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ARTIFICIAL INTELLIGENCE FOR FATWA ISSUANCE: GUIDELINES AND ETHICAL CONSIDERATIONS

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ABSTRACT

The use of artificial intelligence (AI) in issuing fatwas has attracted significant attention because of its potential to transform and streamline the process. However, this advancement raises ethical concerns that necessitate careful consideration, including the preservation of human authority and responsibility, as well as challenges related to interpretation and contextual understanding. This study aims to provide guidance for integrating AI into fatwa issuance and could assist communities facing challenges related to fatwas. The study employed a qualitative methodology that integrates deductive reasoning and field research methods. We conducted semi-structured interviews with Shariah experts and AI specialists to gather comprehensive insights. The findings highlight the potential of AI to revolutionise and streamline the fatwa issuance process. Nonetheless, several ethical dilemmas require resolution. We place emphasis on collaborative efforts between Islamic scholars, AI researchers, ethicists, and community stakeholders to establish comprehensive frameworks that ensure the ethical integration of AI into fatwa issuance. Despite the comprehensive nature of the study, we must acknowledge certain limitations such as contextual specificity, sample size, representation, and technological constraints. The established frameworks should prioritise AI as a supportive tool for scholars, upholding Islamic jurisprudence principles while ensuring fairness, accountability, and contextual awareness. Continuous evaluation, and engagement are pivotal in addressing ethical challenges and facilitating the responsible and beneficial use of AI in fatwa issuance within an Islamic framework.

Keywords: *Artificial Intelligence, Fatwa, Guidelines, Ethics.*

1. INTRODUCTION

Artificial intelligence (AI) has emerged as a game-changing technology with the potential to impact many parts of our lives, including religious contexts. In recent years, there has been a growing interest in investigating the use of AI in religious practices, such as the issuance of fatwas, which are legal judgements based on Islamic law (Munshi et al., 2022). Yahya, (2018) claimed that the traditional process of fatwa issuing, relying on the expertise and interpretations of religious scholars, faces challenges in meeting the demands of a diverse and evolving community These challenges include time-consuming procedures, delays in providing timely fatwa answers, and the potential for contradictory decisions.

Proposals have suggested integrating AI technology into fatwa issuance as a viable solution to address these issues. AI has the capacity to handle a large volume of legal enquiries and provide rapid and standardised fatwa responses, alleviating the burden on religious experts and increasing access to religious guidance. Furthermore, by utilising algorithms and predefined rules, AI has the potential to improve the consistency and objectivity of fatwa decisions, reducing the likelihood of subjective biases and discrepancies (Ferrara, 2024).

However, Aliff Nawi et al. (2021) notes that the use of AI in fatwa issuance raises ethical concerns that require careful attention. It is crucial to ensure that AI-generated fatwas adhere to Islamic norms, eliminate potential biases in AI algorithms, and maintain the integrity and validity of religious judgments. This requires a thorough evaluation of the specific rules and considerations within Islamic jurisprudence to ensure responsible and beneficial use of AI technology. In ethical implications of AI-driven fatwa issuance must be considered to establish norms and moral frameworks that preserve Islamic jurisprudential standards. Thus, this study will examine the framework for incorporating AI into the fatwa issuance process, analyse the ethical problems related to the application of AI in the acceptance of fatwas, and finally propose guidelines to ensure AI-generated fatwas are abided by ethical and Islamic criteria.

2. LITERATURE REVIEW

The literature review provides a comprehensive overview of the existing research and academic discourse regarding the integration of Artificial Intelligence (AI) in the process of issuing fatwas, focussing on the relevant rules and ethical considerations associated with this topic. The current state of knowledge is analysed, identifying gaps for future research and establishing a

foundation for the proposed study. The study can be examined through several themes, as outlined below:

2.1 *Artificial Intelligence (AI) from the Islamic Perspectives and Legal Frameworks*

Ibrahim (2010) delves into al-Qaradawi's insights regarding the divergences among Muslim scholars within the various fiqh divisions. This disagreement is noteworthy not as a recent phenomenon, but rather as a persistent issue that has existed since the formative periods of Islamic history. The article synthesises information from a range of sources, encompassing exegesis texts, hadith, and fiqh, particularly emphasising al-Qaradawi's work entitled "*Kayfa Nataʻamalu Maʻa al-Turath wa al-Tamadhhub wa al-Ikhtilaf*." Al-Qaradawi posits that the variances in perspectives among fiqh divisions are unavoidable and merit consideration rather than dismissal. He underscores the importance of all parties embracing a constructive mindset and upholding ethical standards when navigating disagreements in Islam, to preserve unity among Muslims. This viewpoint, crucially, does not deter ongoing inquiry into matters to develop perspectives that are more substantiated by evidence and advantageous for the Ummah.

Rosele et al. (2013) explores the complexities surrounding the divergent interpretations within Islamic legal opinions (fatwa) as articulated by Malaysian fatwa authorities. This examination delves into fatwa, discerning the elements that incite conflicts, and suggests methodologies to reconcile the formulation process. These solutions encompass collaborations between fatwa institutions and institutions of higher education, as well as the appointment of a Grand Mufti to serve as the paramount authority. The objective is to reduce discord and ambiguity among the populace concerning the various fatwas in Malaysia.

The literature on Islamic jurisprudence and fatwa guidelines provides a crucial basis for the advancement of AI-driven fatwa systems. Within the framework of fatwas in Malaysia, the Fatwa Committees are composed of 15 distinct committees, each possessing its own acknowledged jurisdiction as delineated by Malaysian law. Preliminary investigations indicate that various authors have commented on the disarray surrounding fatwas in Malaysia, highlighting the necessity for the formulation of guidelines to rectify this concern. (Miziazam & Mokhtar, 2018).

The current legal and regulatory frameworks play a crucial role in directing the incorporation of AI in the issuance of fatwas. The General Data Protection Regulation (GDPR) established in the European Union, alongside the Ethical

Guidelines for Trustworthy AI put forth by the European Commission, delineates foundational principles and directives for the ethical advancement of artificial intelligence. European Commission, 2019. Furthermore, the Dubai Ethics Guidelines for Autonomous Vehicles (2019) and the AI Ethics Guidelines established by the Institute of Electrical and Electronics Engineers (IEEE) provide valuable perspectives on ethical considerations and frameworks that may be suitably adapted for AI-driven fatwa systems.

2.1 *The Potential of AI Technology in the Issuance of Fatwas*

Numerous studies have investigated the capabilities of AI technology in the issue of fatwas. Since October 2019, artificial intelligence has been utilised in the issuance of legal opinions (fatwas) (Tsourlaki, 2022).

Nouaouria et al., (2006) examines AI as an intelligent assistant to the Mufti It examines the application of Case-Based Reasoning (CBR), a form of analogical reasoning, which entails addressing novel issues by reutilising answers from analogous situations retained in memory. CBR has been utilised across multiple domains, encompassing cognitive activities such as diagnosis and planning, in addition to interpretation and justification. The study advocates for the application of interpretative case-based reasoning inside Islamic legislation, particularly for information retrieval in the Fatwa production process. A fatwa denotes a legal opinion articulated in accordance with Islamic principles. The El Bayane system is a CBR method intended to aid a Mufti in formulating Fatwas for novel circumstances by leveraging previous Fatwas. It emulates the logic of an imam instead of formulating a fresh Fatwa from the ground up.

2.2 *Ethical Considerations in AI-Generated Fatwa Issuance*

Ethical considerations are paramount in the incorporation of AI technology in fatwa issuance. Academics have emphasised the necessity of ensuring that AI-generated fatwas adhere to Islamic standards. The ethical application of AI cannot be achieved just through principles. A comprehensive framework of interrelated subsystems (moral, ethical, educational, economic, legal) advocating for human-beneficial AI is essential (Raquib & Qadir, 2022).

In a progressively AI-oriented society, ethical norms are essential. Countries around have implemented policies and standards to guarantee responsible AI research and development. The United Kingdom, Europe, and the United States have prioritised public benefit, equity, privacy, and human rights in their directives, but Asian nations such as Singapore, South Korea, and Japan have established expert committees and issued ethical standards. While Islamic

nations have not established explicit AI research rules, they recognise the significance of science and technology in accordance with Islamic teachings. AI research seeks to improve human existence while conforming to Islamic principles, including the safeguarding of religion, life, intellect, lineage, and property. Ethical considerations include privacy, safety, inequity, and trust to protect human rights. Effective regulation is essential for the harmonious coexistence of AI and humanity, guaranteeing an improved future for everybody (Aliff Nawi et al., 2021).

Yihang (2024) emphasises apprehension over AI's influence on employment, inequality, human conduct, privacy, fraud, and security. It underscores the necessity for ethical programming and comprehensive codes to safeguard humanity. Collaborations and frameworks are examined, encompassing Google DeepMind's study on the real-world implications of AI and the UK government's AI code. The significance of Islamic ethics and multidisciplinary dialogue is underscored for tackling the ethical concerns posed by AI.

2.3 *Challenges of Artificial Intelligence in the Issuance of Fatwas*

Prejudice and Equity in Artificial Intelligence Systems: Mitigating biases in AI algorithms is an essential issue in AI-generated fatwa issuance. The literature on bias and fairness in artificial intelligence systems offers significant insights. The deployment of biassed AI presents several ethical ramifications that require careful consideration. A primary worry is the possibility of discrimination against individuals or groups based on race, gender, age, or disability (Noble, 2018).

The literature analysis reveals the current advancements and knowledge deficiencies with the application of AI technology to the matter of fatwas. Previous studies have examined the potential benefits of AI and highlighted ethical concerns; nevertheless, further research is necessary on regulations particular to Islamic jurisprudence and the development of AI-driven systems that comply with Islamic principles. The literature review on the integration of AI in fatwa can be illustrated in **Figure 1**.

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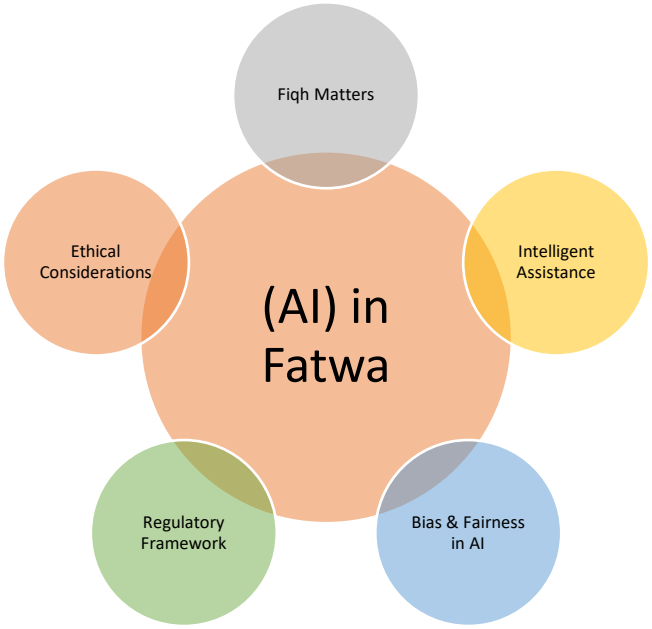

Figure 1. Literature review on the integration of AI in fatwas

The study aims to bridge existing gaps by establishing comprehensive standards and ethical frameworks that facilitate the constructive integration of AI in fatwa issuance, safeguard Islamic principles, and tackle biases and ethical dilemmas.

3. METHODOLOGY

The qualitative study approach employed by the researcher, encompassing document analysis and interviews, will yield significant insights into the application of AI in the issuance of fatwas and associated ethical concerns. This study employed a qualitative methodology to examine the perspectives, experiences, and ethical considerations related to the integration of AI in fatwa. Employing qualitative research methodologies facilitates a more profound understanding of the topic and provides significant insights into its intricacies. The issuing process prioritizes stakeholders' perspectives and experiences, facilitating a comprehensive grasp of the issue.

According to Tamuri (2021) an initial document analysis is to attain a thorough comprehension of the existing environment, identify key ethical issues and norms, and examine pertinent documents including current fatwa issuance guidelines, scholarly publications, and legislative frameworks. We have established the framework for AI integration by utilizing the insights from this document analysis, which include the identification and compilation of a comprehensive dataset of religious texts, scholarly articles, fatwas, legal judgments, historical rulings, and pertinent contextual information. (Munshi et

al., 2022).

Interviews are often perceived as mere "talking," wherein verbal communication serves as an inherent means of information acquisition, rendering qualitative research a favoured type of data gathering (Griffee, 2005). Interviews can yield comprehensive insights into a particular research subject, informed by the participants' backgrounds and perspectives (Daniel & Turner, 2006). We conducted thorough interviews with religious authorities and stakeholders involved in the fatwa issuance process, in collaboration with a Shariah University professor and an artificial intelligence specialist. The semi-structured interviews were conducted, enabling participants to explore multiple aspects of AI integration. The aim is to focus on their viewpoints, experiences, and concerns about AI-driven financial systems and ethical issues. The interview data will provide significant qualitative insights. The subsequent enumeration comprises the interviewees:

Table 1. List of interviewees

Interviewees	Malaysian state	Groups
Interviewee (IV1)	Negeri Sembilan	Fatwa Department
Interviewee (IV2)	Kuala Terengganu	UniSZA

4. RESULTS & DISCUSSION

4.1 *Framework Integrating AI in the Fatwa Issuance Process*

While incorporating AI into the fatwa issuance process can be a complex endeavour, here is a comprehensive framework to consider.

4.1.1 *Determine The Objective*

Clearly articulate the purpose and goals of incorporating AI into the fatwa issuance process. Identify the specific challenges or areas where AI can enhance the process, such as improving efficiency, accuracy, or addressing scalability issues. Aliff Nawi et al (2021) emphasizes that by defining the objective, the focus is on leveraging AI in a targeted manner to maximize its potential benefits and overcome specific limitations or challenges in the fatwa issuance process.

4.1.2 *Data Collection and Preprocessing*

Two key stages in this process, gathering relevant data and data cleaning

and annotation, play a vital role in shaping the quality and effectiveness of the AI system. By meticulously identifying and collecting a diverse and comprehensive dataset of religious texts, scholarly works, fatwas, legal opinions, historical rulings, and contextual information, as advocated by Munshi et al. (2022), the AI system establishes a strong foundation for learning and informed decision-making. Furthermore, through rigorous data cleaning and annotation, the dataset is refined to eliminate inconsistencies and add labels or tags, enhancing the AI models' capacity to generate reliable, contextually appropriate, and accurate fatwas. This data-driven approach ensures that the AI system is well-equipped to address the unique needs of the community, thereby contributing to the credibility and trustworthiness of the fatwa issuance process.

The first crucial step in building a robust AI system for fatwa issuance is the collection of a comprehensive dataset comprising a wide range of religious texts, scholarly works, fatwas, legal opinions, historical rulings, and contextual information. This diverse dataset provides the AI system with a rich source of information to learn from and make informed decisions. By accessing such a wealth of data, the AI system can gain a broader understanding of Islamic teachings, legal precedents, and the factors that influence fatwa rulings. This knowledge base allows the system to deliver accurate and contextually relevant fatwas, addressing the specific needs of the community effectively.

The quality and reliability of the dataset are significantly improved through rigorous data cleaning and annotation processes. Data cleaning involves removing inconsistencies and errors, ensuring that the dataset is of high quality and free from noise that could hinder the AI system's training. Annotation, on the other hand, adds labels or tags to the data, providing context and structure that aids in interpretation during training. This results in AI models that are better equipped to generate accurate and contextually appropriate fatwas. The combination of data cleaning and annotation enhances the AI system's capability to provide reliable religious rulings, thereby contributing to the credibility and trustworthiness of the fatwa issuance process.

4.1.3 *Selection of Algorithms*

The choice of algorithms for developing an AI system for fatwa issuing is a crucial decision that profoundly influences the system's capacity to comprehend and analyse religious texts, extract subtle meanings, and produce

correct and pertinent fatwas. Two principal algorithmic methodologies, specifically Natural Language Processing (NLP) algorithms and Machine Learning Models, provide unique benefits in tackling these difficulties. A meticulous evaluation of the fatwa issuance process and the characteristics of the textual data can facilitate an informed selection among algorithmic methodologies, thereby augmenting the efficacy of the AI system in processing fatwas comprehensively and generating contextually pertinent interpretations.

In building an AI system for fatwa issuing, it is essential to choose or create NLP algorithms specifically suited to the distinct attributes of religious texts. These NLP algorithms must have the ability to understand the complexities of language in these texts, extracting profound meanings and identifying subtle subtleties. This methodology, as proposed by Yihang (2024), guarantees that the AI system can interact with religious texts deeply, establishing a robust basis for precise fatwa production.

A crucial aspect of algorithm selection is identifying appropriate machine learning models for fatwa issuance. Munshi et al. (2022) advocates for the integration of machine learning models, including recurrent neural networks (RNNs) and transformers. RNNs are proficient in handling sequential data, capturing contextual dependencies, and maintaining long-term linkages within text, which corresponds effectively with the sequential characteristics of fatwas. Conversely, transformers demonstrate adeptness in managing extensive language modelling tasks and collecting global dependencies inside the text, utilising attention mechanisms to emphasise relevant information. The deliberate selection of machine learning models allows the AI system to efficiently analyse textual material, derive significant insights, and produce fatwas that are contextually precise and pertinent, hence improving the quality and accuracy of the fatwa issuance process.

4.1.4 *Training of AI Model*

The selection of machine learning methodologies for training AI models in fatwa categorisation profoundly influences the system's efficacy and interpretability. Two principal methodologies, supervised learning and unsupervised learning, present unique benefits and obstacles. By meticulously evaluating the accessibility of labelled data and the distinct objectives of the AI system, a judicious choice among various methods can enhance classification accuracy and provide profound insights into the fundamental patterns and

themes within the underlying dataset.

According to Granulo et al (2019). supervised learning techniques should be the preferable option for training the AI model when labelled data is easily accessible. This method use an annotated dataset to instruct the model in accurately classifying and interpreting textual inputs. The primary benefit of supervised learning is its capacity to generalise information from labelled data, enabling the model to predict outcomes for new, unseen data by utilising learnt patterns on analogous input examples.

When labelled data is scarce, unsupervised learning techniques, such clustering and topic modelling, serve as valuable alternatives. These strategies facilitate the identification of trends and the aggregation of similar fatwas or texts, so enabling the systematic organisation and categorisation of content according to shared themes or attributes. Furthermore, topic modelling reveals the underlying subjects or themes inside the fatwa dataset, allocating a distribution of topics to each fatwa or text. Unsupervised learning techniques, such as clustering and topic modelling, operate without specified labels, hence enabling the AI system to uncover latent patterns, correlations, and themes within the data, enhancing comprehension of the content and structure of the fatwas.

4.1.5 *Model Evaluation and Validation*

Assessing AI model performance and engaging in iterative refinement are essential elements in the creation of a dependable and efficient AI system for issuing fatwas. According to Patrick (1999), these two processes are essential for evaluating the system's efficacy, improving its reliability, and assuring alignment with the knowledge and expectations of domain experts and religious scholars.

Performance measurement entails employing many quantitative metrics, including accuracy, precision, and recall, to assess the model's prediction and classification capabilities. Evaluating AI model performance is essential for ascertaining its efficacy and dependability. Test datasets, apart from the training data, offer insights into the model's efficacy on unfamiliar instances. Cross-validation approaches enhance evaluation rigour by partitioning data into subsets for training and testing, hence examining the model's generalisation skills. In addition to these quantitative measurements, human

expert evaluation provides subjective judgements that align the model's outputs with the knowledge and expectations of domain specialists. The integration of quantitative indicators with human assessment provides a thorough review of the model's performance, enabling enhancement and verification of its efficacy in producing dependable outcomes.

The iterative refining procedure entails continuous improvements to the AI model employed in the fatwa issuance system. These enhancements include algorithm optimisations, the revision of training data, and the integration of insights from domain experts and religious scholars. Through the refinement of algorithms, parameter adjustments, and the introduction of novel methodologies, the model is enhanced in its capacity to comprehend the intricacies of Islamic jurisprudence. Updating training data guarantees that the model stays consistent with the most recent interpretations and academic agreement. Expert and scholarly feedback highlights areas for enhancement and ensures the model appropriately reflects human comprehension. This iterative method enables the AI model to enhance its reliability, accuracy, and alignment with the dynamic needs and expectations of its users over time.

4.1.6 *Integration with the Fatwa Issuance Procedure*

The effective incorporation of AI into the fatwa issuance process depends on two essential factors: collaboration with academics and the development of efficient human-AI interaction. According to Babak et al. (2022), these components are essential for guaranteeing that the AI system adheres to the principles and procedures of Islamic jurisprudence (Fiqh) and promotes effective collaboration between human scholars and the AI system.

Engagement with religious academics, specialists, and jurists is essential for ensuring that the AI system conforms to the principles and procedures of Islamic jurisprudence. Academics provide their extensive knowledge of religious scriptures, legal structures, and Fiqh principles, which are essential for ensuring the AI system's conformity with the Islamic legal framework. Experts in certain domains of Islamic law pertinent to fatwa issuance improve the system's precision and interpretation. Furthermore, the participation of scholars in the validation and verification process guarantees that AI-generated fatwas conform to established rulings and scholarly consensus, thereby enhancing the system's adherence to accepted Islamic principles and improving the overall reliability of the AI-driven fatwa issuance process.

Creating an efficient human-AI interaction interface is equally essential. This interface seeks to establish an accessible environment for researchers to collaborate effortlessly with the AI system. Query-based retrieval enables researchers to enter specific queries or themes, thereby pulling pertinent information from the AI system's knowledge store. The utilisation of topic modelling techniques aids researchers in organising and analysing large textual datasets, enabling the recognition of main topics and concepts. Recommendation systems offer suggestions for pertinent sources, references, or related fatwas based on academics' contributions or fields of interest. The objective is to improve scholars' engagement with the AI system, hence augmenting their efficiency and efficacy in utilising its capabilities and insights for decision-making in the fatwa issuance process.

4.1.7 *Ethical Considerations*

The ethical implications of incorporating AI into the fatwa issuance process are critical, emphasising the importance of bias reduction, openness, and explainability. Ferrara (2024) and Granulo et al (2019) underscore that tackling these ethical issues guarantees the impartiality, precision, and reliability of AI-generated fatwas.

Proactive bias mitigation measures are crucial for ensuring the fairness and accuracy of AI-generated fatwas. It is essential to develop processes and tools to identify and mitigate potential biases within the AI system. This involves a thorough assessment of the training data to guarantee it includes varied perspectives and interpretations, along with a study of algorithms to identify and correct any bias towards viewpoints or opinions. The delineation of fairness criteria aligned with Islamic values is essential, necessitating modifications to algorithms and training methodologies, like the incorporation of counterfactual examples or fairness-aware learning, to alleviate biases. Continuous monitoring, assessment, and auditing in practical contexts, along with stakeholder involvement, are essential elements in the bias reduction process. Advocating for diversity and inclusivity in data collection and evaluation mitigates under-representation or distorted distributions that could lead to biases. (Abdulllah, 2019).

Measures of transparency and explainability seek to furnish academicians and end-users with understanding of the AI's decision-making process. These methods facilitate the elucidation of the rationale behind the AI's judgements

and the explanations for its suggestions. This may entail offering elucidations grounded in the fundamental principles, data repositories, or attributes that shaped the AI's determinations. Enhancing openness and explainability enables scholars and end-users to more effectively assess and validate AI results, guaranteeing alignment with their ethical standards, expectations, and community-specific demands.

4.1.8 *Deployment and Continuous Improvement*

The appropriate implementation and ongoing enhancement of an AI system in the fatwa issuance process are essential for its sustained efficacy and dependability. The procedure, as delineated by Hermansyah et al, (2023) comprises two essential elements: pilot implementation and continuous monitoring and maintenance.

The pilot deployment phase is an essential preliminary stage in the implementation of an AI system for fatwa issuance. It facilitates a restricted implementation, engaging a designated cohort of scholars or a particular domain, to gather critical feedback and discern any obstacles or constraints. This feedback is crucial for fixing issues and implementing improvements to optimise the system's efficiency and ensure it meets the unique criteria of the fatwa issuance process. Through a prototype deployment, the AI system can evolve and adjust according to practical application and user feedback.

Implementing a continuous monitoring and maintenance structure guarantees the sustained efficacy of the AI system. Consistent updates and modifications to the model are crucial for responding to changing linguistic and textual trends, new difficulties, and ensuring the system's pertinence. This ongoing supervision ensures the AI system remains dependable, efficient, and attuned to the evolving requirements of the fatwa issuance process. It allows the system to reliably deliver precise and credible fatwas, despite evolving circumstances and demands, and provides a framework for mitigating potential biases or restrictions that may arise over time.

Based on the accomplish framework, the following figures are presented to facilitate understanding.

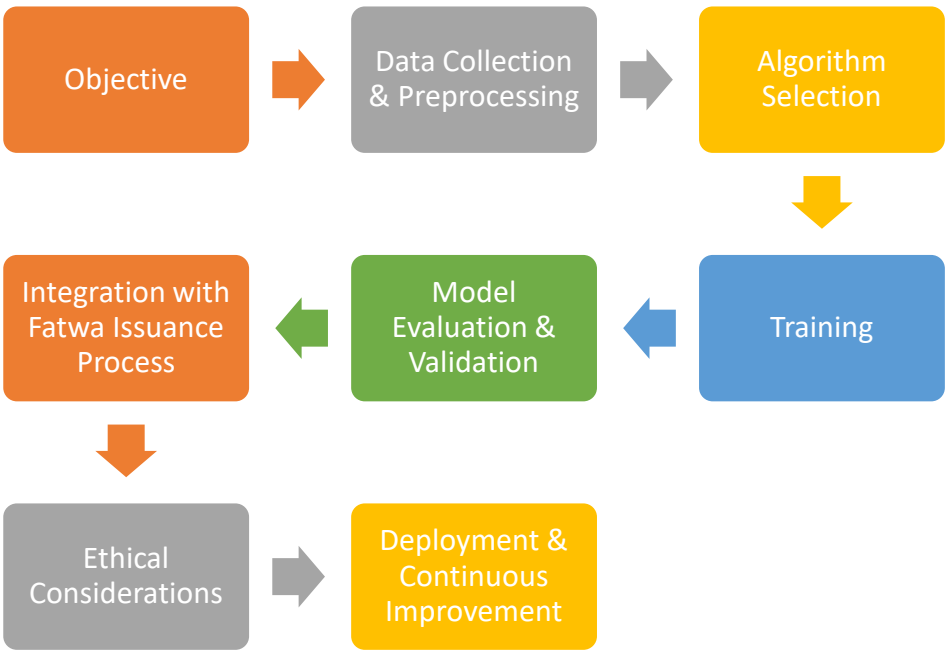

Figure 2. Framework Integrating AI in the Fatwa Issuance

4.2 *The Ethical Dilemmas Associated With The Utilisation Of Artificial Intelligence In The Process Of Issuing Fatwas*

The utilisation of AI in the issue of fatwas presents numerous ethical dilemmas. Below are few significant ethical dilemmas to contemplate:

4.2.1 *Human Authority and Responsibility*

AI-generated fatwas may undermine the conventional role and authority of human scholars (Chowdhury, 2021). Delegating decision-making to AI systems poses a danger without adequate human control and responsibility. It is imperative to uphold the position of human scholars as the ultimate authority and to utilise AI as an instrument to augment their expertise rather than supplant their discernment. The statement underscores the significance of preserving the involvement of human experts in AI-generated fatwas. Human scholars exhibit competence, critical thinking skills, and contextual comprehension that AI systems may not possess. Oversight and accountability should be established in the fatwa issuance process to validate and endorse AI-generated fatwas. AI ought to be regarded as an auxiliary instrument, acknowledging the constraints of AI systems and the necessity for human insight and ethical deliberation. Human scholars participate in consensus-building and academic discourse, which AI systems cannot entirely emulate.

4.2.2 *Interpretation and Contextual Understanding*

Islamic law presents obstacles for AI systems owing to the intricate interpretation of religious scriptures, the necessity for contextual analysis, adaptability, varied interpretations, and ethical considerations. Human academics excel in comprehending the complexities of interpretation, considering context, modifying rulings, recognising subjectivity, and confronting ethical considerations (Yogesh, 2023). AI systems may find it challenging to effectively capture this complexity, which could result in generic replies and the neglect of significant contextual elements and ethical implications.

4.2.3 *Ethical and Jurisprudential Dilemmas*

Fatwas frequently encompass intricate ethical quandaries characterised by divergent legal judgements and interpretations. AI systems may inadequately represent diverse beliefs and may yield simplistic or biassed responses, potentially overlooking minority or disagreeing perspectives (McKendrick, 2022). Addressing such challenges frequently necessitates profound ethical reasoning and a comprehensive grasp of jurisprudential discourse, which AI systems may find challenging to attain.

4.2.4 *Bias and Discrimination*

AI systems are susceptible to bias, either from prejudiced training data or intrinsic biases within the algorithms themselves (Ferrara, 2023). This assertion is further corroborated by Interviewee 2 (IV2):

> *"The most crucial aspect is the trained data; when we want to make a decision, we need to have training data. So, if our data doesn't cover everything, problems may arise. The other important factor is the algorithm we choose; the algorithm selected for AI is also significant."*

Bias may result in discriminatory outcomes, privileging specific groups while marginalising others. It is essential to guarantee that AI algorithms are trained on varied and representative datasets and routinely reviewed for potential biases to ensure equitable and unbiased fatwa generation. Systematic audits must be performed to identify and rectify any biases that may have arisen inside the system. The objective is to guarantee that the fatwas produced by the AI system are equitable, unbiased, and devoid of discriminatory consequences.

4.2.5 *Lack of Transparency*

AI systems, especially deep learning models, exhibit complexity and opacity, complicating the comprehension of their decision-making processes (Nagadivya, 2023). The absence of transparency raises questions about accountability, as academics and end-users may struggle to understand the rationale behind AI-generated fatwas. It is essential to create AI systems that are explicable, enabling scholars to evaluate and authenticate the generated fatwas.

The importance of legitimate and credible sources in Islamic study, as highlighted by Rita (2015), aligns with the fundamental principles governing the issue of fatwas. This assertion is further corroborated by Interviewee 1 (IV1):

> *"The primary basis for issuing fatwas lies in evidence within Islamic jurisprudence, prioritizing the Quran and the Sunnah, followed by consensus (ijma), analogy (qiyas), and other derived principles (masalih mursalah)."*

Consequently, harmonising various viewpoints emphasises the essential dependence on credible sources. AI systems responsible for reading and utilising these sources must maintain the integrity and precision of their data sources for training and decision-making processes. Consistent verification and updates of these sources are crucial to prevent the dissemination of misleading or erroneous fatwas.

The application of AI in fatwa issuance can influence human-machine interaction and the dynamics between scholars and the broader community. Concerns may arise over trust, responsibility, and the emotional and spiritual connection between persons seeking religious direction and the AI system. Ensuring transparent communication and setting suitable boundaries between AI and human scholars is crucial.

4.2.6 *Cultural and Ethical Sensitivities*

Islamic jurisprudence is shaped by cultural and ethical considerations that may differ among various locations and populations. AI systems must account for these sensitivities to deliver precise and contextually relevant fatwas. Neglecting to comply may lead to fatwas that conflict with local customs, practices, and cultural norms. AI systems employed in fatwa issuance must

account for cultural variety, contextual relevance, local norms and practices, ethical issues, expert participation, and adaptability. The worldwide nature of Islam necessitates an awareness of varied cultural forms. The implementation of Islamic principles is influenced by culture, and AI must consider cultural situations. Local cultures and practices differ; hence AI systems must be engineered to produce culturally pertinent fatwas. Ethical concerns, informed by specialists, guarantee conformity with Islamic doctrines. Flexibility enables AI systems to adjust to changing cultural and ethical factors.

Based on the ethical dilemmas abovementioned, the following figures are presented to facilitate understanding.

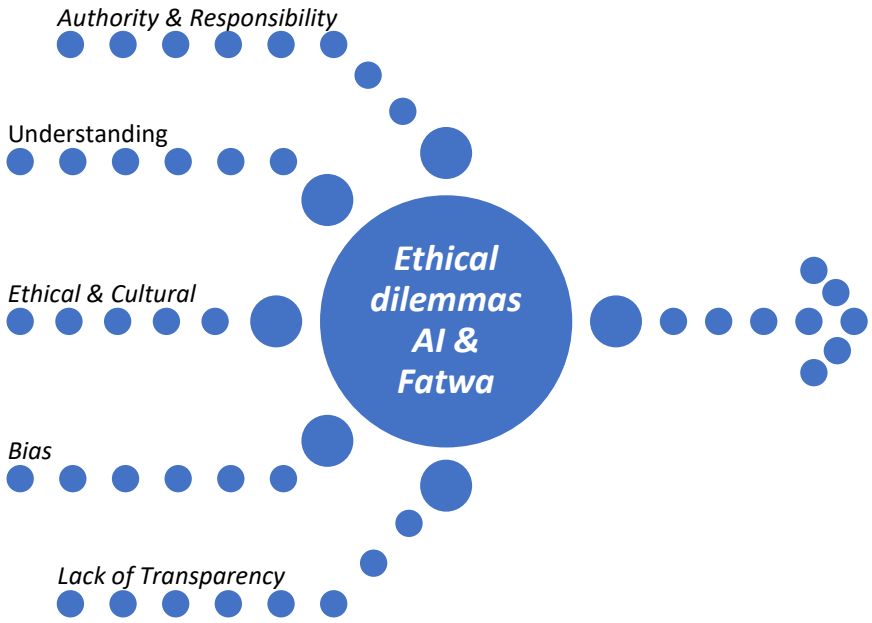

Figure 3. The ethical dilemmas integrating AI in Fatwa Issuance

4.3 *Proposed Guidelines for Monitoring AI-Generated Fatwas*

Here are guidelines to ensure that AI-generated fatwas conform to ethical and Islamic standards:

4.3.1 *Academic Supervision*

Guarantee that AI-generated fatwas are overseen and evaluated by qualified Islamic scholars with knowledge in Islamic jurisprudence (fiqh). These scholars ought to possess the authority to authenticate, amend, or dismiss the fatwas produced by the AI system. (Munshi et al., 2022). Moreover,

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Interviewee 1 (IV1) asserted,

> *"That's the purpose of the fatwa committee. It consists of several individuals, not just one. So, for instance, if we ask AI a question and it provides an answer, we need to scrutinize it carefully in terms of its validity, its alignment with the principles of Islamic jurisprudence. We need human confirmation. Individuals versed in the principles of Islamic jurisprudence, Hadith studies, and related disciplines are the ones who can determine this. Human involvement is necessary because sometimes when we read something, it might seem like we understand it correctly, but there could be a misunderstanding, hence the need for someone to clarify."*

The fatwa committee's role encompasses not only the acceptance of AI-generated responses but also a thorough examination of their legitimacy and conformity with Islamic jurisprudential standards. IV1's focus on human validation underscores the constraints of exclusively depending on AI, recognising the possibility of misconceptions that could occur. The joint endeavours of AI and human proficiency, as endorsed by both Munshi et al., (2022) and IV1, offer a thorough strategy for managing the intricate task of issuing culturally sensitive and precise fatwas. This dual perspective underscores the necessity of integrating the capabilities of AI technology with the nuanced insights of trained scholars for a robust and dependable fatwa issuance system.

4.3.2 *Employ AI as an Instrument*

Frame AI as an instrument to aid scholars in their research and decision-making processes, rather than supplanting their roles totally (Bastian, 2023). This corresponds with the statements made by Interviewee 1 (IV1):

> *"If we use AI for technological systems, and AI is more advanced than just a chatbox on a website, then I don't see much of an issue from a delivery perspective. If we use AI for faster and wider distribution, there's no problem."*

Highlight that the ultimate authority and accountability for issuing fatwas lie with human scholars who have the requisite comprehension of Islamic texts, concepts, and contextual factors. Although AI can provide valuable insights and analyses, it should not be considered a replacement for the wisdom, judgement, and critical thought that scholars contribute. The objective is to utilise AI as a tool to enhance and assist scholars, facilitating their ability to make educated and contextually appropriate decisions in the issuance of

fatwas.

4.3.3 *Integrate Islamic Legal Principles*

Embed the core tenets of Islamic law (Shariah) within the AI algorithms. This encompasses ideas such as the Quran, Sunnah (Prophetic traditions), consensus (ijma'), analogy (qiyas), and public interest (maslahah). The AI system must be trained to identify and prioritise these concepts while formulating fatwas.

4.3.4 *Comprehensive Training Data*

Guarantee that the AI system is trained on an extensive and varied dataset consisting of verified and reputable Islamic sources, encompassing both ancient and modern Islamic knowledge (Eric et al., 2011). This enables the AI system to cultivate a thorough comprehension of Islamic doctrines and jurisprudential principles. Educating the AI system on a diverse and extensive array of Islamic literature allows it to assimilate the knowledge and perspectives of esteemed thinkers across history. This extensive knowledge provides the AI system with the essential basis to produce knowledgeable and well-founded fatwas that conform to the principles and teachings of Islam.

4.3.5 *Avoid Speculation and Conjecture*

Instruct the AI system to refrain from speculation or conjecture when producing fatwas. It must depend on genuine textual evidence and academic consensus to deliver precise and dependable responses. The AI must distinctly distinguish between issues with definitive rulings and those necessitating additional research or academic interpretation. Consequently, the system can guarantee that the fatwas it produces are grounded in robust principles and conform to the official sources of Islamic jurisprudence, thereby circumventing unreliable or unfounded findings. This method fosters trust in the AI system's dependability and upholds the integrity of the fatwa issuance procedure.

4.3.6 *Contextual Considerations*

Integrate contextual aspects into the AI system to address specific circumstances, cultural differences, and dynamic societal environments (Patrick, 1999). The AI must account for the distinct requirements and

sensitivities of many communities and deliver nuanced replies that embody the diversity present in Islamic legal interpretations. Integrating contextual factors is essential in the development of an AI system for fatwa issuance. This entails incorporating conditions, cultural differences, and changing societal contexts into the system's decision-making process. Consequently, the AI system can deliver complex solutions that encapsulate the diversity of Islamic legal interpretations and cater to the distinct requirements and sensitivities of various populations. It must tailor its advice to the specific context in which it is requested, guaranteeing that the issued fatwas are pertinent, significant, and applicable. Moreover, the system must possess the ability to adapt to societal changes over time, integrating fresh insights and interpretations to deliver current and contextually relevant counsel. By considering contextual elements, the AI system can provide a thorough and inclusive method for fatwa issuing, honouring the cultural subtleties inherent in Islamic jurisprudence and more effectively addressing the varied requirements of individuals seeking religious counsel.

4.3.7 *Ongoing Academic Evaluation*

Implement a procedure for the continuous assessment and oversight of the AI system's efficacy. Academics must consistently evaluate AI-generated fatwas to confirm their compliance with Islamic doctrines, ethical principles, and societal requirements. This iterative method aids in identifying and correcting any potential deficiencies or biases inside the system. The objective is to guarantee that the fatwas conform to Islamic doctrines, ethical principles, and the requirements of society. Through continuous evaluations, researchers can detect any possible deficiencies or biases in the AI system. They can evaluate whether the system is correctly interpreting and implementing Islamic teachings, considering the intricacies and complexity involved. This iterative process facilitates ongoing enhancements and changes to the system over time. The scholars' function in overseeing the AI system's performance ensures its integrity and reliability. They can detect and correct any inadvertent biases that may emerge from the training data or algorithms employed. Furthermore, the ongoing academic evaluation guarantees that the AI-generated fatwas stay pertinent and adaptable to the changing demands and difficulties of society. The ongoing academic review process acts as a safeguard to maintain the accuracy, ethical standards, and adherence to Islamic teachings in the AI-assisted fatwa issuance process. It strengthens the position of scholars as custodians of Islamic jurisprudence and guarantees the AI system's continual

adherence to the values and principles it aims to maintain.

4.3.8 *Transparency*

Construct the AI system to provide transparency and elucidation. Researchers and end-users must have access to the AI's decision-making process, encompassing the foundational rules, data sources, and rationale (Nagadivya, 2023). This transparency cultivates confidence, facilitates critical assessment, and permits academics to authenticate the AI-generated fatwas. Transparency and explicability are fundamental attributes of an AI system employed in fatwa issuance. It entails structuring the system to elucidate its decision-making process. Researchers and end-users must have access to information regarding the foundational rules, data sources, and rationale utilised by the AI system. By fostering transparency, the AI system creators can cultivate confidence among academics and users. Transparency facilitates comprehension of the system's conclusion processes, hence permitting critical assessment and examination. Academics can examine and authenticate the fatwas produced by the AI system, guaranteeing their conformity with Islamic doctrines and principles. Explainability also assists in resolving any issues or enquiries that may emerge concerning the AI system's conclusions. When scholars and end-users comprehend the rationale behind the system's outputs, their confidence in its dependability and correctness is enhanced. Transparency and explainability in the AI system foster openness, accountability, and trust. It enables experts to interact with the system and guarantee its adherence to Islamic principles, promoting a cooperative and knowledgeable methodology for fatwa issuing.

4.3.9 *Ethical Oversight*

Establish measures to avert misuse, bias, or unethical conduct within the AI system. Consistently evaluate the AI algorithms and data to identify and correct any biases or inconsistencies. Guarantee adherence to privacy and data protection regulations to secure sensitive personal information urged to establish (Elmahjub, 2023). Moreover, adherence to privacy and data protection requirements is essential to safeguard the sensitive personal information potentially involved in the operation of the AI system. Using these ethical oversight mechanisms, organisations can maintain ethical standards, foster equity, and protect the rights and privacy of those affected by the AI system.

4.3.10 *Community Engagement and Feedback*

Foster community involvement by soliciting input from many stakeholders, including academics, religious authorities, and the general populace. Establish forums for transparent dialogue and avenues for feedback to guarantee the AI system corresponds with the values and requirements of the community it serves. Community involvement and input are essential for the creation and execution of an AI-driven fatwa issuance system. Open debates and dialogue platforms enable stakeholders, such as researchers, religious leaders, and the public, to contribute input and share their viewpoints. This participation guarantees that the system conforms to community values and satisfies their requirements. Soliciting opinions from academics and religious authorities is essential for integrating their experience in Islamic jurisprudence. Their insights might enhance the system and resolve any issues. Involving the public through surveys and consultations facilitates extensive input and guarantees that the system embodies the community's collective desires. Through the active engagement of the community, engineers can establish a transparent and accountable AI system that addresses their requirements. This collaborative methodology cultivates trust, ownership, and a collective feeling of accountability in the development and utilisation of the AI-driven fatwa issuance system.

Based on the proposed guidelines for monitoring AI-generated fatwas, the following figures are presented to facilitate understanding.

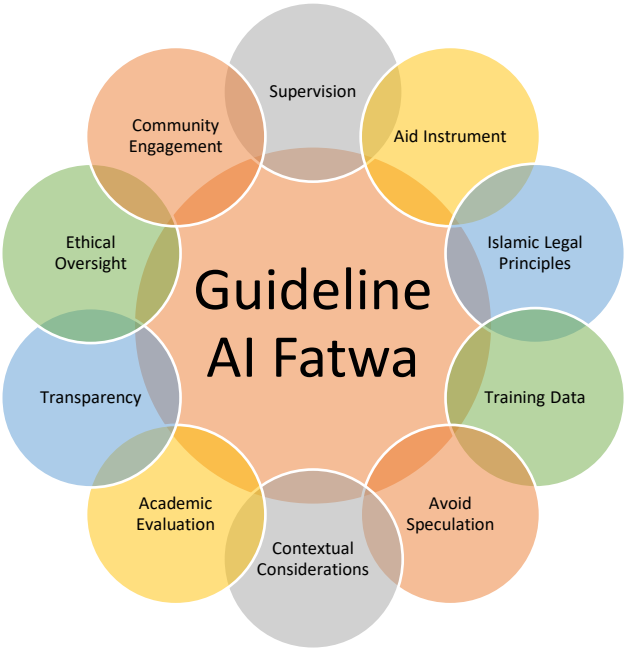

Figure 4. Guidelines for Monitoring AI-Generated Fatwas

5. CONCLUSION

The utilisation of AI in the issue of fatwas presents both opportunities and obstacles. Although AI can enhance the efficiency and accessibility of fatwa issuance, it also raises substantial ethical issues that necessitate meticulous consideration. Upholding the authority and accountability of human scholars, ensuring the integrity of Islamic principles, and protecting against biases and discrimination are essential factors.

The ethical concerns associated with AI-generated fatwas encompass human authority, contextual interpretation, moral and legal dilemmas, bias and discrimination, transparency and elucidation, source authenticity, human-machine interactions, and cultural sensitivity. These issues necessitate a cooperative strategy that includes Islamic scholars, Fiqh specialists, AI researchers, ethicists, and community stakeholders to formulate thorough frameworks that guarantee the ethical utilisation of AI in fatwa issuance.

Such frameworks should underscore the function of AI as an instrument to assist scholars rather than supplanting their experience. They must integrate strong systems for human oversight, contextual analysis, and interpretation, while ensuring transparency, explainability, and accountability. Moreover, the significance of diverse and representative training data, routine bias audits, and continuous academic evaluation cannot be overstated.

Continuous interaction, communication, and assessment are necessary to address ethical concerns. This guarantees that the utilisation of AI in fatwa issuance is consistent with the ideals and principles of Islamic law, honours cultural and ethical sensitivities, and addresses the requirements of those seeking religious guidance. A balanced strategy that incorporates technical breakthroughs while preserving the wisdom, insights, and ethical considerations of human scholars will be essential for the successful integration of AI in the issuance of fatwas within Islamic scholarship.

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