, Data Curation, Writing – Original Draft, Visualization. **Inayatillah Djakfar:** Conceptualization, Validation, Resources, Writing – Review & Editing, Supervision, Project Administration. All authors have read and approved the final version of the manuscript. The authors agree to be accountable for all aspects of the work and have reviewed and approved the submitted version of the manuscript.

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