

RECONTEXTUALIZING CHATGPT IN HADITH STUDIES: AN EPISTEMOLOGICAL CRITIQUE OF ARTIFICIAL INTELLIGENCE AS RELIGIOUS AUTHORITY

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Abstract: The rapid development of generative artificial intelligence, particularly ChatGPT, has transformed the way Muslims access Islamic knowledge, including hadith studies. While this technology enhances accessibility to hadith literature, it also raises fundamental epistemological concerns regarding scholarly authority and the reliability of AI-generated religious information. This study aims to examine the position of ChatGPT in hadith studies from the perspective of Islamic epistemology by analyzing its legitimacy, limitations, and implications for religious authority. Employing a qualitative library research design, the study uses descriptive-analytical and epistemological approaches. Data were collected from classical hadith literature, contemporary scholarly works, and analyses of ChatGPT-generated responses related to hadith. The findings reveal that ChatGPT effectively facilitates information retrieval and preliminary exploration of hadith literature; however, it cannot function as an independent scholarly authority because its outputs are generated through probabilistic language prediction rather than *isnād* verification, *matn* criticism, or qualified scholarly reasoning. Uncritical dependence on ChatGPT may create an illusion of algorithmic authority that gradually displaces the established role of scholars and the methodological foundations of hadith sciences. Therefore, ChatGPT should be positioned as a supporting research tool whose outputs must always be validated through primary sources, hadith criticism, and expert supervision. This study underscores the need to reconstruct the relationship between artificial intelligence and hadith epistemology so that technological innovation can coexist with the preservation of the integrity and authority of Islamic scholarship.

Keywords: ChatGPT; Hadith Studies; Artificial Intelligence; Islamic Epistemology; Scholarly Authority.

Abstrak: Perkembangan kecerdasan artifisial generatif, khususnya ChatGPT, telah mengubah cara masyarakat mengakses pengetahuan Islam, termasuk kajian hadis. Kemudahan tersebut di satu sisi memperluas akses terhadap literatur hadis, tetapi di sisi lain memunculkan persoalan epistemologis mengenai otoritas keilmuan dan validitas informasi yang dihasilkan. Penelitian ini bertujuan menganalisis kedudukan ChatGPT

dalam kajian hadis melalui perspektif epistemologi Islam dengan menelaah legitimasi, keterbatasan, dan implikasinya terhadap otoritas keilmuan hadis. Penelitian menggunakan pendekatan kualitatif berbasis studi kepustakaan dengan metode deskriptif-analitis dan analisis epistemologis. Data diperoleh dari literatur hadis klasik, kajian kontemporer, serta analisis terhadap respons ChatGPT mengenai hadis. Hasil penelitian menunjukkan bahwa ChatGPT mampu mempercepat akses informasi dan mendukung eksplorasi awal literatur hadis, namun tidak dapat dijadikan otoritas ilmiah karena bekerja berdasarkan prediksi statistik bahasa, bukan verifikasi sanad, kritik matan, maupun ijtihad ilmiah. Ketergantungan tanpa verifikasi berpotensi melahirkan ilusi otoritas algoritmik yang menggeser peran ulama dan metodologi hadis yang telah mapan. Oleh karena itu, pemanfaatan ChatGPT perlu ditempatkan sebagai instrumen pendukung penelitian yang selalu dikontrol melalui verifikasi sumber primer, metodologi kritik hadis, dan pendampingan ahli. Penelitian ini menegaskan pentingnya rekonstruksi relasi antara kecerdasan artifisial dan epistemologi hadis agar inovasi teknologi tetap berjalan seiring dengan terjaganya otoritas keilmuan Islam.

Kata Kunci: *Chatgpt; Kajian Hadis; Kecerdasan Artifisial; Epistemologi Islam; Otoritas Keilmuan.*

INTRODUCTION

The rapid development of Artificial Intelligence (AI) in the last decade has dramatically transformed the landscape of human life. The emergence of Large Language Models (LLMs) such as GPT (Generative Pre-trained Transformer) has inaugurated a new chapter in human-machine interaction.¹ Trained through deep learning techniques on billions of words from diverse textual corpora, these models are capable of generating responses that closely resemble human language, with remarkable coherence and fluency.² Unsurprisingly, GPT has quickly become one of the most widely used technologies, permeating fields as diverse as education, business, and even religion.

This phenomenon carries significant implications for Islamic studies. Whereas previously Muslims relied on classical texts, religious scholars, or Islamic educational institutions to acquire religious knowledge, many now turn directly to GPT for instant answers.³ For instance, one may ask about the authenticity of a hadith, request an explanation of its meaning, or seek guidance on its application in modern contexts. In this way, GPT functions as a kind of “virtual assistant” perceived as capable of responding to almost any religious inquiry.

¹ Yanshu Wang et al., “Recent Advances in Interactive Machine Translation With Large Language Models,” *IEEE Access* 12 (2024): 179353–82, <https://doi.org/10.1109/ACCESS.2024.3487352>.

² Daniel W. Otter, Julian R. Medina, and Jugal K. Kalita, “A Survey of the Usages of Deep Learning for Natural Language Processing,” *IEEE Transactions on Neural Networks and Learning Systems* 32, no. 2 (February 2021): 604–24, <https://doi.org/10.1109/TNNLS.2020.2979670>.

³ Berlian Dwi Puji Mulya et al., “Islamic Religious Education Learning Process Through the Utilization of ChatGPT,” *JIE (Journal of Islamic Education)* 10, no. 1 (January 4, 2025): 36–54, <https://doi.org/10.52615/jie.v10i1.554>.

On the one hand, this phenomenon represents a form of democratization of Islamic knowledge. Information that was once restricted to students of Islamic seminaries, university circles, or scholars is now accessible to anyone with an internet connection.⁴ Such accessibility resonates with the Islamic spirit of disseminating knowledge. On the other hand, however, the presence of GPT raises serious epistemological and ethical dilemmas. Despite its sophistication, AI remains an algorithm operating probabilistically, not a scholar grounded in the sciences of hadith.

In classical Islamic tradition, hadith occupies a central position as the second source of law after the Qur'an.⁵ Its validity has been safeguarded through rigorous methodologies, including the verification of transmission chains (*isnād*), the assessment of narrators (*al-jarḥ wa al-ta'dīl*), and critical evaluation of the text (*matn*) to ensure its coherence with the Qur'an, rationality, and historical context.⁶ The science of hadith is often described as one of the most critical and meticulous disciplines in the intellectual history of Islam.

GPT, however, does not operate within this methodological framework. When asked about the status of a hadith, GPT frequently labels it as "authentic" (*ṣaḥīḥ*) or "weak" (*ḍa'īf*) without providing the *isnād*, the chain of transmitters, or the scholarly authorities behind such classifications. Its responses are brief, generalized, and tend to oversimplify the complexity of hadith criticism. This creates a serious epistemological risk: the public may perceive GPT's answers as authoritative, even though they are merely probabilistic textual predictions, often derived from fragmented sources of varying reliability.⁷ Moreover, GPT lacks hermeneutical awareness—it cannot contextualize a hadith in terms of its socio-historical setting, interpretive tradition, or jurisprudential schools. Consequently, GPT may reinforce reductive understandings of hadith, undermining the rich and diverse exegetical traditions of Islam.

Beyond epistemology, this phenomenon also raises ethical concerns. Within Islamic ethics, the transmission of religious knowledge is considered a profound trust (*amānah*) that requires caution and responsibility.⁸ The Prophet warned against misattributing sayings to him, deeming it a grave sin. GPT, however, is devoid of moral responsibility; it merely generates text based on

⁴ Moch Fakhruroji, "Muslims Learning Islam on the Internet," in *Handbook of Contemporary Islam and Muslim Lives* (Cham: Springer International Publishing, 2019), 1–17, https://doi.org/10.1007/978-3-319-73653-2_70-1.

⁵ G.H.A. Juynboll, *Studies on the Origins and Uses of Islamic Hadith* (London: Routledge, 2024), <https://doi.org/10.4324/9781003557098>.

⁶ Mekki Klaina, "Authenticating Hadith Manuscripts and the Methodology of Textual Accuracy," *Asian Journal of Islamic Studies and Da'wah* 3, no. 3 (May 5, 2025): 332–55, <https://doi.org/10.58578/ajisd.v3i3.5586>.

⁷ Luciano Floridi and Massimo Chiriatti, "GPT-3: Its Nature, Scope, Limits, and Consequences," *Minds and Machines* 30, no. 4 (December 1, 2020): 681–94, <https://doi.org/10.1007/s11023-020-09548-1>.

⁸ Abdulaziz Sachedina, "Islamic Ethics," *American Journal of Islam and Society* 6, no. 2 (December 1, 1989): 378, <https://doi.org/10.35632/ajis.v6i2.2692>.

linguistic probabilities. Yet for lay users, its confident and fluent language often creates the illusion of accuracy. This produces what may be termed an “illusion of authority,” in which an algorithm is treated as though it were a qualified scholar.⁹ Left unchecked, these dynamic risks the widespread dissemination of religious misinformation, potentially endangering Muslim faith and practice.

Scholarly discussions on AI and religion have been increasing, with studies addressing themes such as “Interaction of Artificial Intelligence with Religions” (Yeliz Akkaya Türköl, 2025),¹⁰ A.I. in Religion, A.I. for Religion, A.I. and Religion (Randall Reed, 2021),¹¹ and Religion and Emotions Towards Artificial Intelligence (Stanisław Fel and Jarosław Kozak, 2025).¹² However, critical examinations of GPT in the specific context of hadith studies remain scarce. This lacuna is striking, given the foundational role of hadith in Islamic law and theology. Without epistemological and ethical scrutiny, the uncritical use of GPT in relation to hadith risks destabilizing established frameworks of Islamic scholarship.

Against this backdrop, the present study focuses on GPT as a contemporary AI phenomenon and its relationship with the science of hadith. By integrating epistemological and ethical critiques of digital technology into the field of hadith studies, this research opens new interdisciplinary pathways, combining classical Islamic scholarship with the challenges of the digital age.

The significance of this research is both academic and practical. Academically, it contributes to the growing literature on the intersection of AI and Islam, particularly in relation to hadith studies. Practically, it cautions the public against treating GPT as an authoritative source of religious knowledge. Furthermore, it advocates the development of a digital ethics framework for Islamic studies one that integrates the rigor of classical hadith scholarship with the realities of contemporary technological innovation.

RESEARCH METHODS

This study employed a qualitative descriptive-analytical design. Primary data were generated from ChatGPT responses to selected hadith-related queries, while secondary data were drawn from classical hadith sources and contemporary literature on AI and epistemology. Data were collected through structured prompts directed to ChatGPT and documented for analysis, alongside a literature review of authoritative works. The analysis combined content analysis to identify patterns of

⁹ Timothy R. McIntosh et al., “A Culturally Sensitive Test to Evaluate Nuanced GPT Hallucination,” *IEEE Transactions on Artificial Intelligence* 5, no. 6 (June 2024): 2739–51, <https://doi.org/10.1109/TAI.2023.3332837>.

¹⁰ Yeliz Akkaya Türköl, “Interaction of Artificial Intelligence with Religions,” *Eskişehir Osmangazi Üniversitesi İlahiyat Fakültesi Dergisi* 12, no. Din ve Yapay Zeka (May 15, 2025): 60–79, <https://doi.org/10.51702/esoguifd.1626128>.

¹¹ Randall Reed, “A.I. in Religion, A.I. for Religion, A.I. and Religion: Towards a Theory of Religious Studies and Artificial Intelligence,” *Religions* 12, no. 6 (May 31, 2021): 401, <https://doi.org/10.3390/rel12060401>.

¹² Stanisław Fel and Jarosław Kozak, “Religion and Emotions Towards Artificial Intelligence: Christians, Non-Christians and Non-Believers,” *Scientia et Fides* 13, no. 1 (March 27, 2025): 75–103, <https://doi.org/10.12775/SetF.2025.005>.

GPT outputs—such as probabilistic orientation, reduction of sanad and matn, and the “illusion of authority”—with an epistemological-hermeneutical critique that compared these outputs against classical methodologies of isnād verification, matn criticism, and contextual interpretation. This approach enabled a critical evaluation of ChatGPT’s potential role as either an epistemic authority or merely a supportive tool in hadith studies.

RESULTS AND DISCUSSION

The Operational Concept of ChatGPT

To understand the position of ChatGPT as a generative artificial intelligence technology, it is crucial to unpack the foundational concepts and theoretical framework underpinning its mechanism. ChatGPT is not an entity that “understands” in an intrinsic sense; rather, it is a predictive system based on transformer neural networks trained on a massive corpus of textual data.¹³ Its operation begins with the process of tokenization, in which words or sentences are transformed into numerical units. These tokens are then processed through a self-attention mechanism, whereby the model calculates the interrelationships among words within a given context. The outcome is a response generated by selecting words or phrases according to their highest probabilistic likelihood.¹⁴

Through this mechanism, ChatGPT is able to generate answers that appear coherent, fluent, and authoritative. Nevertheless, such responses do not result from logical reasoning or epistemological understanding, but rather from statistical calculations. This explains why its output often appear convincing while lacking empirical accuracy or strong methodological grounding.¹⁵ This phenomenon is commonly referred to as hallucination, wherein the system produces fictitious information presented in language that appears valid and reliable.

From a functional perspective, ChatGPT offers a number of advantages that can be utilized for academic and practical purposes. First, its speed in producing responses allows for time efficiency, particularly for users seeking instant summaries or explanations. Second, its multilingual capacity makes ChatGPT an effective medium for cross-cultural communication in global contexts. Third, its compatibility with other digital technologies strengthens its role within broader ecosystems, ranging from voice assistants to collaborative research platforms.¹⁶

¹³ Tianyu Wu et al., “A Brief Overview of ChatGPT: The History, Status Quo and Potential Future Development,” *IEEE/CAA Journal of Automatica Sinica* 10, no. 5 (May 2023): 1122–36, <https://doi.org/10.1109/JAS.2023.123618>.

¹⁴ Hemant Kumar et al., “AI-Driven Natural Language Processing: ChatGPT’s Potential and Future Advancements in Generative AI,” in *2024 6th International Symposium on Advanced Electrical and Communication Technologies (ISAECT)* (IEEE, 2024), 1–6, <https://doi.org/10.1109/ISAECT64333.2024.10799591>.

¹⁵ Ana Suárez et al., “Unveiling the ChatGPT Phenomenon: Evaluating the Consistency and Accuracy of Endodontic Question Answers,” *International Endodontic Journal* 57, no. 1 (January 9, 2024): 108–13, <https://doi.org/10.1111/iej.13985>.

¹⁶ Mohammadreza Farrokhnia et al., “A SWOT Analysis of ChatGPT: Implications for Educational Practice and Research,” *Innovations in Education and Teaching International* 61, no. 3 (May 3, 2024): 460–74, <https://doi.org/10.1080/14703297.2023.2195846>.

These advantages highlight ChatGPT's significant instrumental value when positioned as a supportive tool in knowledge exploration and production.

Nevertheless, these advantages must be critically contextualized given the system's fundamental limitations. One prominent weakness lies in its lack of emotional intelligence. Although capable of mimicking persuasive communication styles, ChatGPT does not possess genuine empathy—an essential component of human interaction. Another limitation concerns its difficulty in grasping complex contexts. Since its responses are based on probabilistic patterns, the model struggles to capture the historical, philosophical, or hermeneutical nuances of a topic. As a result, its output often remains superficial despite being articulated in seemingly sophisticated language. The most fundamental limitation, however, is the absence of an internal verification mechanism for truth claims.¹⁷ Because it is trained on datasets of varying quality, ChatGPT is unable to reliably differentiate between authoritative and non-authoritative information.

From an epistemological standpoint, these strengths and weaknesses suggest that ChatGPT merely represents large-scale pattern recognition. It lacks mechanisms of critique, validation, or dialectical engagement that are central to human scholarly traditions. Consequently, its role should be confined to functioning as an auxiliary tool for exploration and the generation of preliminary ideas, rather than being treated as a legitimate authority of knowledge. The integration of ChatGPT into academic and religious domains must therefore be accompanied by robust epistemological filters, including source verification, human scholarly oversight, and the strengthening of digital literacy. Such measures will ensure that this technology serves to broaden access to information without undermining established scholarly authority.

General Patterns of GPT Responses in Hadith Studies

One of the most pressing epistemological concerns in utilizing GPT for hadith studies lies in the general patterns of its responses. At first glance, GPT's answers display the hallmarks of narrative coherence, linguistic fluency, and rhetorically logical structures. This pattern creates the impression that the generated responses possess strong scholarly authority, while the substance often represents only a simplification of the deep complexities inherent in the tradition of hadith criticism. In other words, GPT constructs a discursive representation that is "neat but shallow": neat in terms of linguistic presentation, but shallow in terms of methodological depth.¹⁸ This phenomenon raises serious challenges, for in hadith scholarship, epistemological legitimacy is never determined by surface-level presentation, but by a rigorous and meticulous process of *sanad*-based critique.

¹⁷ Nirmeen Elmohandes and Mostafa Marghany, "Effective or Ineffective? Using ChatGPT for Staffing in the Hospitality Industry," *European Journal of Tourism Research* 36 (November 1, 2023): 3617, <https://doi.org/10.54055/ejtr.v36i.3286>.

¹⁸ Alessandro Acciai et al., "Narrative Coherence in Neural Language Models," *Frontiers in Psychology* 16 (April 1, 2025), <https://doi.org/10.3389/fpsyg.2025.1572076>.

A closer analysis reveals three defining features of GPT's response patterns. First, conciseness and brevity: GPT tends to reduce complex issues into brief, easily digestible statements.¹⁹ While this accessibility is convenient, it simultaneously eliminates the intricate layers of *isnād* (chain of transmission), *matn* (content), and contextual analysis that constitute the very core of hadith sciences. Second, probabilistic orientation: GPT's outputs are not the result of critical assessment of *isnād* or *matn* as performed by traditional scholars, but rather the outcome of probabilistic calculations based on training data. Thus, the validity of its responses does not arise from epistemological verification, but from the frequency of linguistic patterns within its corpus. Third, ahistorical tendencies: GPT rarely provides the historical context of how a hadith was debated, interpreted, or positioned in the development of hadith scholarship. Yet in the Islamic intellectual tradition, historical context is indispensable for understanding the meaning and authority of a narration.

The combination of these three features produces a potentially dangerous epistemological illusion. Conciseness fosters the impression that hadith can be understood instantly without the discipline of criticism, whereas hadith studies are precisely designed to resist such instantaneity. The probabilistic approach replaces the principle of *sanad*-based authority with a statistical principle of likelihood. Meanwhile, the ahistorical orientation erases the intellectual dynamism of hadith discourse, rendering invisible the debates among scholars and the historical trajectory of criticism.²⁰ Thus, GPT's response patterns should not be regarded as merely rhetorical, but as an epistemological shift: from a layered epistemology of critique to a reductive epistemology of algorithms.

Within the framework of the philosophy of knowledge, GPT's response patterns can be understood as a form of epistemological simplification. The science of hadith, like other Islamic disciplines, has evolved through mechanisms of cumulative critique, debate, and clarification. Every conclusion presupposes a long and cautious scholarly process. GPT, by contrast, presents conclusions without disclosing the process behind them. This reflects what theorists of knowledge describe as the "flattening of complexity": the tendency of digital technologies to compress scholarly intricacies into instant information.²¹ As a result, non-specialist users may become unaware that behind the labels of *ṣaḥīḥ* or *ḍa'īf* lies a vast network of *isnād* analysis, biographical evaluation of transmitters, and extensive methodological debates.

This phenomenon also carries significant social implications. The seemingly authoritative responses of GPT risk displacing the authority of hadith

¹⁹ Abdullah A. Al Qurashi et al., "Can a Machine Ace the Test? Assessing GPT-4.0's Precision in Plastic Surgery Board Examinations," *Plastic and Reconstructive Surgery - Global Open* 11, no. 12 (December 2023): e5448, <https://doi.org/10.1097/GOX.0000000000005448>.

²⁰ Umayah, "Epistemology of Hadith Understanding: A Theoretical Study," *Jurnal Multidisiplin Madani* 3, no. 3 (March 30, 2023): 739–62, <https://doi.org/10.55927/mudima.v3i3.3567>.

²¹ Mohamed Fouz Mohamed Zacky and Md Moniruzzaman, "Islamic Epistemology' in a Modern Context: Anatomy of an Evolving Debate," *Social Epistemology* 38, no. 4 (July 3, 2024): 511–25, <https://doi.org/10.1080/02691728.2023.2227945>.

scholars in the eyes of the public. When communities become accustomed to receiving answers that are concise and immediate, they may perceive the extended explanations of scholars—an essential element of epistemological education—as unnecessary. In other words, GPT's response patterns may foster a process of disintermediation of authority, whereby the role of scholars as mediators between hadith texts and the Muslim community is undermined. From the perspective of the sociology of knowledge, this marks a radical shift: from knowledge grounded in scholarly authority to knowledge mediated by algorithms.²²

Another critical issue is GPT's lack of epistemological accountability. In hadith studies, every claim to authority can be traced and verified: *isnād* can be examined, *matn* can be compared, and scholarly opinions can be verified through classical literature. GPT, in contrast, operates as a black box: it provides probabilistic outputs without transparent citations that can be traced or verified.²³ This opacity further compounds the epistemological dilemma, since hadith scholarship is inherently predicated on transparency and verifiability.

Therefore, the general patterns of GPT's responses in hadith studies cannot be dismissed as mere stylistic tendencies. They represent a fundamentally different epistemic logic from that of *isnād*-based scholarship. GPT privileges accessibility and speed, while hadith sciences emphasize verification, caution, and moral responsibility. This epistemological divergence must be approached with caution, for if GPT's patterns are accepted uncritically, they risk supplanting centuries of Islamic scholarly tradition with an instant, superficial epistemology.²⁴

In this regard, critical engagement with GPT's response patterns is indispensable. Such patterns reveal that technological sophistication does not necessarily equate to epistemological depth. In the context of hadith studies, what is at stake is not merely informational accuracy, but also the integrity of scholarly authority and the moral responsibility involved in attributing words to the Prophet saw. Critical awareness of GPT's epistemological limitations paves the way toward formulating a more responsible framework for the use of AI: one in which GPT is positioned only as a technical aid, not as an epistemic authority. This ensures that Muslim communities can benefit from technological innovation without eroding the rich scholarly traditions that have been cultivated over centuries.

Ethical Dimension: The Illusion of Authority and Misinformation

One of the most significant findings of this study is the phenomenon of the illusion of authority attached to GPT's responses when applied to religious contexts, particularly in the field of hadith. GPT-generated answers often appear polished, fluent, and logically structured, giving the impression of scholarly authority.

²² Mike Zajko, "Artificial Intelligence, Algorithms, and Social Inequality: Sociological Contributions to Contemporary Debates," *Sociology Compass* 16, no. 3 (March 2, 2022), <https://doi.org/10.1111/soc4.12962>.

²³ Nils Köbis and Luca D. Mossink, "Artificial Intelligence versus Maya Angelou: Experimental Evidence That People Cannot Differentiate AI-Generated from Human-Written Poetry," *Computers in Human Behavior* 114 (January 2021): 106553, <https://doi.org/10.1016/j.chb.2020.106553>.

²⁴ Floridi and Chiriatti, "GPT-3: Its Nature, Scope, Limits, and Consequences."

Epistemologically, however, GPT lacks the mechanisms of *isnād* (chain of transmission) and *matn* (content) verification that are foundational to the Islamic scholarly tradition. Its responses are probabilistic in nature—mathematical outputs based on language patterns in large-scale datasets—rather than the result of scholarly *ijtihād* subjected to the rigorous discipline of *‘ilm al-ḥadīth*. Furthermore, GPT is unable to consistently distinguish between primary sources, such as classical hadith compilations, and secondary or non-academic sources, including popular writings, opinions, or even unreliable digital content. This poses a serious risk, particularly when lay users accept GPT’s answers uncritically, treating them as a basis for belief or even as grounds for personal *fatwā*.²⁵ From the perspective of Islamic ethics, this opens the door to the widespread dissemination of religious misinformation.

In contemporary digital ethics, principles such as accountability, transparency, and responsibility are considered fundamental. If these principles are indispensable in secular domains, their necessity is far greater in the Islamic scholarly context, where transmitted information directly affects the faith and practices of millions of believers. When GPT produces responses that are factually incorrect yet rhetorically convincing, the risk extends beyond misinformation: it undermines the authority of traditional scholars. A public accustomed to GPT’s instant and neatly packaged answers may come to undervalue the complex methodologies of *isnād* and *matn* criticism, which form the very backbone of hadith sciences.²⁶ These dynamic risks eroding respect for scholars as custodians of the epistemic chain of transmission. In other words, GPT threatens to shift epistemic authority from a *sanad*-based tradition toward a shallow algorithmic epistemology.

The risks extend further into the political realm. Because GPT generates responses based on dominant patterns within its training corpus, it is vulnerable to selective citation of hadith depending on user queries. With the right framing, GPT can be manipulated to support specific ideological positions, such as fundamentalism or gender conservatism. Here lies the dual danger—epistemological and political: a technology ostensibly designed to be neutral may inadvertently reinforce biased narratives that lack strong scholarly foundations in the hadith tradition.²⁷

From the perspective of Islamic ethics, disseminating religious knowledge without legitimate authority can amount to *tadlīs* (concealment or distortion of truth), or even *iftirā’* *‘alā Allāh* (false attribution to God). The science of hadith has always been vigilant against such errors; every transmitter is subject to scrutiny, and every narration is examined in depth. GPT, because of its methodological

²⁵ Mónica Andok, “The Impact of Online Media on Religious Authority,” *Religions* 15, no. 9 (September 12, 2024): 1103, <https://doi.org/10.3390/rel15091103>.

²⁶ Aqil M. Azmi, Abdulaziz O. Al-Qabbany, and Amir Hussain, “Computational and Natural Language Processing Based Studies of Hadith Literature: A Survey,” *Artificial Intelligence Review* 52, no. 2 (August 18, 2019): 1369–1414, <https://doi.org/10.1007/s10462-019-09692-w>.

²⁷ Fabio Yoshio Suguri Motoki, Valdemar Pinho Neto, and Victor Rodrigues, “More Human than Human: Measuring ChatGPT Political Bias,” *SSRN Electronic Journal*, 2023, <https://doi.org/10.2139/ssrn.4372349>.

limitations, cannot meet these standards. Unsupervised use of such a tool, therefore, presents a profound ethical problem.

To address this illusion of authority, it is necessary to establish an ethical framework guiding the use of GPT in hadith studies. First, every GPT-generated response in religious contexts should be accompanied by clear epistemic markers: identifying the source, assessing the reliability of the *isnād*, and citing scholarly evaluations. Second, periodic religious audits are required, wherein scholars and academics critically review GPT's outputs to prevent the spread of misinformation. Third, public education is crucial: communities must be taught that GPT is not a substitute for scholars but merely a tool requiring human verification. Without these safeguards, GPT risks functioning as a misleading "digital instant scholar" rather than a constructive aid to knowledge.

Epistemological Dimension: The Reduction of Sanad and Matn Complexity

One of the major challenges in employing GPT for hadith studies lies in its tendency to reduce epistemological complexity. In the classical tradition of hadith scholarship, the authenticity of a narration is never determined solely by its text (*matn*), but through a comprehensive assessment of the *sanad* (chain of transmission), the *matn* itself, and the broader context of transmission.²⁸ Classical scholars developed highly elaborate methodologies, ranging from *'ilm al-rijāl* (biographical evaluation of narrators), *jarḥ wa ta'dīl* (criticism and validation of narrators), to examinations of consistency between the *matn* and the overarching principles of *sharī'a*. Each of these layers of analysis required time, precision, and specialized expertise.²⁹ However, when a query is posed to GPT, this intricate epistemological process is frequently reduced to an instant answer that merely presents a final conclusion, without offering any substantive account of the underlying verification process.

For example, if a user asks about the status of the hadith "*innamā al-a'māl bi al-niyyāt*" ("Actions are judged by intentions"), GPT will swiftly state that the hadith is authentic (*ṣaḥīḥ*) and among the foundational narrations reported by al-Bukhārī and Muslim. While this statement is correct in general, GPT does not explain how the hadith came to be classified as authentic: who the narrators were, what its *isnād* looks like, and why it occupies such a central place in the hadith tradition. In classical literature, this narration is considered foundational not only because of its sound chain but also due to its broad theological and ethical implications. By bypassing this process, GPT risks severing the connection between methodological reasoning and final conclusions.³⁰

This limitation is closely tied to GPT's epistemic nature. As a language model, GPT operates through probabilistic prediction: it selects words based on

²⁸ Latifah Abdul Majid et al., "Exploring Innovations and Challenges in The Study of Hadith in The Digital Era," *International Journal of Academic Research in Business and Social Sciences* 14, no. 3 (March 16, 2024), <https://doi.org/10.6007/IJARBS/v14-i3/20957>.

²⁹ Mehmet Apaydın, "The Feasibility of Using Artificial Intelligence in Hadith Research," *مجلة 40*, no. 140 (March 4, 2025): 9–64, <https://doi.org/10.34120/jsis.v40i140.3479>.

³⁰ Apaydın.

statistical patterns in data, not by performing *isnād* verification or *matn* criticism. Consequently, GPT produces answers that sound convincing but cannot be verified against the methodological standards of hadith science.³¹ From the perspective of Islamic epistemology, this represents a serious problem, since hadith tradition demands not only the validity of content but also the validity of transmission. By neglecting *isnād*, GPT effectively shifts the epistemology of hadith from a model grounded in scholarly authority and layered verification to one dominated by shallow probabilistic language patterns.³²

Another consequence of this reduction is the erosion of the critical dimension of hadith studies. The discipline of hadith is not limited to categorizing narrations as *ṣaḥīḥ* or *ḍaʿīf*; it also cultivates *adab al-baḥṭh wa al-munāẓara* (the ethics of scholarly discourse and debate). This process trains Muslims to exercise caution, avoid hastily attributing statements to the Prophet saw, and appreciate scholarly disagreements.³³ If reliance on GPT replaces recourse to scholars, this epistemological pedagogy risks being lost. Future generations may come to see hadith as a collection of “instant answers” available at a click, rather than as a scholarly inheritance requiring discipline, *isnād*, and intellectual rigor.³⁴

Critiques of this epistemic reduction also resonate with modern philosophy of knowledge. Thinkers such as Foucault have highlighted how knowledge is inseparable from power relations. By offering instant answers, GPT creates a new power relation: algorithms supplant scholars as sources of epistemic authority.³⁵ Yet, the authority of scholars is built upon *isnād*, ethical integrity, and moral responsibility, whereas GPT’s “authority” is illusory, emerging from eloquence and speed of response. From this perspective, the uncritical use of GPT risks producing a generation more inclined to trust algorithmic authority than the epistemology of *sanad*.³⁶

To mitigate this reduction, several strategic steps are necessary. First, multidisciplinary collaboration is required among hadith scholars, AI experts, and digital ethicists to establish frameworks for using GPT in ways that align with Islamic epistemology. For instance, developing a verified hadith database that can be integrated into AI systems would allow responses to be both linguistically coherent and epistemically legitimate. Second, GPT-generated answers should be

³¹ Niken Aisyah Maharani Herwanza et al., “Penerapan Langchain Retriever Dengan Model Chat Openai Dalam Pengembangan Sistem Chatbot Hadis Berbasis Telegram,” *JTIM : Jurnal Teknologi Informasi Dan Multimedia* 6, no. 1 (May 26, 2024): 70–83, <https://doi.org/10.35746/jtim.v6i1.514>.

³² Umayah, “Epistemology of Hadith Understanding: A Theoretical Study.”

³³ Moath Mustafa Ahmad Najeeb, “A Novel Hadith Processing Approach Based on Genetic Algorithms,” *IEEE Access* 8 (2020): 20233–44, <https://doi.org/10.1109/ACCESS.2020.2968417>.

³⁴ Travis Zack et al., “Assessing the Potential of GPT-4 to Perpetuate Racial and Gender Biases in Health Care: A Model Evaluation Study,” *The Lancet Digital Health* 6, no. 1 (January 2024): e12–22, [https://doi.org/10.1016/S2589-7500\(23\)00225-X](https://doi.org/10.1016/S2589-7500(23)00225-X).

³⁵ Rico Hauswald, “Artificial Epistemic Authorities,” *Social Epistemology*, January 13, 2025, 1–10, <https://doi.org/10.1080/02691728.2025.2449602>.

³⁶ Andrea Ferrario, Alessandro Facchini, and Alberto Termine, “Experts or Authorities? The Strange Case of the Presumed Epistemic Superiority of Artificial Intelligence Systems,” *SSRN Electronic Journal*, 2023, <https://doi.org/10.2139/ssrn.4561425>.

accompanied by explicit epistemological markers, such as *isnād* status, scholarly disagreements, and references to primary sources. This would help users understand that hadith knowledge is complex, nuanced, and irreducible to a single conclusion. Third, Muslim communities must be educated about the continued necessity of scholars as primary authorities, while GPT should be positioned merely as a research tool, not a substitute for the scholarly chain of transmission.³⁷

In sum, GPT's reduction of *sanad* and *matn* complexity is not merely a technical issue but strikes at the heart of Islamic epistemology. Hadith tradition emphasizes caution, verification, and respect for scholarly disagreement. GPT, with its probabilistic nature, neglects these values and replaces them with instant yet shallow answers. If left unchallenged, this phenomenon risks distorting Muslim understandings of how religious knowledge is transmitted, studied, and practiced. Therefore, critical engagement with this epistemological dimension is essential to ensure that AI technologies reinforce—rather than undermine—the scholarly heritage of Islam.

Towards a Framework for Responsible Utilization of AI

Although the weaknesses of GPT in the interpretation of Hadith have been identified, this study does not advocate for the wholesale rejection of artificial intelligence in Islamic scholarship. To reject AI entirely would risk leaving the Muslim community behind in the tide of global technological advancement. The real challenge, therefore, lies in positioning AI within an epistemological, ethical, and methodological framework that prevents disinformation or the illusion of authority, while enabling it to serve as an instrument that enriches contemporary Hadith studies.³⁸ Addressing this challenge requires both conceptual and practical strategies, which may be summarized into three key proposals: affirming the role of AI as a *tool* rather than an *authority*, strengthening multidisciplinary collaboration, and developing Islamic AI models grounded in authoritative sources.

First, it is essential to reaffirm that AI, including GPT, should be positioned strictly as a *tool* or auxiliary aid, not as an epistemic authority. Many lay users tend to treat GPT's responses as "instant fatwas" or final truths, when in fact GPT lacks the epistemological foundations required for Hadith verification.³⁹ In the Islamic tradition, interpretive authority resides in scholars who possess chains of transmission (*sanad*), mastery of *jarḥ wa ta'dīl* (criticism and validation of narrators), an understanding of *matn* contexts, and the ability to balance divergent interpretations. Accordingly, GPT may serve only as a research assistant, facilitating access to literature, summarizing texts, or stimulating preliminary

³⁷ Mohammed Adnan Abdulrahman, "The Future of Hadith Studies in the Digital Age: Opportunities and Challenges," *Journal of Ecohumanism* 3, no. 8 (November 27, 2024), <https://doi.org/10.62754/joe.v3i8.4927>.

³⁸ Andri Nirwana AN et al., "SWOT Analysis of AI Integration in Islamic Education: Cognitive, Affective, and Psychomotor Impacts," *Qubahan Academic Journal* 5, no. 1 (March 4, 2025): 476–503, <https://doi.org/10.48161/qaj.v5n1a1498>.

³⁹ Ferrario, Facchini, and Termine, "Experts or Authorities? The Strange Case of the Presumed Epistemic Superiority of Artificial Intelligence Systems."

discussion. For instance, GPT may assist students of Hadith by retrieving various *sharḥ* from classical works such as *Fatḥ al-Bārī* or *Sharḥ Muslim*, but the interpretive conclusions must remain within the domain of qualified scholars. This distinction is critical to prevent the emergence of algorithmic illusions of authority that displace human scholarly expertise.

Second, establishing a framework for responsible AI usage requires robust multidisciplinary collaboration. Hadith studies alone cannot address the challenges posed by technology, nor can computer scientists design accurate systems without the epistemological guidance of Islamic scholarship.⁴⁰ Thus, collaboration among Hadith experts, AI specialists, and digital ethicists is indispensable. Hadith scholars can provide criteria for the validity of *sanad*, acceptable *matn* standards, and the methodology of Hadith criticism. AI researchers, in turn, can develop algorithms for semantic search and textual verification, while digital ethicists can formulate principles of accountability and transparency in data usage. Such collaboration must also be institutionally supported by authoritative bodies, including Islamic universities, fatwa councils, and research centers, ensuring both academic and religious legitimacy. Without this integration, AI will continue to operate in an unregulated fashion, relying on unverifiable internet data and thereby perpetuating religious misinformation.

Third, the most strategic step is the initiation of Islamic AI models trained exclusively on authoritative sources. The inherent limitation of generic GPT lies in its reliance on uncured internet data without epistemological safeguards.⁴¹ Consequently, fabricated Hadiths, controversial commentaries, or popular but unauthentic opinions may be presented on equal footing with authoritative literature. To remedy this, there is a pressing need for Large Language Models (LLMs) trained specifically on verified Islamic corpora, including the *Kutub al-Sittah*, classical *sharḥ* works (e.g., by Ibn Ḥajar, al-Nawawī, or al-Suyūṭī), and rigorously peer-reviewed contemporary Hadith studies. Such a model would not only provide greater epistemic reliability but could also serve as a trustworthy educational resource for the Muslim community. The development of an Islamic AI model is not a utopian aspiration: early initiatives such as the Hadith Digital Library or the digitization of Hadith manuscripts have already laid the groundwork. However, realizing an Islamic LLM requires substantial investment, international collaboration, and the commitment of global Islamic institutions.

Beyond these three central proposals, several critical considerations must be emphasized to ensure that the framework for AI utilization does not remain at a merely normative level. First, every AI-generated output in religious contexts should include epistemological markers. AI should not merely declare “this Hadith

⁴⁰ Issam El Naqa et al., “Translation of AI into Oncology Clinical Practice,” *Oncogene* 42, no. 42 (October 13, 2023): 3089–97, <https://doi.org/10.1038/s41388-023-02826-z>.

⁴¹ Amina El Ganadi et al., “Generative AI for Islamic Texts: The EMAN Framework for Mitigating GPT Hallucinations,” in *Proceedings of the 17th International Conference on Agents and Artificial Intelligence* (SCITEPRESS - Science and Technology Publications, 2025), 1221–28, <https://doi.org/10.5220/0013312800003890>.

is authentic” or “this Hadith is weak,” but should identify the scholars who made the judgment, the transmission chain upon which it rests, and the reference texts consulted. This aligns with principles of transparency in digital ethics as well as the Islamic scholarly demand for clarity of *sanad*. Second, religious auditing mechanisms must be institutionalized, whereby scholars and academics periodically evaluate AI outputs to prevent algorithmic biases or critical errors from spreading unchecked. Third, serious efforts must be undertaken to educate the public so that AI is not perceived as a replacement for religious authority, but rather as a supplementary literacy tool. Such education could be integrated into digital literacy curricula in Islamic seminaries, universities, and media-based da’wah programs.

A responsible framework for AI integration must also account for the geopolitics of knowledge. At present, global AI technologies are predominantly controlled by Western corporations that have no epistemological commitment to Islamic traditions. If Muslims remain passive consumers, religious narratives produced by AI will continue to be shaped by data curated from external perspectives. This scenario risks introducing a new form of epistemological colonialism, whereby Islamic intellectual authority is mediated through algorithms developed without sensitivity to Hadith methodology.⁴² Hence, developing Islamic AI is not merely a technological necessity but also a critical measure to safeguard the epistemic sovereignty of Islam in the digital age.

In conclusion, the integration of AI into Hadith studies demands not only pragmatic adaptation but also critical transformation. GPT and similar models are valuable only insofar as they are situated within a clear framework: they must be positioned as tools, reinforced through multidisciplinary collaboration, and directed toward the development of authoritative Islamic models. Furthermore, epistemological markers, religious audits, and digital literacy initiatives are essential to ensure that AI does not become a source of misinformation. This framework is crucial not merely for preserving the integrity of Hadith scholarship but also for ensuring that the Islamic intellectual legacy is not reduced to algorithmic data stripped of its epistemological spirit. Through such critical measures, AI can be reoriented into an educational and research partner that strengthens, rather than undermines, the tradition of Islamic scholarship.

CONCLUSION

This study has demonstrated that the integration of generative artificial intelligence, particularly GPT, into the field of hadith studies introduces a profound epistemological dilemma. On a technical level, GPT possesses remarkable capabilities in generating responses that are coherent, fluent, and persuasive. Yet, beneath this linguistic sophistication lies a fundamental limitation: it does not operate within the methodological principles that form the essence of hadith

⁴² Muhammet Yurtseven, “The Possibility of Producing Reliable Religious/Islamic Knowledge Through AI Developed Under the Influence of Positivist and Secular Thought,” *Eskişehir Osmangazi Üniversitesi İlahiyat Fakültesi Dergisi* 12, no. Din ve Yapay Zeka (May 15, 2025): 80–103, <https://doi.org/10.51702/esoguifd.1628249>.

sciences, namely *isnād* verification, *matn* criticism, and historical contextualization. Consequently, the responses produced by GPT cannot be regarded as legitimate scholarly outputs but merely as probabilistic predictions derived from patterns in data.

The findings of this research reveal the dangers of an epistemological shift that occurs when GPT is uncritically relied upon in religious contexts. The hadith tradition is built upon caution, traceability, and accountability, where every claim of authority must be substantiated through a rigorous chain of transmission and methodological scrutiny. GPT, however, reduces this complex process into instant information, often presenting only a final verdict without the necessary scholarly reasoning that underpins it. This phenomenon may be described as an “epistemological reduction”—the narrowing of hadith scholarship from a discipline of layered, meticulous critique into superficial algorithmic outputs.

From an ethical perspective, the study highlights the danger of what can be termed the “illusion of authority.” The polished language and logical structure of GPT’s answers create the appearance of scholarly legitimacy, despite the absence of moral consciousness, accountability, or the ethical responsibility that is central to the transmission of religious knowledge. Within the Islamic tradition, attributing false statements to the Prophet is considered a grave sin. Allowing GPT to circulate unverified responses in religious discourse therefore poses a serious risk: it not only facilitates misinformation but also undermines the role of scholars as custodians of knowledge, and in some cases, could even be exploited for ideological manipulation.

The central conclusion of this study is that GPT cannot and should not be treated as an epistemic authority in hadith scholarship. Its role must remain strictly instrumental: as a tool to accelerate access to sources, provide preliminary summaries, or stimulate interdisciplinary exploration. Interpretive authority, however, must remain in the hands of qualified scholars who possess sanad transmission, mastery of hadith criticism, and a deep sense of ethical responsibility.

Importantly, this study does not advocate the wholesale rejection of artificial intelligence in Islamic scholarship. Rather, it calls for a critical reorientation of its role. AI can indeed serve as a valuable partner in enhancing accessibility and broadening engagement with hadith literature, but only if it is contextualized within an epistemological and ethical framework that safeguards the integrity of Islamic scholarship. Without such critical awareness, Muslim communities risk succumbing to a form of algorithmic authority that is both reductive and illusory—one that threatens not only the discipline of hadith itself but also the broader intellectual heritage of Islam.

REFERENCES

Abdul Majid, Latifah, Mohd Nasir Abdul Majid, Hazlin Kader @Shahar, and Wan Siti Norjannah W Sulong. “Exploring Innovations and Challenges in The Study of Hadith in The Digital Era.” *International Journal of Academic*

- Research in Business and Social Sciences* 14, no. 3 (March 16, 2024). <https://doi.org/10.6007/IJARBSS/v14-i3/20957>.
- Abdulrahman, Mohammed Adnan. "The Future of Hadith Studies in the Digital Age: Opportunities and Challenges." *Journal of Ecohumanism* 3, no. 8 (November 27, 2024). <https://doi.org/10.62754/joe.v3i8.4927>.
- Acciai, Alessandro, Lucia Guerrisi, Pietro Perconti, Alessio Plebe, Rossella Suriano, and Andrea Velardi. "Narrative Coherence in Neural Language Models." *Frontiers in Psychology* 16 (April 1, 2025). <https://doi.org/10.3389/fpsyg.2025.1572076>.
- Akkaya Türkol, Yeliz. "Interaction of Artificial Intelligence with Religions." *Eskişehir Osmangazi Üniversitesi İlahiyat Fakültesi Dergisi* 12, no. Din ve Yapay Zeka (May 15, 2025): 60–79. <https://doi.org/10.51702/esoguifd.1626128>.
- Andok, Mónika. "The Impact of Online Media on Religious Authority." *Religions* 15, no. 9 (September 12, 2024): 1103. <https://doi.org/10.3390/rel15091103>.
- Apaydın, Mehmet. "The Feasibility of Using Artificial Intelligence in Hadith Research." *مجلة الشريعة والدراسات الإسلامية* 40, no. 140 (March 4, 2025): 9–64. <https://doi.org/10.34120/jsis.v40i140.3479>.
- Azmi, Aqil M., Abdulaziz O. Al-Qabbany, and Amir Hussain. "Computational and Natural Language Processing Based Studies of Hadith Literature: A Survey." *Artificial Intelligence Review* 52, no. 2 (August 18, 2019): 1369–1414. <https://doi.org/10.1007/s10462-019-09692-w>.
- Elmohandes, Nirmeen, and Mostafa Marghany. "Effective or Ineffective? Using ChatGPT for Staffing in the Hospitality Industry." *European Journal of Tourism Research* 36 (November 1, 2023): 3617. <https://doi.org/10.54055/ejtr.v36i.3286>.
- Fakhruroji, Moch. "Muslims Learning Islam on the Internet." In *Handbook of Contemporary Islam and Muslim Lives*, 1–17. Cham: Springer International Publishing, 2019. https://doi.org/10.1007/978-3-319-73653-2_70-1.
- Farrokhnia, Mohammadreza, Seyyed Kazem Banihashem, Omid Noroozi, and Arjen Wals. "A SWOT Analysis of ChatGPT: Implications for Educational Practice and Research." *Innovations in Education and Teaching International* 61, no. 3 (May 3, 2024): 460–74. <https://doi.org/10.1080/14703297.2023.2195846>.
- Fel, Stanisław, and Jarosław Kozak. "Religion and Emotions Towards Artificial Intelligence: Christians, Non-Christians and Non-Believers." *Scientia et Fides* 13, no. 1 (March 27, 2025): 75–103. <https://doi.org/10.12775/SetF.2025.005>.
- Ferrario, Andrea, Alessandro Facchini, and Alberto Termine. "Experts or Authorities? The Strange Case of the Presumed Epistemic Superiority of Artificial Intelligence Systems." *SSRN Electronic Journal*, 2023. <https://doi.org/10.2139/ssrn.4561425>.
- Floridi, Luciano, and Massimo Chiriatti. "GPT-3: Its Nature, Scope, Limits, and Consequences." *Minds and Machines* 30, no. 4 (December 1, 2020): 681–94. <https://doi.org/10.1007/s11023-020-09548-1>.

- Fouz Mohamed Zacky, Mohamed, and Md Moniruzzaman. "Islamic Epistemology' in a Modern Context: Anatomy of an Evolving Debate." *Social Epistemology* 38, no. 4 (July 3, 2024): 511–25. <https://doi.org/10.1080/02691728.2023.2227945>.
- Ganadi, Amina El, Sania Aftar, Luca Gagliardelli, and Federico Ruozzi. "Generative AI for Islamic Texts: The EMAN Framework for Mitigating GPT Hallucinations." In *Proceedings of the 17th International Conference on Agents and Artificial Intelligence*, 1221–28. SCITEPRESS - Science and Technology Publications, 2025. <https://doi.org/10.5220/0013312800003890>.
- Hauswald, Rico. "Artificial Epistemic Authorities." *Social Epistemology*, January 13, 2025, 1–10. <https://doi.org/10.1080/02691728.2025.2449602>.
- Herwanza, Niken Aisyah Maharani, Nazruddin Safaat Harahap, Febi Yanto, and Fitri Insani. "Penerapan Langchain Retriever Dengan Model Chat Openai Dalam Pengembangan Sistem Chatbot Hadis Berbasis Telegram." *JTIM: Jurnal Teknologi Informasi Dan Multimedia* 6, no. 1 (May 26, 2024): 70–83. <https://doi.org/10.35746/jtim.v6i1.514>.
- Juynboll, G.H.A. *Studies on the Origins and Uses of Islamic Hadith*. London: Routledge, 2024. <https://doi.org/10.4324/9781003557098>.
- Klaina, Mekki. "Authenticating Hadith Manuscripts and the Methodology of Textual Accuracy." *Asian Journal of Islamic Studies and Da'wah* 3, no. 3 (May 5, 2025): 332–55. <https://doi.org/10.58578/ajisd.v3i3.5586>.
- Köbis, Nils, and Luca D. Mossink. "Artificial Intelligence versus Maya Angelou: Experimental Evidence That People Cannot Differentiate AI-Generated from Human-Written Poetry." *Computers in Human Behavior* 114 (January 2021): 106553. <https://doi.org/10.1016/j.chb.2020.106553>.
- Kumar, Hemant, Madhavi Damle, N.A. Natraj, Abdul Aziz Afzal, and Maria Lapina. "AI-Driven Natural Language Processing: ChatGPT's Potential and Future Advancements in Generative AI." In *2024 6th International Symposium on Advanced Electrical and Communication Technologies (ISAECT)*, 1–6. IEEE, 2024. <https://doi.org/10.1109/ISAECT64333.2024.10799591>.
- McIntosh, Timothy R., Tong Liu, Teo Susnjak, Paul Watters, Alex Ng, and Malka N. Halgamuge. "A Culturally Sensitive Test to Evaluate Nuanced GPT Hallucination." *IEEE Transactions on Artificial Intelligence* 5, no. 6 (June 2024): 2739–51. <https://doi.org/10.1109/TAI.2023.3332837>.
- Mulya, Berlian Dwi Puji, Nasikhin, Fihri, and Mahfud Junaedi. "Islamic Religious Education Learning Process Through the Utilization of ChatGPT." *JIE (Journal of Islamic Education)* 10, no. 1 (January 4, 2025): 36–54. <https://doi.org/10.52615/jie.v10i1.554>.
- Najeeb, Moath Mustafa Ahmad. "A Novel Hadith Processing Approach Based on Genetic Algorithms." *IEEE Access* 8 (2020): 20233–44. <https://doi.org/10.1109/ACCESS.2020.2968417>.
- Naqa, Issam El, Aleksandra Karolak, Yi Luo, Les Folio, Ahmad A. Tarhini, Dana Rollison, and Katia Parodi. "Translation of AI into Oncology Clinical

- Practice.” *Oncogene* 42, no. 42 (October 13, 2023): 3089–97. <https://doi.org/10.1038/s41388-023-02826-z>.
- Nirwana AN, Andri, Alfian Rifai, Mohamad Ali, Triono Ali Mustofa, Viky Nur Vambudi, Muh. Nur Rochim Maksum, and Mush’ab Umar Budihargo. “SWOT Analysis of AI Integration in Islamic Education: Cognitive, Affective, and Psychomotor Impacts.” *Qubahan Academic Journal* 5, no. 1 (March 4, 2025): 476–503. <https://doi.org/10.48161/qaj.v5n1a1498>.
- Otter, Daniel W., Julian R. Medina, and Jugal K. Kalita. “A Survey of the Usages of Deep Learning for Natural Language Processing.” *IEEE Transactions on Neural Networks and Learning Systems* 32, no. 2 (February 2021): 604–24. <https://doi.org/10.1109/TNNLS.2020.2979670>.
- Qurashi, Abdullah A. Al, Ibrahim Abdullah S Albalawi, Ibrahim R. Halawani, Alanoud Hammam Asaad, Adnan M. Osama Al Dwehji, Hala Abdullah Almusa, Ruba Ibrahim Alharbi, Hussain Amin Alobaidi, Subhi M. K. Zino Alarki, and Fahad K. Aljindan. “Can a Machine Ace the Test? Assessing GPT-4.0’s Precision in Plastic Surgery Board Examinations.” *Plastic and Reconstructive Surgery - Global Open* 11, no. 12 (December 2023): e5448. <https://doi.org/10.1097/GOX.0000000000005448>.
- Reed, Randall. “A.I. in Religion, A.I. for Religion, A.I. and Religion: Towards a Theory of Religious Studies and Artificial Intelligence.” *Religions* 12, no. 6 (May 31, 2021): 401. <https://doi.org/10.3390/rel12060401>.
- Sachedina, Abdulaziz. “Islamic Ethics.” *American Journal of Islam and Society* 6, no. 2 (December 1, 1989): 378. <https://doi.org/10.35632/ajis.v6i2.2692>.
- Suárez, Ana, Víctor Díaz-Flores García, Juan Algar, Margarita Gómez Sánchez, María Llorente de Pedro, and Yolanda Freire. “Unveiling the ChatGPT Phenomenon: Evaluating the Consistency and Accuracy of Endodontic Question Answers.” *International Endodontic Journal* 57, no. 1 (January 9, 2024): 108–13. <https://doi.org/10.1111/iej.13985>.
- Suguri Motoki, Fabio Yoshio, Valdemar Pinho Neto, and Victor Rodrigues. “More Human than Human: Measuring ChatGPT Political Bias.” *SSRN Electronic Journal*, 2023. <https://doi.org/10.2139/ssrn.4372349>.
- Umayah. “Epistemology of Hadith Understanding: A Theoretical Study.” *Jurnal Multidisiplin Madani* 3, no. 3 (March 30, 2023): 739–62. <https://doi.org/10.55927/mudima.v3i3.3567>.
- Wang, Yanshu, Jinyi Zhang, Tianrong Shi, Dashuai Deng, Ye Tian, and Tadahihiro Matsumoto. “Recent Advances in Interactive Machine Translation With Large Language Models.” *IEEE Access* 12 (2024): 179353–82. <https://doi.org/10.1109/ACCESS.2024.3487352>.
- Wu, Tianyu, Shizhu He, Jingping Liu, Siqi Sun, Kang Liu, Qing-Long Han, and Yang Tang. “A Brief Overview of ChatGPT: The History, Status Quo and Potential Future Development.” *IEEE/CAA Journal of Automatica Sinica* 10, no. 5 (May 2023): 1122–36. <https://doi.org/10.1109/JAS.2023.123618>.
- Yurtseven, Muhammet. “The Possibility of Producing Reliable Religious/Islamic

Knowledge Through AI Developed Under the Influence of Positivist and Secular Thought.” *Eskişehir Osmangazi Üniversitesi İlahiyat Fakültesi Dergisi* 12, no. Din ve Yapay Zeka (May 15, 2025): 80–103. <https://doi.org/10.51702/esoguifd.1628249>.

Zack, Travis, Eric Lehman, Mirac Suzgun, Jorge A Rodriguez, Leo Anthony Celi, Judy Gichoya, Dan Jurafsky, et al. “Assessing the Potential of GPT-4 to Perpetuate Racial and Gender Biases in Health Care: A Model Evaluation Study.” *The Lancet Digital Health* 6, no. 1 (January 2024): e12–22. [https://doi.org/10.1016/S2589-7500\(23\)00225-X](https://doi.org/10.1016/S2589-7500(23)00225-X).

Zajko, Mike. “Artificial Intelligence, Algorithms, and Social Inequality: Sociological Contributions to Contemporary Debates.” *Sociology Compass* 16, no. 3 (March 2, 2022). <https://doi.org/10.1111/soc4.12962>.