



LEVERAGING ARTIFICIAL INTELLIGENCE IN ZAKAT CALCULATION: A COMPARATIVE STUDY OF AI SYSTEMS

Mustafa Mat Jubri Shamsuddin¹, Fatimah Karim², Saidatolakma Mohd Yunus³

¹Department of Fiqh and Usul al-Fiqh, AbdulHamid AbuSulayman Kulliyah of Islamic Revealed Knowledge and Human Sciences, International Islamic University Malaysia.

² Department of Fiqh and Usul al-Fiqh, AbdulHamid AbuSulayman Kulliyah of Islamic Revealed Knowledge and Human Sciences, International Islamic University Malaysia.

³ Department of Fiqh and Usul al-Fiqh, AbdulHamid AbuSulayman Kulliyah of Islamic Revealed Knowledge and Human Sciences, International Islamic University Malaysia.

Corresponding Author: Mustafa Mat Jubri Shamsuddin. Department of Fiqh and Usul al-Fiqh, AbdulHamid AbuSulayman Kulliyah of Islamic Revealed Knowledge and Human Sciences, International Islamic University Malaysia, P.O. Box 10, 53100 Kuala Lumpur. Email: mussham@iiu.edu.my

Abstract

The integration of Artificial Intelligence (AI) into Islamic financial practices offers new avenues for enhancing zakat calculation accuracy, efficiency, and jurisprudential compliance. However, the adoption of AI in this domain raises complex questions regarding its alignment with Shariah principles, particularly in distinguishing between fixed rulings (nass) and interpretive jurisprudence (ijtihad). This study investigates whether AI can be leveraged to perform zakat calculations while maintaining doctrinal integrity. Using a qualitative research methodology, the study applies doctrinal analysis to classical Islamic sources and contemporary fatwas, combined with comparative analysis across the four major Sunni madhabs and a practical test of five AI systems: Claude, ChatGPT, Gemini, Perplexity, and Grok. Each AI was evaluated based on its ability to calculate zakat under three different scenarios of increasing complexity: basic cash, mixed portfolios, and modern instruments like cryptocurrency and REITs. The findings indicate that AI systems are

capable of handling standard zakat computations with a high degree of accuracy and efficiency, particularly in areas categorized as wasail (procedural means). However, the results also highlight key limitations, including the inability to autonomously handle new asset classifications or apply jurisprudential discretion without prior scholarly input. The study proposes guidelines and parameters to ensure AI implementation respects the immutable aspects of zakat while optimizing ijtihadi areas. These insights are vital for future Shariah-compliant AI developments in Islamic finance.

Keywords: Zakat Calculation, Artificial Intelligence, Islamic Finance, Shariah Compliance, FinTech

Received: November 10, 2025

Accepted: December 03, 2025

Online Published: December 31, 2025

1. Introduction

Zakat constitutes one of the fundamental pillars of Islam, as ordained in the Holy Quran: *"And establish prayer and give zakat, and whatever good you put forward for yourselves - you will find it with Allah"* (Al-Baqarah: 110). The Prophet Muhammad (peace be upon him) emphasized the precision required in zakat calculation, stating: *"There is no zakat on less than five camels, and there is no zakat on less than five awsuq of dates, and there is no zakat on less than five awraq of silver"* (Sahih al-Bukhari). This prophetic guidance establishes the principle that zakat calculations must adhere to specific thresholds and methodologies rooted in Islamic jurisprudence.

In contemporary society, the landscape of wealth and assets has evolved dramatically from the traditional agricultural and pastoral economy of early Islamic civilization. Modern Muslims possess diversified portfolios including stocks, bonds, cryptocurrencies, real estate investments, and complex financial instruments that were unknown during the classical period of Islamic jurisprudence. The Quran's timeless principle that *"Allah intends for you ease and does not intend for you hardship"* (Al-Baqarah: 185) suggests that Islamic law should accommodate technological solutions that facilitate religious obligations while maintaining their essential integrity.

The emergence of Artificial Intelligence and financial technology presents unprecedented opportunities to address the computational complexities inherent in modern zakat assessment. The prophetic tradition emphasizes accuracy in financial dealings: *"Whoever deceives is not one of us"* (Sahih Muslim), underscoring the imperative for precise calculations in fulfilling this religious obligation. Contemporary scholars have increasingly recognized the potential for technology to serve religious purposes, provided such applications align with Shariah principles and enhance rather than compromise the fulfillment of Islamic duties.

2. Problem Statement

Contemporary zakat calculation faces fundamental challenges in reconciling classical jurisprudential frameworks with modern financial realities. Traditional manual methods, while religiously sound, prove inadequate for complex asset portfolios fluctuating in real-time across global markets. The Quranic injunction "*Give of the good things which you have earned*" (Al-Baqarah: 267) requires accurate asset identification and valuation, increasingly difficult in digitized environments.

Variations among the four major Islamic law schools complicate systematic calculation, with different madhabs maintaining distinct positions on asset categorization, nisab thresholds, and methodologies, creating confusion for Muslims fulfilling religious obligations. The prophetic teaching "*Actions are but by intention*" (Sahih al-Bukhari) emphasizes that zakat fulfillment requires both sincerity and methodological correctness.

The absence of standardized, Shariah-compliant technological solutions has led to inconsistent practices and potential non-compliance worldwide, undermining zakat's role as a systematic wealth redistribution mechanism for individual purification and societal welfare.

This study investigates whether AI-based systems can provide reliable, adaptable zakat calculation solutions maintaining Islamic legal compliance while addressing contemporary financial complexities. The primary objective develops a conceptual framework harmonizing technological capabilities with jurisprudential requirements. Secondary objectives include analyzing existing AI-driven platforms for operational models and fiqh adaptability, identifying implementation gaps, and proposing development standards ensuring algorithmic transparency and Shariah auditability, ultimately providing practical guidance for developers, scholars, and institutions creating technologically robust systems honoring prophetic precision traditions.

3. Literature Review

This literature review examines 27 research studies from 2018 to 2025 analyzing AI applications in zakat calculation, management, and distribution systems, revealing growing consensus on technology's transformative potential while maintaining Shariah compliance.

3.1 Technological Applications in Zakat Calculation

The integration of Artificial Intelligence into zakat calculation has progressed substantially, with AI assuming traditional *amil* duties including record-keeping, calculation, and collection (Nugraha et al., 2019). However, most studies demonstrate technical capabilities without adequately addressing whether algorithmic systems can legitimately fulfill roles traditionally requiring *amanah* and scholarly discretion. Abdul Rahman et al. (2024) employed big data analytics for *kifayah* determination, representing methodological sophistication, yet failed to engage with the jurisprudential implications of automating *ijtihad*-dependent decisions. Similarly, while Aljabr et al. (2018) developed rule-based

expert systems and Fazial et al. (2025) emphasized transparency in *nisab* calculations, these systems avoid complex contemporary assets requiring analogical reasoning (*qiyas*).

Regional implementations reveal diverse approaches. Al-Ahbabi (2024) documented Qatar's Zakat Fund achieving 60% processing time reduction and 40% cost savings, providing valuable empirical validation. However, Al-Nahid's (2024) Kuwait model insufficiently addresses transferability to resource-limited contexts. Critically, most technological studies proceed with minimal engagement from *ulama* specializing in *fiqh al-mu'amalat*, creating jurisprudentially superficial systems despite technical sophistication.

Shariah compliance research remains incomplete. While Albin Zaid et al. (2025) examined AI's *zakatable status* and Wahyudi et al. (2024) applied *maqasid al-shariah* frameworks, concrete criteria for determining when AI implementation genuinely serves religious objectives versus compromising them through opacity remain underspecified. Mohd Radzi et al. (2024) identified trust as crucial for adoption, yet mechanisms ensuring algorithmic transparency and scholarly auditability are inadequately theorized, representing a fundamental gap this study addresses.

3.2 Digital Platform Development

Comprehensive digital zakat management platforms have emerged as integrated solutions addressing collection, calculation, and distribution processes. Zulkifley and Muneeza (2024) analyzed Selangor's technological infrastructure, identifying AI, Machine Learning, and FinTech as enhancement tools, though their study remains largely descriptive without evaluating implementation effectiveness or user satisfaction metrics. Wan Mohamed Salleh et al. (2022) emphasized digital optimization's potential impact on operational efficiency, yet provided insufficient empirical validation of claimed improvements. The gap between theoretical advocacy and measured outcomes represents a significant limitation across platform development literature. Ahmad Naufal et al. (2023) developed more practical solutions through personal zakat calculators utilizing LiveCode programming and SQLite databases, demonstrating technical feasibility. However, their system's limited scope—focusing exclusively on personal calculations without institutional integration—raises questions about scalability and suitability for complex organizational zakat management.

The COVID-19 pandemic accelerated digital transformation discourse, prompting crisis-responsive innovations. Syed et al. (2020) proposed AI and Natural Language Processing-based models combining zakat with *Qardh-Al-Hasan* for pandemic relief, representing creative integration of multiple Islamic financial instruments. Critically, however, their model remains theoretical without pilot implementation or feasibility assessment. Rabbani et al. (2022) presented comprehensive frameworks incorporating blockchain, machine learning, and NLP technologies, demonstrating technological sophistication. Yet both studies exhibit a common weakness: emphasis on technological possibilities without addressing implementation challenges including regulatory compliance, institutional capacity requirements, and Shariah governance frameworks. The literature reveals insufficient attention to practical deployment barriers, operational sustainability, and long-term maintenance requirements—critical gaps for real-world zakat institution adoption.

3.3 Challenges and Research Gaps

Current AI-powered zakat systems face fundamental implementation challenges including algorithmic opacity, inadequate Shariah governance mechanisms, and limited technological infrastructure in resource-constrained contexts (Karshiboyeva, 2023; Fazial et al., 2025). More critically, the literature exhibits a troubling methodological pattern: overwhelming emphasis on technical capabilities while systematically avoiding jurisprudential complexity. Most studies demonstrate AI efficacy on uncontroversial assets—cash, gold, agricultural produce—yet conspicuously evade contemporary *nawazil* requiring *ijtihad*, such as cryptocurrency valuation methodologies, fluctuating investment portfolios, and complex financial derivatives. This selective application severely limits practical utility for modern Muslims with diversified wealth.

Furthermore, the absence of longitudinal empirical validation represents a significant scholarly deficiency. Existing research lacks systematic comparison between AI-calculated and scholar-verified assessments, raising fundamental questions about reliability. The critical gap reconciling classical *fiqhi* epistemology with algorithmic reasoning remains undertheorized: specifically, determining which zakat determinations constitute permissible *wasail* (procedural means) amenable to automation versus those requiring ongoing scholarly *ijtihad*. This study addresses these deficiencies through systematic doctrinal analysis and practical AI testing across diverse asset scenarios.

4. Methodology

4.1 Research Design

This study employs a qualitative research approach combining doctrinal analysis, comparative jurisprudential examination, and practical AI testing to address AI integration in Shariah-compliant zakat calculation systems.

4.2 Data Collection

4.2.1 Primary Sources

Primary data sources comprise foundational Islamic texts establishing zakat's doctrinal framework. Quranic verses and authenticated *hadith* collections—particularly *Sahih al-Bukhari* and *Sahih Muslim*—provide immutable scriptural mandates (*nass*) governing zakat obligations, thresholds, and methodologies. Classical *fiqhi* texts from the four major Sunni *madhahib* offer authoritative jurisprudential interpretations, including Hanafi sources (Ibn al-Humam's *Fath al-Qadir*), Maliki works (al-Dasuqi's *Hashiyah*), Shafi'i texts (al-Nawawi's *al-Majmu'*), and Hanbali sources (Ibn Qudamah's *al-Mughni*), providing the jurisprudential lens for evaluating contemporary AI applications.

4.2.2 Secondary Sources

Secondary sources encompass contemporary scholarly discourse on AI integration and modern zakat challenges. Peer-reviewed academic literature published between 2018 and 2025 was systematically reviewed, capturing recent technological developments in AI-powered zakat calculation and Islamic FinTech applications. Contemporary *fatawa* from recognized jurisprudential councils—including Malaysian state committees and the *Majma' al-Fiqh al-Islami*—addressing cryptocurrency, digital assets, and algorithmic calculation provide crucial insights into applying classical principles to unprecedented scenarios (*nawazil*). This integration ensures both scholarly rigor and practical religious authority.

4.3 Data Analysis

4.3.1 Qualitative Content Analysis

Qualitative content analysis employed dual analytical frameworks to examine AI integration in zakat calculation. Thematic analysis identified recurring concepts across classical and contemporary sources, particularly distinguishing between immutable scriptural mandates (*nass*) and areas permitting jurisprudential discretion (*ijtihad*), alongside emerging themes regarding algorithmic transparency and scholarly authority in digital contexts. Doctrinal analysis examined whether classical *usul al-fiqh* principles—including *qiyas*, *maslahah*, and the *maqasid-wasail* distinction—provide sufficient frameworks for evaluating AI applications or require new jurisprudential categories.

4.3.2 Comparative Analysis

Comparative analysis operated on three analytical dimensions. Inter-*madhab* comparison examined divergent zakat calculation methodologies across Hanafi, Maliki, Shafi'i, and Hanbali schools, identifying consensus areas (*ijma'*) versus disputed issues (*ikhtilaf*) to determine algorithmic reconcilability. Diachronic comparison traced evolution from classical manual calculation methods to contemporary computational approaches, identifying continuities and ruptures. Critical comparison between AI algorithmic processing and traditional scholarly *ijtihad* assessed whether algorithmic calculation constitutes procedural enhancement or substantive transformation in determining religious obligations.

4.4 Practical AI Application Testing

4.4.1 Selected AI Platforms

Five prominent AI systems were systematically tested: Claude (Anthropic), ChatGPT (OpenAI), Gemini (Google), Perplexity AI, and Grok (X.AI). These platforms were selected based on their advanced natural language processing capabilities, widespread accessibility, and claimed proficiency in complex analytical reasoning tasks.

4.4.2 Testing Scenarios

Testing employed a tiered complexity design comprising three scenario categories. Basic scenarios involved straightforward cash-based zakat calculations. Intermediate scenarios introduced mixed portfolios combining cash, gold, and stocks with debt considerations. Advanced scenarios challenged systems with contemporary instruments including cryptocurrency, REITs, and international investments.

4.4.3 Evaluation Criteria

AI responses were evaluated against four criteria: jurisprudential accuracy in applying classical *fiqhi* principles, cross-madhab compatibility acknowledging legitimate differences, mathematical calculation precision, and user guidance quality including explanations of underlying reasoning and appropriate scholarly disclaimers for disputed issues.

4.5 Data Integration and Synthesis

The synthesis of findings from doctrinal analysis, comparative jurisprudential examination, and practical AI testing employed a triangulation methodology to develop comprehensive recommendations for Shariah-compliant AI zakat systems. Data integration occurred through iterative cross-validation, wherein jurisprudential principles derived from classical sources were tested against AI system performance, revealing both capabilities and limitations. Specifically, AI responses to test scenarios were systematically evaluated against madhab-specific rulings extracted from classical texts, identifying alignment in consensus areas (*ijma'*) while exposing gaps in handling disputed questions (*masa'il khilafiyah*). Contemporary *fatawa* provided a mediating framework, demonstrating how modern scholars navigate similar challenges of applying classical principles to unprecedented scenarios, offering methodological guidance for AI system development.

This integrative analysis revealed a critical distinction: AI systems demonstrate high accuracy and efficiency in areas categorized as *wasail* (procedural means)—including mathematical computation, data aggregation, and threshold verification—but require ongoing scholarly oversight in *maqasid*-related determinations involving jurisprudential discretion, asset classification for novel instruments, and balancing competing *madhab* positions. The synthesis thus produced a conceptual framework distinguishing between automatable zakat calculation components and those requiring human scholarly engagement, forming the basis for the study's recommendations on appropriate AI integration that respects both technological capabilities and jurisprudential integrity.

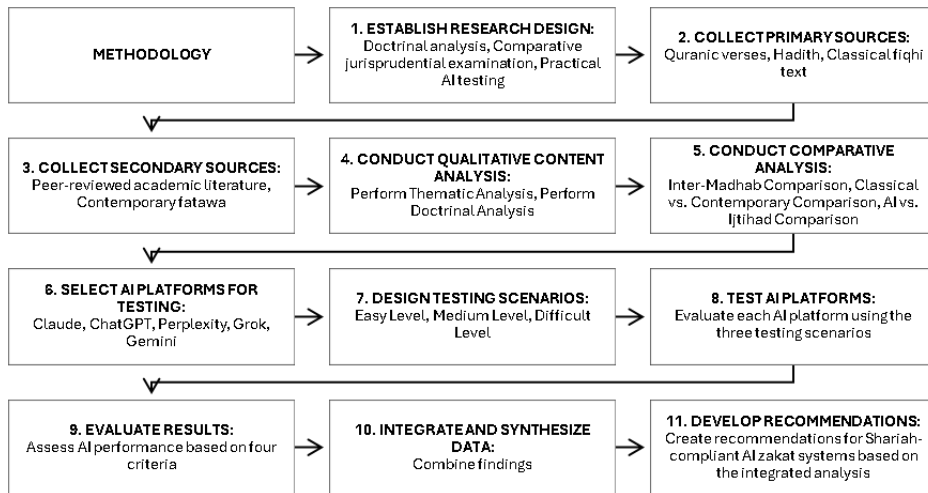


Diagram 1: Research Methodology

5. Results and Discussion

This section presents the key findings of the study through four interconnected subthemes. It begins with an exploration of classical fiqhi principles in light of modern zakat calculation complexities. It then addresses the Islamic legal framework governing AI integration, navigating between textual sources (*nas*) and *ijtihad*. The discussion proceeds to assess the technical applications of AI in zakat computation and their alignment with jurisprudential standards. Finally, a comparative analysis highlights the tension and synergy between AI-driven efficiency and the precision of traditional scholarly reasoning.

5.1 Classical Fiqhi Principles and Contemporary Zakat Calculation

5.1.1 Five Fundamental Principles

Zakat calculation is governed by five fundamental principles established in classical Islamic jurisprudence, each presenting unique challenges for contemporary AI implementation. First, the *nisab* (minimum threshold) represents the minimum wealth obligating zakat payment, established at 85 grams of gold, 595 grams of silver, five camels, or forty sheep across the four *madhahib* (Ibn al-Humam, 2003; al-Dasuqi, 1996; al-Qalyubi, 1995; Ibn Qudamah, 1997).

AI systems must accurately track fluctuating precious metal prices while accommodating different *madhab* preferences and regional variations. Second, *al-qadr* (zakatable amount) specifies varying percentages: 2.5% for liquid assets, 5-10% for agricultural products depending on irrigation methods, and 20% for mining discoveries. AI must correctly apply these rates to increasingly complex modern financial instruments. Third, *al-haul* (completion of one lunar year) requires continuous ownership for 354 days before zakat becomes due, necessitating sophisticated temporal calculations for frequently traded assets like stocks or cryptocurrencies. Fourth, *al-amwal* (property types)

encompasses classical categories—gold, silver, livestock, agricultural produce, and trade goods—requiring AI systems to classify contemporary assets including digital currencies and investment portfolios while respecting inter-*madhab* variations in asset treatment. Fifth, debt considerations (*al-dayn*) significantly impact calculations, with *madhahib* differing on deduction methods, requiring nuanced handling of modern financial arrangements including credit facilities and complex business liabilities. These principles form the foundation for AI-powered zakat systems, demanding algorithms balancing mathematical precision with jurisprudential authenticity.

5.1.2 Development of Using Technology in Zakat Calculation

Technology in zakat calculation evolved through distinct phases addressing modern financial complexity. The pre-1980s traditional era relied entirely on manual calculations by religious scholars and *amil* officers without computer involvement (Nugraha et al., 2019). The 2000s digital transition introduced basic online calculators promoting transparency, though these merely computed 2.5% without considering jurisprudential requirements. The 2010s witnessed expert systems development, with Aljabr et al. (2018) creating comprehensive platforms based on Islamic jurisprudence, functioning like scholarly consultations and validated by *ulama*. The 2020s brought specialized applications, including Ahmad Naufal et al.'s (2023) mobile calculators with statistical capabilities and Wan Othman et al.'s (2023) Gold-Z addressing *nisab* determination accuracy. Cryptocurrency integration (2019-2024) saw progressive Malaysian *fatwa* rulings establishing comprehensive frameworks: Perlis (2019) categorized cryptocurrency as trade goods, Selangor (2021) classified digital currencies as *al-mutaqawwim* assets, Federal Territory (2020) extended principles to robo-advisor investments, Sarawak (2024) established dual categorization for digital assets, and Pahang (2023) authorized direct cryptocurrency zakat collection. Currently, AI and advanced analytics demonstrate sophisticated capabilities, with Abdul Rahman et al. (2024) using big data for *kifayah* determination and Al-Ahbab (2024) documenting Qatar's successful implementation handling complex instruments while reducing costs. This trajectory shows clear progression from manual methods to AI-powered systems maintaining classical jurisprudential adherence.

5.2 Islamic Legal Framework for AI Integration

The integration of artificial intelligence in zakat systems operates within a sophisticated Islamic legal framework that distinguishes between fixed divine ordinances and areas subject to scholarly interpretation (*ijtihad*).

i. Non-Ijtihadi Elements: Fixed by Nass: Fundamental zakat parameters including *nisab* (minimum thresholds) and *al-qadr* (prescribed rates) remain immutable, derived directly from Quranic verses and prophetic traditions. These elements cannot be modified through AI algorithms or technological innovation. As established in classical jurisprudence, the 2.5% rate for liquid assets, 85 grams gold *nisab*, and specific livestock calculations represent divine ordinances that AI systems must implement without alteration.

ii. *Ijtihadi Elements: Wasail and Urf-Based Methods*: Areas mentioned in *nass* but classified as *wasail* (means/methods) allow technological enhancement. Nugraha et al. (2019) demonstrated how AI can assume traditional *amil* duties including *Hasabah* (calculation methods), *Juba'h* (collection procedures), and *Qasa'mah* (distribution mechanisms). Al-Nahid (2024) showed expert systems can automate fatwa services and calculation methodologies while maintaining jurisprudential authenticity. These procedural aspects, being based on *urf* (customary practices), can evolve with technological advancement as Muneeza and Nadwi (2019) argued for adapting classical zakat administration to contemporary customary practices.

iii. *Ijtihadi Elements: Al-Maskut (New Asset Categories)*: Unmentioned (*al-maskut*) contemporary assets like cryptocurrencies, digital currencies, and complex financial instruments require fresh *ijtihad*. Albin Zaid et al. (2025) demonstrated Islamic jurisprudence's flexibility through *qiyas* (analogical reasoning) in accommodating AI-generated wealth and digital assets. These new asset categories, absent from classical texts, necessitate scholarly reasoning to determine their *zakatable* status and appropriate calculation methods.

Using artificial intelligence in zakat calculation falls under Ijtihadi Elements *Wasail And Urf-Based Methods*. Since zakat calculation methods are considered *wasail* (means/instruments) rather than fixed divine ordinances, AI implementation represents a legitimate evolution of customary practices (*urf*) in computational methodology. The *nass* establishes *what* to calculate (nisab, rates) but not *how* to calculate, making AI-powered calculation systems permissible technological enhancements of traditional scholarly calculation methods while preserving the immutable jurisprudential foundations.

Category	What It Includes	Can AI Be Used?
Fixed Elements (Cannot Change)	<ul style="list-style-type: none"> • Zakat rates (2.5%) • Nisab amounts (85g gold) • Basic zakat rules • Quran and Hadith requirements 	<ul style="list-style-type: none"> • AI must follow exactly. • Cannot modify these rules. • AI calculates using these fixed amounts.
Methods & Procedures (Can Improve)	<ul style="list-style-type: none"> • How to calculate zakat • How to collect zakat • Record keeping methods • Distribution procedures 	<ul style="list-style-type: none"> • AI is allowed and helpful • Can improve calculation methods. • Makes processes faster and accurate.
New Assets (Need Scholars)	<ul style="list-style-type: none"> • Cryptocurrency • Digital money • New investment types • Modern financial products 	<ul style="list-style-type: none"> • Scholars decide first • AI can calculate after scholars determine if zakat applies. • Requires Islamic legal interpretation.

Table 1: AI Integration of Zakat

5.3 AI-Powered Zakat Calculation

To evaluate artificial intelligence capabilities in zakat calculation, five leading AI platforms (Claude, ChatGPT, Perplexity, Grok, and Gemini) were tested across three complexity levels. Each scenario progressively challenges AI systems' ability to handle jurisprudential

requirements, from basic cash calculations to complex modern financial instruments, assessing both computational accuracy and Islamic compliance.

Testing Scenarios	Claude	ChatGPT	Perplexity	Grok	Gemini
<p>Scenario 1: Ahmad wants to calculate his Zakat. He has the following assets:</p> <ul style="list-style-type: none"> • Cash in his wallet: RM5,000 • Money in his personal savings account: RM42,000 • Money in his checking account for bills: RM13,000 	<p>Total wealth: RM60,000. In Malaysia, the nisab amount has been set at RM29,961 for the year 2025 (Jan-June). The standard zakat rate on salary is 2.5% of a person's eligible income. Ahmad's Zakat obligation: $RM60,000 \times 2.5\% = RM1,500$.</p>	<p>Total wealth = RM 5,000 + RM 42,000 + RM 13,000 = RM 60,000. Nisab in Malaysia for 2025 (based on 85g of gold) \approx RM 29,740. Zakat = 2.5% \times RM 60,000 = RM 1,500.</p>	<p>Total Assets = RM5,000 + RM42,000 + RM13,000 = RM60,000. The nisab (minimum threshold) for zakat harta in Malaysia for 2025 ranges from RM29,376 to RM32,133.89 (depends on state, but most use around RM29,740–RM32,134). The zakat rate is 2.5% of the total zakatable assets. Zakat due = $RM60,000 \times 0.025 = RM1,500$</p>	<p>Total Wealth: MYR 5,000 + MYR 42,000 + MYR 13,000 = MYR 60,000. In Malaysia, the Nisab for Zakat al-Mal is based on the value of 85 grams of gold. The gold price in Malaysia in 2025 is approximately MYR 350–400 per gram for 999 gold. Using an estimated gold price of MYR 375/gram (midpoint estimate for 2025): Nisab = 85 grams \times MYR 375 = MYR 31,875. Zakat is 2.5% of the total Zakatable wealth: Zakat = MYR 60,000 \times 0.025 = MYR 1,500</p>	<p>Total assets are: RM5,000 + RM42,000 + RM13,000 = RM60,000. According to a prominent Zakat authority in Malaysia, the Nisab for the second half of 2025 (July to December) is RM35,449. The Zakat rate for cash and savings is 2.5% of your total assets. Zakat due: $RM60,000 \times 2.5\% = RM1,500$.</p>
<p>Analysis for scenario 1:</p>	<p>All five AIs correctly identified the core principles of Zakat calculation: Sum all Zakatable assets: All correctly added the cash to get RM60,000. Compare to Nisab: All recognized that RM60,000 is above the nisab threshold.</p>				

	<p>Apply 2.5% rate: All correctly calculated 2.5% of RM60,000 as RM1,500. For this specific scenario:</p> <ul style="list-style-type: none"> • Claude, ChatGPT, and Perplexity all provide perfectly accurate and useful answers. Perplexity gets extra credit for highlighting the variability of the nisab by state. • Gemini provides a correct calculation but uses a non-standard and confusing nisab value without clear explanation. • Grok is ranked last because it bases its nisab explanation on an incorrect gold price, rendering that part of its answer factually wrong, even though the final Zakat calculation is numerically correct. 				
Testing Scenarios	Claude	ChatGPT	Perplexity	Grok	Gemini
<p>Scenario 2: Encik Amin, a Malaysian investor, wants to calculate his Zakat. His financial position is as follows: Assets:</p> <ul style="list-style-type: none"> • Cash in Savings Account: RM 50,000 • Cash in Current Account: RM 25,000 • Cash on hand: RM 500 • Gold Jewellery (inherited, held as investment): 1,000 grams • Shares in Public Listed Companies: RM 40,000 (Market Value) • Outstanding Credit Card Debt: RM 1,800 	<p>Cash Assets: Savings Account: RM50,000 Current Account: RM 50,000 Cash on hand: RM500 Total Cash: RM75,500 Gold Assets: Gold Jewellery: 1,000 grams Current gold price: RM454.77 per gram for 24K gold. Gold Value: 1,000g x RM455 = RM455,000 Investment Assets: Public Listed Company Shares: RM40,000 Total Assets: RM570,500 Liabilities (Deductible): Credit Card Debt: RM1,800 Personal</p>	<p>List Zakatable Assets: Cash in Savings Account: RM 50,000 Cash in Current Account: RM 25,000 Cash on Hand: RM 500 Gold Jewellery (investment): 1,000g Current gold price in Malaysia (2025): about RM 350 per gram (average retail basis; zakat centers use this for nisab). Value = 1,000g x RM 350 = RM 350,000 Shares (public listed, market value): RM 40,000 Total Assets = 50,000 +</p>	<p>Asset Summary: Savings Account: RM50,000 Current Account: RM25,000 Cash on Hand: RM500 Gold Jewellery (investment, 1,000g): RM349,880 (1,000g x RM349.88/g current value per official figures) Shares in Public Listed Companies: RM40,000 (market value) Total Assets: RM50,000 + RM25,000 + RM500 + RM349,880 + RM40,000 = RM465,380 Liabilities (deductible short-term debts for</p>	<p>Encik Amin's Assets and Liabilities: Cash in Savings Account: RM 50,000 (Zakatable) Cash in Current Account: RM 25,000 (Zakatable, assuming not reserved solely for immediate essentials) Cash on Hand: RM 500 (Zakatable) Gold Jewellery (inherited, held as investment): 1,000 grams. Valued at current market price for 916 gold (22K, common for Malaysian jewellery) at RM 442 per gram on August 25,</p>	<p>Cash (Savings, Current & On Hand): RM 50,000 (Savings) RM 25,000 (Current) RM 500 (On hand) Subtotal: RM 75,500 Gold Jewellery: Since your gold is inherited and held as an investment, it is subject to Zakat regardless of its weight. The market price of gold fluctuates daily. As of August 2025, the approximate value of 1 gram of gold is RM 350. Value: 1,000 grams x RM 350 = RM 350,000 Shares in</p>

<p>• Personal Loan (remaining amount due this year): RM 3,200</p>	<p>Loan: RM3,200 Total Liabilities: RM5,000 Net Zakatable Wealth: RM570,500 - RM5,000 = RM565,500 The nisab amount of RM29,961 for 2025. Zakat Calculation: The standard zakat rate is 2.5%. Encik Amin's Zakat obligation: RM565,500 × 2.5% = RM14,137.50 Haul requirement: All assets must have been held for one full lunar year Gold investment: Since the gold is held as an investment (not for personal use), it's fully zakatable Shares: Market value of shares is included in zakatable</p>	<p>25,000 + 500 + 350,000 + 40,000 = RM 465,500 Subtract Liabilities (Debts Due Within 1 Year) Credit Card Debt: RM 1,800 Personal Loan (due this year): RM 3,200 Total Liabilities = RM 5,000 Net Zakatable Wealth = RM 465,500 - RM 5,000 = RM 460,500 Nisab (2025, Malaysia) ≈ RM 29,740 (85g of gold). Zakat = 2.5% × RM 460,500 = RM 11,512.50.</p>	<p>zakat) Credit Card Debt: RM1,800 Personal Loan (amount due this year): RM3,200 Total Deductible Liabilities: RM1,800 + RM3,200 = RM5,000 Net Zakatable Assets = RM465,380 - RM5,000 = RM460,380 The 2025 nisab is between RM29,740.00 and RM32,134 depending on state. Zakat is 2.5% of net zakatable assets: RM460,380 × 0.025 = RM11,509.50 Zakat on cash/bank accounts: Add up all cash-related assets before deducting liabilities. Gold (investment): Zakat is</p>	<p>2025. Market value = 1,000 grams × RM 442/gram = RM 442,000 (Zakatable in full, as investment) Shares in Public Listed Companies: RM 40,000 (market value; Zakatable as investment) Outstanding Credit Card Debt: RM 1,800 (deductible) Personal Loan (due this year): RM 3,200 (deductible) Total Zakatable Assets: RM 50,000 + RM 25,000 + RM 500 + RM 442,000 + RM 40,000 = RM 557,500 Total Deductible Liabilities: RM 1,800 + RM 3,200 = RM 5,000 Net Zakatable Wealth: RM 557,500 - RM 5,000 = RM 552,500. In Malaysia, the Nisab for</p>	<p>Public Listed Companies: Zakat on shares is calculated based on their current market value. Value: RM 40,000 Total Zakatable Assets: RM 75,500 + RM 350,000 + RM 40,000 = RM 465,500 In Malaysia, short-term debts that are due for payment within the current year are generally deductible from your total assets. Outstanding Credit Card Debt: RM 1,800 Personal Loan (due this year): RM 3,200 Total Deductible Liabilities: RM 1,800 + RM 3,200 = RM 5,000 Net Zakatable Wealth: RM 465,500 - RM 5,000 = RM 460,500</p>
---	---	--	---	---	--

	wealth		<p>imposed at 2.5% of the full market value since it's held as an investment and exceeds 85g threshold. Shares: 2.5% of market value is the typical approach for long-term holdings without detailed asset/liability breakdowns.</p>	<p>Zakat al-Mal is the value of 85 grams of gold (999 purity). It varies by state and is updated semi-annually based on average gold prices.</p> <p>For Selangor (July–December 2025): RM 35,449 (based on official data; equivalent to ~85 grams at ~RM 417/gram average).</p> <p>Zakat is 2.5% (or 1/40) of the net Zakatable wealth.</p> <p>Net wealth = Total Zakatable assets – Deductible liabilities = RM 557,500 – RM 5,000 = RM 552,500 Zakat rate = 0.025 (2.5/100) Zakat amount = RM 552,500 × 0.025 = RM 13,812.50</p>	<p>The Nisab is the minimum threshold for Zakat. In Malaysia, the Nisab for the second half of 2025 (July–December) is RM 35,449.</p> <p>Zakat due: RM 460,500 x 2.5% = RM 11,512.50</p>
--	--------	--	--	--	--

				<p>Gold Valuation: Based on 916 gold price of RM 442/gram (22K) on August 25, 2025. Uruf Exemption for Jewellery: Not applied here, as it's held as investment (not worn/personal use). Shares: Zakatable at current market value (2.5%). Current Account: Included fully; if reserved for bills, it may be partially exempt.</p>	
<p>Analysis for scenario 2:</p>	<p>The 5 AI models agreed on the following core principles:</p> <ul style="list-style-type: none"> • Asset Inclusion: All forms of cash and cash equivalents are zakatable. • Investment Assets are Zakatable: Assets held with the intention of generating wealth or appreciation are subject to Zakat. There was consensus on two types: Gold: Because the jewellery was explicitly "inherited, held as investment," it is fully zakatable. The personal use exemption (uruf) does not apply. Shares: Shares in public-listed companies are zakatable based on their current market value (RM 40,000). • Deduction of Short-Term Debts: Short-term liabilities that are due for payment within the current lunar year can be deducted from the total zakatable assets. • The Nisab Requirement: Zakat is only obligatory if the total net wealth exceeds the nisab value (agreed to be based on 85 grams of gold). • The Calculation Rate: The final Zakat amount is calculated at a rate of 2.5% on the net zakatable wealth. <p>For this complex scenario:</p> <ul style="list-style-type: none"> • Perplexity is the winner for using the most precise and official-sounding gold price, leading to the most accurate calculation. • ChatGPT and Gemini both provide correct calculations using sound 				

	principles and reasonable estimates for the gold price. <ul style="list-style-type: none"> • Grok provides excellent explanatory context but is let down by a major factual error in the gold price, ruining the calculation. • Claude also provides a good framework but makes a fundamental error in applying the 24K gold price to jewellery, resulting in the most inflated and incorrect final answer. 				
Testing Scenarios	Claude	ChatGPT	Perplexity	Grok	Gemini
Scenario 3: Encik Sulaiman, a KL-based investor. His holdings are diverse. Liquid Assets: Cash in Hand: RM5,000 Savings Account: RM85,000 Foreign Currency (USD): \$15,000 = RM70,500 Subtotal: RM160,500 Cryptocurrency: Bitcoin: 0.8 BTC × RM280,000 = RM224,000 Securities: Malaysian Blue-Chip Stocks: RM300,000 Singapore REITs: S\$100,000 × 3.50 = RM350,000 Subtotal: RM650,000 Insurance: Investment-Linked Policy (Surrender Value): RM120,000	Liquid Assets: Cash in Hand: RM5,000 Savings Account: RM85,000 Foreign Currency (USD): \$15,000 = RM70,500 Subtotal: RM160,500 Cryptocurrency: Bitcoin: 0.8 BTC × RM280,000 = RM224,000 Securities: Malaysian Blue-Chip Stocks: RM300,000 Singapore REITs: S\$100,000 × 3.50 = RM350,000 Subtotal: RM650,000 Insurance: Investment-Linked Policy (Surrender Value): RM120,000	Liquid Assets Cash in Hand = RM 5,000 Savings = RM 85,000 Foreign Currency Account (USD 15,000 × 4.70) = RM 70,500 Subtotal Liquid = RM 160,500 Bitcoin = 0.8 × RM 280,000 = RM 224,000 Malaysian Blue-Chip Stocks (market value) = RM 300,000 Singapore REITs (S\$100,000 × 3.50) = RM 350,000 Subtotal Securities = RM 650,000 Insurance (Investment-linked, zakatable portion only) Surrender	Total Zakatable Assets Liquid Assets: Cash in hand: RM5,000 Savings: RM85,000 Foreign currency account (USD): \$15,000 × 4.70 = RM70,500 Subtotal: RM5,000 + RM85,000 + RM70,500 = RM160,500 Cryptocurrency (Bitcoin) 0.8 BTC × RM280,000 = RM224,000 Securities Malaysian blue-chip stocks: RM300,000 Singapore REITs (SGX): S\$100,000 ×	Liquid Assets: Cash in Hand: RM 5,000 (Zakatable) Savings Account: RM 85,000 (Zakatable) Foreign Currency Account (USD, CIMB): \$15,000 × 4.70 = RM 70,500 (Zakatable, converted to MYR) Cryptocurrency: Bitcoin (BTC): 0.8 BTC × RM 280,000/BTC = RM 224,000 (Zakatable at market value, as digital assets are subject to Zakat if held as investment) Securities: Malaysian Blue-Chip Stocks: RM	The Zakat rate is 2.5%, and the Nisab (minimum threshold) for Zakat in Malaysia for the year 2025 is RM29,740, as set by Pusat Pungutan Zakat-MAIWP. The value of all of Encik Sulaiman's assets that are subject to Zakat. Cash in Hand: RM 5,000 Savings Account (MYR): RM 85,000 Foreign Currency Account (USD): RM 70,500 (as per the provided conversion) Cryptocurrency (Bitcoin): RM 224,000. Zakat authorities in

<p>Securities: Malaysian Blue-Chip Stocks: RM 300,000 (Market Value) Singapore REITs (SGX): S\$100,000 (Market Value) SGD/MYR Exchange Rate (Selling): 3.50 -> RM 350,000</p> <p>Insurance: Investment-Linked Policy: Surrender Value: RM 120,000 Sum Covered (RM Imillion)</p> <p>Liabilities: Outstanding Credit Card Debt (due): RM 12,000 Margin Financing for Stocks (short-term portion): RM 50,000</p>	<p>Total Assets: RM1,154,500</p> <p>Liabilities (Deductible): Credit Card Debt: RM12,000 Margin Financing: RM50,000 Total Liabilities: RM62,000</p> <p>Net Zakatable Wealth: RM1,154,500 - RM62,000 = RM1,092,500</p> <p>Zakat Assessment: Encik Sulaiman's net wealth (RM1,092,500) exceeds the nisab amount of RM29,961 for 2025.</p> <p>Zakat Calculation: The standard zakat rate is 2.5%. Encik Sulaiman's Zakat obligation: $RM1,092,500 \times 2.5\% = RM27,312.50$</p>	<p>Value = RM 120,000 (Sum covered RM 1m is not zakatable, only cash value applies)</p> <p>Total Gross Assetsn = 160,500 (liquid) + 224,000 (crypto) + 650,000 (securities) + 120,000 (insurance) = RM 1,154,500</p> <p>Subtract Liabilities (Debts Due Within 1 Year): Credit Card Debt = RM 12,000 Margin Financing (short-term portion) = RM 50,000 Total Liabilities = RM 62,000</p> <p>Net Zakatable Wealth = RM 1,154,500 - RM 62,000 = RM 1,092,500</p> <p>Nisab (Malaysia 2025) = RM</p>	<p>3.50 = RM350,000</p> <p>Subtotal: RM300,000 + RM350,000 = RM650,000</p> <p>Investment-Linked Insurance Policy-Surrender value: RM120,000 (only surrender value is zakatable, not sum covered).</p> <p>Grand Total Zakatable Wealth: RM160,500 + RM224,000 + RM650,000 + RM120,000 = RM1,154,500</p> <p>Deduct Liabilities: Outstanding credit card debt: RM12,000</p> <p>Margin financing (short-term): RM50,000</p> <p>Total Liabilities:</p>	<p>300,000 (market value; Zakatable at 2.5% for investment holdings) Singapore REITs (SGX): S\$100,000 \times 3.50 = RM 350,000 (Zakatable similarly to shares, converted to MYR)</p> <p>Insurance: Investment-Linked Policy Surrender Value RM 120,000 (Zakatable as savings/investment portion; sum covered is exempt)</p> <p>Liabilities: Outstanding Credit Card Debt: RM 12,000 (deductible) Margin Financing for Stocks (short-term): RM 50,000 (deductible, as outstanding financing on shares)</p> <p>Total Zakatable</p>	<p>Malaysia have ruled that cryptocurrency is a zakatable asset. Malaysian Blue-Chip Stocks: RM 300,000. Zakat is due on the market value of shares. Singapore REITs (SGX): RM 350,000 (as per the provided conversion). Zakat is due on the market value of foreign securities. Investment-Linked Policy: RM 120,000 (Surrender Value). The surrender value of an investment-linked policy is considered zakatable savings in Malaysia.</p> <p>Total Zakatable Assets: RM 5,000 + RM 85,000 + RM 70,500 + RM 224,000 + RM 300,000 + RM 350,000</p>
--	---	--	---	--	---

	<p>Modern Assets: Cryptocurrency and foreign investments are included as they represent tradeable wealth</p> <p>Investment Policy: Only surrender value counts, not the sum assured coverage</p> <p>Margin Financing: Properly deducted as it's debt against investment assets</p> <p>Haul Requirement: All assets must have been held for one full lunar year</p>	<p>29,740 (85g gold equivalent).</p> <p>Zakat = 2.5% × RM 1,092,500 = RM 27,312.50</p>	<p>RM12,000 + RM50,000 = RM62,000</p> <p>Net Zakatable Amount: RM1,154,500 - RM62,000 = RM1,092,500</p> <p>Zakat due=RM1,092,500×0.025 = RM27,312.50</p> <p>Zakat covers all cash and cash-equivalents, cryptocurrencies meeting haul/nisab, market value of listed shares (as per shariah-compliant holdings), foreign currency equivalents, and the surrender value of insurance/investment-linked policies if unchanged for a haul period. Deduct only short-term, immediate liabilities.</p>	<p>Assets: RM 5,000 + RM 85,000 + RM 70,500 + RM 224,000 + RM 300,000 + RM 350,000 + RM 120,000 = RM 1,154,500</p> <p>Total Deductible Liabilities: RM 12,000 + RM 50,000 = RM 62,000</p> <p>Net Zakatable Wealth: RM 1,154,500 - RM 62,000 = RM 1,092,500</p> <p>In the Federal Territory (KL), the Nisab for Zakat al-Mal is based on the value of 85 grams of gold (999 purity), updated periodically by PPZ-MAIWP. For 2025, the Nisab is RM 29,740.</p> <p>Zakat amount = RM 1,092,500 × 0.025 = RM 27,312.50</p>	<p>+ RM 120,000 = RM 1,154,500</p> <p>Subtract Deductible Liabilities In Malaysia, debts that are short-term or due within the year can be deducted from your total zakatable wealth.</p> <p>Outstanding Credit Card Debt: RM 12,000</p> <p>Margin Financing for Stocks (short-term portion): RM 50,000. This debt is directly related to a zakatable asset (stocks) and is due in the current year, making it deductible.</p> <p>Total Deductible Liabilities: RM 12,000 + RM 50,000 = RM 62,000</p> <p>Net Zakatable Wealth Net Zakatable</p>
--	--	--	--	--	---

				<p>Cryptocurrency: Treated as a Zakatable asset at market value if held for investment, similar to commodities.</p> <p>Securities (Stocks and REITs): Zakatable at 2.5% of market value for long-term holdings; no dividends mentioned, so not added.</p> <p>Foreign Currency and Assets: Converted to MYR and included as liquid wealth.</p> <p>Insurance: Only the surrender value is Zakatable, as it represents the investment component.</p> <p>Hawl and Other Assets: Assumed met; include any other Zakatable items (e.g., gold, business</p>	<p>Wealth: RM 1,154,500 (Total Assets) - RM 62,000 (Total Liabilities) = RM 1,092,500</p> <p>Zakat due: RM 1,092,500 * 2.5% = RM 27,312.50</p>
--	--	--	--	--	--

				income) if applicable.	
Analysis for scenario 3:	<p>All 5 AI models agreed on the following core principles:</p> <ul style="list-style-type: none"> • Inclusion of All Liquid & Cash-Equivalent Assets: The total pool of zakatable wealth includes: Physical cash on hand, money in bank accounts, foreign currency, which must be converted to its Malaysian Ringgit (MYR) value at the current exchange rate at the time of calculation. • Valuation of Investments at Market Price: The market value of investment assets on the calculation date is used, not their purchase price. This applies to: Publicly traded stocks, Cryptocurrencies, Real Estate Investment Trusts. • Treatment of Investment-Linked Insurance: Only the surrender value, the sum assured (the Takaful/insurance coverage portion) is not included in the calculation. • Deduction of Short-Term Liabilities: All debts that are due and payable within the current lunar year can be deducted from the total zakatable wealth. This includes: Credit card debt and Margin financing used to purchase investments. • The Nisab Threshold: Zakat is only obligatory if the final net wealth meets or exceeds the nisab value, which all AIs agreed is based on 85 grams of gold (with values around RM29,740 for 2025). • The Zakat Rate: The obligatory rate is 2.5% of the total net zakatable wealth. For this highly complex scenario all 5 AI models delivered a 100% accurate calculation (RM27,312.50) and correctly identified all zakatable assets and deductible liabilities. • Perplexity: provides the most comprehensive, principle-based explanations for why each asset is treated the way it is. • Claude and Grok: Claude for its excellent structure and mention of the "haul", and Grok for its specific reference to the PPZ-MAIWP authority. • ChatGPT and Gemini: they are both perfectly accurate and clear but are more concise and less detailed in their explanatory notes. 				

Table 2: Zakat Calculation by AI Platforms

AI Platform	Scenario 1 (Basic)	Scenario 2 (Complex)	Scenario 3 (Highly Complex)	Overall Assessment
Claude	Perfectly accurate	Fundamental error	100% accurate Excellent structure Mentioned haul requirement	Strong on principles but made critical valuation error in Scenario 2
ChatGPT	Perfectly accurate	Correct calculation Reasonable gold estimate	100% accurate Clear but concise	Consistently accurate across all complexity levels
Perplexity	Perfectly accurate Highlighted nisab variability by state	Most precise gold price	Most comprehensive explanations	Best overall - accurate with superior explanatory detail
Grok	Incorrect gold price	Major gold price error	100% accurate Referenced PPZ-	Improved significantly with

	Final calculation still correct	Good explanations	MAIWP authority	complexity but gold valuation issues
Gemini	Non-standard nisab value Calculation correct	Correct calculation Sound principles	100% accurate Accurate but less detailed	Solid performance, particularly on complex scenarios

Table: Comparative Analysis of AI Systems

5.4 Guidelines for AI-Powered Zakat Calculation

These following guidelines are designed to ensure that AI systems maintain both computational accuracy and jurisprudential authenticity.

i. Adherence to Fixed Principles (Non-Negotiable)

AI systems must be built to strictly adhere to the non-negotiable, fixed elements of Zakat, which are derived directly from the Quran and Sunnah. These include:

- **Zakat Rate (Al-Qadr):** The AI must apply the obligatory rate of 2.5% on most assets, with no modification.
- **Minimum Threshold (Al-Nisab):** The system must use the current, officially recognized Nisab value, which is based on the value of 85 grams of gold. AI must be able to track fluctuating market prices to determine the real-time Nisab, but cannot alter the 85-gram standard.

ii. Integration of Ijtihadi Elements (Permissible Evolution)

AI is permissible and valuable in areas of Islamic jurisprudence that are subject to scholarly interpretation (Ijtihad).

- **Methods and Procedures (Wasail):** AI can be used to automate and improve the procedural aspects of Zakat calculation, such as the Hasabah (calculation methods) and record-keeping. The document confirms that AI is a legitimate technological enhancement of these processes.
- **New Asset Categorization:** For contemporary assets not mentioned in classical texts (e.g., cryptocurrencies, digital investments, and modern financial instruments), AI should be configured to apply the rulings of Islamic scholars. The AI's role is to calculate the Zakat on these assets *after* scholars have determined their zakatable status and the appropriate calculation method.

iii. Key Operational Parameters for AI Systems

For an AI system to be successful and reliable, it must be programmed with the following operational parameters:

- **Real-time Valuation:** The AI must use the current market value of all assets on the calculation date, not their purchase price. This is particularly crucial for fluctuating assets like stocks, cryptocurrencies, and gold.

- **Comprehensive Asset Inclusion:** The system must identify and include all forms of zakatable wealth, including cash, savings, foreign currencies (converted to local value), publicly traded stocks, REITs, and cryptocurrencies.
- **Treatment of Investment-Linked Insurance:** Only the surrender value of an investment-linked insurance policy is to be considered as zakatable wealth. The sum assured or coverage portion is not.
- **Deduction of Liabilities:** The AI must allow for the deduction of short-term liabilities (debts due and payable within the current lunar year), such as credit card debt or margin financing, from the total zakatable wealth.
- **Adherence to Haul Requirement:** The system must be able to track that all assets have been held for a full lunar year (haul) before Zakat becomes obligatory.
- **Source Authority:** The AI should be updated with and reference the official guidelines and rulings of local Zakat authorities (e.g., PPZ-MAIWP in Malaysia) to ensure regional and contemporary relevance.

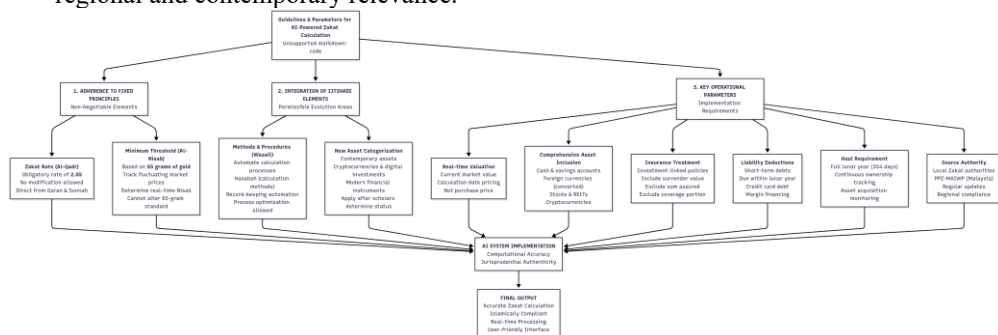


Diagram 2: Guidelines for AI-Powered Zakat Calculation

6. Conclusion

This study explored the integration of Artificial Intelligence (AI) in zakat calculation, focusing on its alignment with Shariah principles, computational reliability, and practical feasibility. The findings affirm that AI can serve as a valuable tool in enhancing the efficiency, accuracy, and reach of zakat administration, provided it operates within a well-defined Islamic legal and ethical framework.

6.1 Research Findings

This study reveals four critical findings regarding AI integration in Shariah-compliant zakat calculation systems. First, concerning alignment with Shariah objectives, the research confirms that AI systems must carefully distinguish between fixed zakat rulings and interpretative matters open to *ijtihad*. Fixed rulings—including *nisab* thresholds, zakat rates (*al-qadr*), and the completion of one lunar year (*haul*)—constitute immutable scriptural mandates that must be implemented without modification. In contrast, procedural and interpretative areas, such as calculation methodologies and classification of new asset types, represent domains where technological enhancement through AI-driven automation is permissible and beneficial. This distinction ensures that AI serves to facilitate compliance rather than alter fundamental religious obligations.

Second, regarding doctrinal compatibility, the study demonstrates that AI application in zakat calculation is jurisprudentially permissible when it functions as *wasilah* (a means or tool) without encroaching upon the core *usul* (principles) of zakat. Critically, calculations performed by AI systems achieve validity only when grounded in human-sourced *fiqhi* determinations provided by qualified scholars. This prerequisite becomes particularly important for contemporary financial instruments lacking classical jurisprudential precedent, including cryptocurrencies, investment-linked policies, and complex derivatives. The AI system's role is computational and procedural, while jurisprudential classification and ruling determination remain within the exclusive domain of human scholarly authority.

Third, practical AI performance evaluation through systematic testing of five prominent platforms—Claude, ChatGPT, Perplexity, Grok, and Gemini—across three complexity scenarios (basic, intermediate, and complex) yielded significant insights. The testing revealed that most platforms demonstrated notable accuracy in performing basic and intermediate zakat computations involving straightforward asset categories and established jurisprudential consensus. However, substantial discrepancies emerged in the treatment of complex contemporary instruments, particularly foreign investments, cryptocurrency portfolios, and multi-jurisdictional assets. These limitations highlight the critical need for enhanced jurisprudential input from qualified *ulama* and clearer programming logic that explicitly accounts for inter-*madhab* variations and disputed classifications (*masa'il khilafiyah*).

Fourth, concerning operational parameters essential for reliable implementation, the research identifies that AI zakat systems must incorporate several critical functionalities to ensure both accuracy and jurisprudential compliance. These include real-time asset valuation capabilities that account for market fluctuations, accurate debt deduction logic reflecting different *madhab* methodologies, and compliance with local zakat authority guidelines and regulatory frameworks. Furthermore, system reliability and user acceptability are significantly enhanced through the inclusion of regional *fatawa*, accommodation of *madhab* preferences allowing users to select their school of jurisprudence, and *hijri*-based temporal tracking ensuring precise *haul* calculations according to the Islamic lunar calendar. These operational requirements reflect the intersection of technological capability and jurisprudential precision necessary for effective AI-powered zakat systems.

6.2 Recommendations

- i. *Structured Shariah Oversight*: AI developers must collaborate with Shariah scholars to create validated frameworks for asset classification and zakat applicability. A continuous review mechanism should be established to incorporate new fatwas and financial instruments.
- ii. *Standardization and Certification*: Regulatory bodies such as JAKIM or state zakat boards (e.g., MAIWP) should develop official standards and certification procedures

for AI-based zakat systems. This would ensure credibility, consumer trust, and fiqhi compliance across platforms.

- iii. *Educational Integration*: AI should also be employed to educate users on zakat rules, asset categorization, and calculation processes. Interactive explanations and justification outputs can help bridge the knowledge gap between technology and traditional jurisprudence.
- iv. *Ethical Data Use and Transparency*: All AI applications must adhere to strict data privacy standards. The transparency of algorithms and auditability of decisions are essential to building trust among Muslim users and scholars alike.
- v. *Focus on Ijtihadi Boundaries*: Developers must program AI to recognize its boundaries—calculating “how” zakat is applied but never determining “what” is obligatory without human scholarly input.

References

- Abdul-Rahman, A., Mohd Nor, S., & Yaacob, S. E. (2023). Technological integration within zakat institutions: A comprehensive review and prospective research directions. *International Journal of Islamic Thought*, 24, 31-43. <https://doi.org/10.24035/ijit.24.2023.268>
- Ahmad Naufal, T. T., Zainudin, A. J., Othman, S., & Aziz, F. F. (2023). Personal zakat calculator mobile application with statistical analysis record. *AIP Conference Proceedings*, 2625(1), 050001. <https://doi.org/10.1063/5.0129750>
- Al-Ahbabī, A. A. (2024). Athar istikhdam taṭbīqāt al-dhakā' al-iṣṭinā'ī fī taqdīm khadamāt ṣundūq al-zakāh: tajribat ṣundūq al-zakāh al-qatarī. *Majalat al-Sharq al-Awsat lil-Dirasat al-Qanuniyyah wal-Fiqhiyyah*, 4(4), 90–101. <https://doi.org/10.56961/mejljs.v4i4.767>
- Albin Zaid, S. M. A., Alkhalidi, M. M., & Alghamdi, M. A. (2025). The zakatability of AI: A dual analysis from Sharia and Saudi law. *Journal of Posthumanism*, 5(5), 2357-2369. <https://doi.org/10.63332/joph.v5i5.1621>
- al-Dasūqī, M. ibn A. ibn 'A. (1996). *Hāshiyat al-Dasūqī 'alā al-Sharḥ al-Kabīr* (M. 'Ulaysh & M. 'A. Shāhīn, Eds.). Dār al-Kutub al-'Ilmiyya.
- Aljabr, A. K., Almousa, A. M., Bhutta, M. N. M., Alesmael, M. W., & Ilyas, Q. M. (2018). An expert system for calculating zakat in Islam. *3rd International Conference on Emerging Trends in Engineering, Sciences and Technology (ICEEST)*. <https://doi.org/10.1109/ICEEST.2018.8643319>
- al-Juwaynī, 'A. al-M. ibn 'A. ibn Y. ibn M. (2007). *Nihāyat al-Maṭlab fī Dirāyat al-Madhhab* ('A. al-'A. M. al-Dīb, Ed.). Dār al-Minhāj.
- al-Kāsānī, 'A. al-D. A. B. ibn M. ibn A. (1986). *Badā'ī' al-Ṣanā'ī' fī Tartīb al-Sharā'ī'*. Dār al-Kutub al-'Ilmiyya.
- Al-Nahid, A. A. (2024). Tawzīf tiqniyyāt al-dhakā' al-iṣṭinā'ī fī al-'amal al-khayrī: tiqniyyāt muqtarahah li-bayt al-zakāh wa-al-amānah al-'āmmah lil-awqāf bi-dawlat al-kuwayt.

- Majalat al-Shari'ah wal-Dirasat al-Islamiyyah*, 39(si4), 487–519.
<https://doi.org/10.34120/jsis.v39isi4.3235>
- al-Qaliyūbī, A. S., & 'Umayra, A. al-B. (1995). *Hāshiyatā Qaliyūbī wa- 'Umayra*. Dār al-Fikr.
- Al-Sudi, W. A. (2023). Al-dhakā' al-iṣṭinā'ī ka-āliyyah li-tanshīṭ al-nizām al-zakawī. *Iqtisaduna al-Islami*, 4.
- Fazial, F., Ishak, M. M. M., Taher, M. S. I. M., & Ghazali, N. (2025). Enhancing zakat management through digitalization: A literature review on emerging technologies and best practices. *Journal Information and Technology Management*, 10(38).
<https://doi.org/10.35631/JISTM.1038006>
- Fazial, F., Ismail, M. S. I., Ahmad, J. I., Abdul Talib, N. H., & Zainal, H. (2025). Developing a digital system for zakat calculation: A case study of gold and silver. *Environment-Behaviour Proceedings Journal*, 10(SI31), 67-73.
<https://doi.org/10.21834/e-bpj.v10iSI31.6935>
- Ibn al-Humām, M. ibn 'A. al-W. ibn 'A. al-Ḥ. (2003). *Sharḥ Faṭḥ al-Qadīr 'alā al-Hidāya Sharḥ Bidāyat al-Mubtadī* ('A. R. G. al-Mahdī, Ed.). Dār al-Kutub al-'Ilmiyya.
- Ibn Mufliḥ, M. ibn M. ibn M. ibn M. (2003). *Kitāb al-Furū' wa-ma 'ahu Taṣḥīḥ al-Furū' li-'Alā' al-Dīn 'Alī ibn Sulaymān al-Mardāwī* ('A. ibn 'A. al-M. al-Turkī, Ed.). Mu'assasat al-Risāla.
- Ibn Qudāmah al-Maqdisī, M. al-D. A. M. 'A. ibn A. ibn M. (1997). *al-Mughnī* ('A. ibn 'A. al-M. al-Turkī & 'A. al-F. M. al-Ḥulw, Eds.). Dār 'Ālam al-Kutub li-l-Ṭibā'a wa-l-Nashr wa-l-Tawzī'.
- Jawatankuasa Fatwa Negeri Perlis. (2019). *Fatwa zakat ke atas aset digital Bitcoin (BTC)*. Retrieved from <https://muftiperlis.gov.my/index.php/en/himpunan-fatwa-negeri/217-fatwa-zakat-ke-atas-aset-digital-bitcoin-btc>
- Jawatankuasa Fatwa Negeri Selangor. (2021). *Hukum matawang kripto (cryptocurrency): Satu analisa syarak*. Retrieved from <https://www.muftiselangor.gov.my/2023/10/27/hukum-matawang-kripto-cryptocurrency-satu-analisa-syarak/>
- Karshiboyeva, L. (2023). The impact of AI and information technologies on Islamic charity (zakat): Modern solutions for efficient distribution. *IRSHAD International Journal of Law and Policy*, 1(5). <https://doi.org/10.59022/ijlp.83>
- Lembaga Zakat Selangor. (2021). *Zakat mata wang kripto*. Retrieved from <https://www.zakatselangor.com.my/info-zakat/zakat-kewajipan-berzakat/zakatkripto/>
- Meerangani, K. A., Sharipp, M. T. M., Hamid, M. F. A., Hashim, S. N. I., Rameli, M. F. P., & Rosele, M. I. (2022). Digitalisation of zakat management system in Malaysia: Potential and challenges. *International Journal of Academic Research in Economics and Management Sciences*, 11(2), 290-302.
<http://dx.doi.org/10.6007/IJAREMS/v11-i2/13984>
- Mesyuarat Jawatankuasa Perundangan Hukum Syarak Negeri Pahang. (2023). *Zakat matawang kripto dan aset digital serta kaedah pentaksirannya*. Retrieved from <https://mufti.pahang.gov.my/fatwa/2023/zakat-matawang-kripto-dan-aset-digital-serta-kaedah-pentaksirannya>
- Mesyuarat Lembaga Fatwa Sarawak. (2024). *Hukum berkenaan zakat mata wang kripto dan aset digital serta kaedah pentaksirannya*. Retrieved from <https://itibyan.sarawak.gov.my/>

- Mohd Radzi, S. H., Ishak, N. A., Zin, A. S. M., Ayop, S. D., & Rahman, R. A. (2024). The role of technology acceptance model on intentions of zakat payers in using online zakat payment services. *International Journal of Research and Innovation in Social Science*, 8(11), 1089-1096. <https://dx.doi.org/10.47772/IJRIS.2024.8110088>
- 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, A. R., & Saeful, E. (2019). Artificial intelligence usage in zakat optimization. *The 3rd International Conference of Zakat (ICONZ) Proceedings*, 14-24. <https://doi.org/10.37706/iconz.2019.144>
- Pejabat Mufti Wilayah Persekutuan. (2020). *Al-Kafi 1736: Zakat simpanan bagi pelaburan digital menggunakan robo-advisor*. Retrieved from <https://muftiwp.gov.my/ms/artikel/al-kafi-li-al-fatawi/4549-al-kafi-1736-zakat-simpanan-bagi-pelaburan-digital-menggunakan-robo-advisor>
- Rabbani, M. R., Hassan, M. K., Khan, S., & Muneeza, A. (2022). A fintech-based zakat model using artificial intelligence. In *FinTech in Islamic Financial Institutions* (pp. 45-62). Palgrave Macmillan. https://doi.org/10.1007/978-3-031-14941-2_3
- Rahman, A. A., Sofian, A. A. M., & Zakaria, N. Z. Y. (2024). Comparison of the exclusion rates for families personal expenses in zakat in Malaysia: The role of artificial intelligence. *IBAF E-Proceedings*, 11(1), 810-818. <https://doi.org/10.33102/pczyey50>
- Salim, K., Noor, W. N. W. M., & Mohd, S. M. R. (2025). The potential applications of artificial intelligence in managing zakat funds. In *Disruptive Technologies and Muslim Societies* (pp. 371-387). World Scientific. https://doi.org/10.1142/9781800616295_0016
- Syed, M. H., Khan, S., Rabbani, M. R., & Thalassinis, Y. E. (2020). An artificial intelligence and NLP based Islamic fintech model combining zakat and Qardh-Al-Hasan for countering the adverse impact of COVID 19 on SMEs and individuals. *International Journal of Economics and Business Administration*, 8(2), 351-364. <https://doi.org/10.35808/ijeba/466>
- Wahyudi, I., Amalia, E., & Rini, R. (2024). Revamping tradition with tech: Guiding innovation in zakat for social good. *Al-Risalah: Jurnal Studi Agama dan Pemikiran Islam*, 15(1). <https://doi.org/10.34005/alrisalah.v15i1.3497>
- Wan Mohamed Salleh, W. N. A., Rasid, S. Z. A., & Basiruddin, R. (2022). Optimising digital technology in managing zakat. *International Journal of Academic Research in Business and Social Sciences*, 12(8), 726-733. <http://dx.doi.org/10.6007/IJARBS/v12-i8/14355>
- Zulkifley, M., & Muneeza, A. (2024). Optimizing zakat distribution in Selangor using technology. *International Journal of Islamic Economics and Finance Research*, 7(2), 105-122. <https://doi.org/10.53840/ijiefer162>