Digitalizing the Quran and Hadith: Epistemological Reconstruction and Challenges of Religious Authority in the Digital Age

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Abstract
This study examines how the digital transformation of the Quran and Hadith reshapes Islamic epistemology while maintaining the authenticity and authority of revealed texts in the contemporary technological era. The central issue addressed is the tension between expanded accessibility enabled by digital platforms and the emerging challenges related to textual verification, ethical responsibility, and interpretative accuracy. This research employs a Systematic Literature Review (SLR) by analyzing peer-reviewed national and international publications focusing on the digitalization of sacred texts, artificial intelligence in Islamic studies, and data governance. The analysis follows a thematic and comparative approach through the stages of identification, screening, evaluation, and synthesis, emphasizing philosophical, epistemological, and normative dimensions. The findings reveal that digitalization enhances scholarly engagement, supports innovative *da'wah* practices, and contributes to the preservation and dissemination of Islamic knowledge. However, it also poses significant risks, particularly the potential for epistemic distortion, algorithmic bias, and weakened mechanisms of *sanad* and textual authentication. This study argues that the digitalization of the Quran and Hadith must be grounded in ethical frameworks, rigorous scholarly methodology, and sharia-based principles to ensure its legitimacy as a sustainable instrument for Islamic education and religious authority in the digital age.

INTRODUCTION

The digitalization of the Quran and Hadith is rooted in the responsibility of Muslims to preserve the purity of divine revelation while facilitating access to the primary sources of Islamic law (Fajrie et al., 2023; Firdaus, 2022). The guarantee of the Quran's preservation from alteration and distortion is explicitly affirmed in Quran Surah Al-Hijr (15:9), which serves as a theological foundation for efforts to safeguard revelation across generations. In the modern context, this responsibility has expanded through digital transformation, enabling broader and more systematic storage, distribution, and learning of sacred texts.

According to Nursyam (2019), the utilization of information technology in Quranic and Hadith education represents the fulfillment of a sharia-based responsibility to disseminate religious knowledge effectively and efficiently. In line with this view, Hakak et al (2017) emphasizes that digitalization plays a crucial role in ensuring the security and authenticity of religious texts, while Sani & Abdulmumini, (2025) highlight its contribution to expanding global access to Islamic education. Therefore, digitalization should not be understood merely as a technical innovation, but also as a form of intellectual and spiritual responsibility in preserving and transmitting revelation to future generations.

From a philosophical perspective, the digitalization of the Quran and Hadith represents a synthesis between the Islamic scholarly tradition and modern technological paradigms. Wahid (2024) argues that the relationship between religion and technology reflects a dialectic between spiritual values and scientific rationality. Within the framework of Islamic modernization, Rusli (2023) views digitalization as a form of contextualizing Islamic teachings within digital spaces without diminishing their sacredness. This perspective aligns with the concept of a "revolution of interpretation" proposed by Rouf (2025), referring to a shift from conventional exegetical methods toward more interactive and contextual digital interpretations. Accordingly, digitalization functions not only as a technical tool but also as an epistemological instrument that reshapes how Muslims understand and interpret revelation.

This phenomenon is evident in the proliferation of various Islamic digital applications and platforms, such as Digital Quran and Hadith Browser (Agarwal et al., 2018; Fajrie et al., 2023), as well as national platforms like Quran Kemenag and online da'wah media (Firdaus, 2022; Nursyam, 2019). Nevertheless, the process of digitalization also presents ethical and epistemological challenges, including the potential for interpretive deviation, the plagiarism of sacred texts, and the weakening of sanad validity due to insufficient scholarly verification mechanisms (Abdullah & Falah, 2025; Umanah, 2024). These conditions indicate that advances in digital technology generate ambivalent implications for Islamic studies and religious practice.

From philosophical and theoretical standpoints, the digitalization of the Quran and Hadith reflects a dialectical relationship between spiritual values and scientific progress. Rusli (2023); Wahid (2024) interpret this phenomenon as part of the broader process of Islamic modernization that seeks to preserve the sanctity of revelation amid rapid digital transformation. The concept of a "revolution of interpretation" underscores a paradigm shift from conventional exegetical approaches toward digital interpretations that are more adaptive to technological developments (Rouf, 2025). Phenomenologically, digitalization has transformed the ways Muslims interact with sacred texts, particularly through digital applications and platforms that expand access to global Islamic knowledge sources. However, as cautioned by (Abdullah & Falah, 2025; Umanah, 2024), these transformations may also reduce the accuracy of sanad and the validity of interpretations if they are not supported by robust methodological foundations.

Numerous studies on the digitalization of the Quran and Hadith have been conducted with diverse focuses and approaches. Most previous research has emphasized technological aspects, such as data security and text authentication (Hakak et al., 2018; Kamaruddin et al., 2017), as well as innovations in online learning (Setiani & Makkaraka, 2024). In addition, several studies have developed digital applications and systems to enhance user access to and interactivity with sacred texts (Fajrie et al., 2023; Zakariah et al., 2017). Despite their significant contributions, these studies tend to separate technological concerns from juridical, philosophical, and theological dimensions, resulting in digitalization being understood primarily as a

technical innovation rather than a complex epistemological and spiritual process.

This gap indicates the need for a more integrative approach to examining the digitalization of the Quran and Hadith. Accordingly, this study is designed to analyze the digitalization of sacred texts through three interrelated dimensions juridical, philosophical, and theoretical as a unified analytical framework. This approach seeks to bridge the longstanding divide between technology and theology, which has often been discussed in isolation. Thus, digitalization is positioned not merely as technological advancement, but as a scholarly and spiritual phenomenon that influences the authenticity of revelation, interpretive ethics, and Islamic scholarly authority.

Based on the foregoing discussion, this study aims to comprehensively examine the digitalization of the Quran and Hadith and its implications for authenticity, the dissemination of Islamic knowledge, and religious authority in the digital era. Through an integrative analysis, this research is expected to contribute both academically and practically to the development of secure, ethical, and revelation-based Islamic digital systems, thereby enabling digital transformation to function as a sustainable bridge between Islamic scholarly tradition and technological innovation.

METHODS

The unit of analysis in this study consists of scholarly publications that examine the phenomenon of the digitalization of the Quran and Hadith from various multidisciplinary perspectives. Each academic article is positioned as an analytical unit representing the development of Islamic thought within the context of technological modernization. The analytical focus is directed toward examining how the application of digital technologies influences the authenticity of revelation, interpretive methodologies, and the relationship between spiritual values and scientific progress (Akem et al., 2025; Engkizar, Jaafar, Alias, et al., 2025; Rambe et al., 2025). This study also encompasses normative, epistemological, and practical dimensions that emerge as implications of digital transformation in the religious sphere. By employing academic publications as the unit of analysis, this research not only examines scholarly content but also maps evolving intellectual discourses within the field of digital Islamic studies. This approach enables the assessment of the extent to which digitalization has shaped new paradigms in understanding and disseminating Islamic knowledge globally through digital media and technologies.

This study employs a Systematic Literature Review (SLR) method with a qualitative descriptive-analytical approach. This design is selected because it enables the systematic collection, evaluation, and synthesis of research findings to achieve a comprehensive understanding of the digitalization of the Quran and Hadith (Hitt & Tucker, 2016; Lame, 2019; Samiaji & Nuryadi, 2024; Tosi et al., 2024). The purpose of adopting the SLR method is to identify scholarly developments, challenges, and implications of digitalization for Islamic scholarship, particularly in the contexts of education, *da'wah*, and the authentication of sacred texts. Through this approach, the study uncovers thematic patterns and research gaps that have received limited attention in previous studies. The SLR method also facilitates interdisciplinary analysis integrating technology, theology, and Islamic philosophy within a cohesive theoretical framework. Accordingly, the research design is not merely descriptive but also analytical in tracing the interconnections between digital technology, spiritual values, and the authenticity of revelation in the modern era (Engkizar et al., 2023; Engkizar et al., 2025; Lame, 2019).

The data sources for this study comprise 35 national and international scholarly articles published between 2014 and 2025. These articles were retrieved from reputable academic databases, including Google Scholar, ScienceDirect,

ResearchGate, and relevant Islamic digital portals. Source selection was guided by criteria of topical relevance, publication recency, and scholarly contribution to the study of Quranic and Hadith digitalization. The analyzed literature spans several fields, including information technology in Islamic studies, digital education, Quranic exegesis and Hadith studies, and religious digital ethics. Each publication was examined to identify the relationship between digital technologies and Islamic scholarly values, particularly in relation to text authentication, data security, and the adaptation of Islamic education to technological advancement. The diversity of data sources allows this study to present a comprehensive and representative portrayal of the evolving discourse on Islamic digitalization (Suhendi, 2024).

Data collection was conducted through four main stages: identification, selection, evaluation, and synthesis of the literature. The identification stage began with a systematic literature search using keywords such as *Digital Quran*, *Digital Hadith*, *Islamic Artificial Intelligence*, and *Religious Technology*. The selection stage involved screening publications based on their relevance to the research focus, while the evaluation stage assessed methodological rigor and substantive alignment with the research objectives. Studies that did not meet thematic, methodological, or publication-period criteria were excluded from the review. Subsequently, the synthesis stage involved categorizing the selected studies according to themes, approaches, and key findings. This systematic procedure enabled the identification of general patterns, scholarly gaps, and emerging trends in the digitalization of Islamic studies. Through a structured data collection process, this research ensures traceability and accuracy at each stage of the review.

Data analysis was conducted using thematic and comparative approaches. The thematic analysis categorized research findings into major themes, such as sacred text authentication, technological integration in Islamic education, and religious digital ethics. Meanwhile, the comparative analysis examined similarities and differences across studies to achieve a more holistic understanding. The analysis focused on three primary dimensions: juridical (preservation of revelation and *maqasid al-shari'ah*), philosophical (the relationship between spirituality and technology), and theoretical (Islamic epistemology and the modernization of interpretation). The validity of the findings was ensured through source triangulation and critical review of the analyzed literature. The synthesized results were then interpreted to formulate directions for the future development of digital Islamic studies. Through this approach, the research not only inventories prior findings but also constructs a conceptual model that positions digitalization as an ethical, integrative, and sustainable religious phenomenon within the context of modern Islamic civilization.

RESULT AND DISCUSSION

Based on Abduloh et al (2021); Fahmi & Layyinnati (2025); Firdaus (2022), the use of digital technology in Quranic and Hadith education has brought significant changes in the way Muslims access, understand, and disseminate Islamic knowledge. Through online media, digital applications, and interactive platforms, processes of *da'wah* and religious education are now able to reach broader audiences without spatial and temporal limitations. Digitalization has demonstrably enhanced efficiency, accessibility, and equity in access to Islamic knowledge sources on a global scale. Beyond serving as a learning tool, technology has also emerged as a contemporary medium of *da'wah* capable of presenting Islamic teachings in dynamic, adaptive, and contextually relevant ways. Nevertheless, these advancements must be accompanied by ethical oversight, academic governance, and moral responsibility to ensure that the dissemination of knowledge remains grounded in the principle of the authenticity of revelation. Without such foundations, digitalization risks leading to a reduction of meaning and deviation from the essential spiritual values of Islam.

Findings from Hakak et al (2017, 2018); Kamaruddin et al (2017) indicate that the application of watermarking, pattern recognition, and block chain technologies plays a strategic role in safeguarding the integrity and authenticity of digital sacred texts. These innovations are employed to ensure that Quranic and Hadith texts remain authentic and protected from forgery, alteration, or unauthorized dissemination. Such digital security technologies demonstrate that scientific advancement can synergize with Islamic values in efforts to preserve revelation. Through automated verification systems and transparent record-keeping, any modification to the text can be accurately detected, thereby maintaining its authenticity (Baroud et al., 2025; Jaafar et al., 2025). However, the successful implementation of these technologies requires strict regulation, supervision, and academic validation to ensure alignment with Islamic scholarly principles and ethics. In this sense, digital security is not merely a technical concern but also a manifestation of moral responsibility in safeguarding the sanctity of revelation in the modern era.

Based on the studies of Rouf (2025); Yuningsih & Ghany (2024), digitalization has given rise to the concept of an interpretive revolution, characterized by a shift from conventional exegetical methods toward more interactive, participatory, and contextual digital approaches. This transformation opens new spaces for Muslims to actively engage in understanding Quranic verses through digital media such as tafseer applications, online portals, and Islamic discussion forums. This process not only expands access to exegetical knowledge but also fosters critical and collaborative thinking among contemporary Quranic learners. However, the ease of access also entails the risk of unrestricted interpretations lacking solid scholarly foundations. Therefore, the digitalization of Quranic interpretation must remain grounded in principles of *adab*, rigorous scholarly methodology, and recognized religious authority to preserve the sanctity of the revealed text. When properly managed, digitalization can serve as a means of strengthening authentic and contextual Quranic understanding in the modern era.

Digitalization in Islamic education has driven significant transformations in the methods of teaching the Quran and Hadith (Firdaus, 2022; Setiani & Makkaraka, 2024; Suhartawan & Hasanah, 2023). Information technology functions as a catalyst for pedagogical transformation, enabling learning processes to become more interactive, flexible, and based on cross-national collaboration. Through digital platforms, students and educators gain broader access to *tafseer*, hadith, and Islamic learning materials, thereby enriching their spiritual experience in understanding revelation. Moreover, online learning systems enhance learner autonomy and contribute to the development of global Islamic literacy across diverse socio-cultural contexts. However, the effectiveness of digitalization in Islamic education largely depends on maintaining a balance between technological advancement and spiritual moral values. Accordingly, the implementation of digital innovation must be ethically guided to ensure alignment with public benefit (*maslahah*), scholarly integrity, and the noble objectives of Islamic education.

Advancements in digital technology entail two major consequences: increased accessibility to religious knowledge and complex ethical risks (Hidayah & Musaddad, 2025; Wahid, 2024). While digitalization enhances the effectiveness of Islamic learning and expands the scope of *da'wah*, it also raises concerns regarding the commercialization of religious content, declining sincerity in *da'wah* practices, and the erosion of spiritual values due to the dominance of algorithms and market-driven trends. This condition reflects a fundamental dilemma between technological innovation and the sanctity of Islamic teachings. Therefore, robust digital ethical governance grounded in *maqasid al-shari'ah* particularly the protection of religion (*hifz al-din*), intellect, and morality is essential. Such ethical frameworks serve as normative

safeguards to ensure that technology functions as a medium of intellectual worship rather than merely an economic commodity. Consequently, digitalization acquires meaning only when its progress is directed toward strengthening humanity, spirituality, and the authenticity of revelation amid global modernization.

Research conducted by (Agarwal et al., 2018; Sani & Abdulmumini, 2025) demonstrates significant progress in the application of artificial intelligence (AI) for digital Hadith authentication. Systems such as the Hadith Browser Verification Extension have been developed to automatically detect fabricated hadiths with high levels of accuracy and efficiency. By employing machine learning algorithms, these technologies are capable of analyzing chains of transmission (*sanad*), textual content (*matan*), and textual patterns to distinguish between *sahih*, *hasan*, and *da'if* hadiths effectively. Nonetheless, AI cannot fully replace the scholarly authority of ulama and hadith experts who possess deep contextual and historical understanding of transmission narratives. Therefore, integration between artificial intelligence and classical scholarly methodologies is required to establish a more robust, accurate, and epistemologically grounded system of hadith verification. This synergy is expected to preserve the authenticity of hadith sources in the digital era while reinforcing Islamic scholarly authority in addressing modern challenges.

According to Abusharif (2023); Rusli (2023), digitalization represents an ambivalent phenomenon that simultaneously offers significant opportunities and poses threats to the sanctity of revelation. Digital technology expands the scope of religious understanding and facilitates new forms of interaction between individuals and sacred texts, enabling the global and cross-cultural dissemination of Islamic teachings. However, when not grounded in strong theological foundations and scholarly ethics, digitalization risks obscuring the essence of religious teachings and contributing to the secularization of Islamic knowledge. This phenomenon underscores the necessity of harmoniously integrating spiritual values with technological advancement to ensure that digital development remains oriented toward strengthening faith rather than merely facilitating information access. With such balance, technology can function as an innovative medium for *da'wah* and learning without compromising religious values, thereby positioning digitalization as an instrument of spiritual enlightenment and preservation of revelation in the modern era.

Digitalization cannot be understood solely from a technical perspective; rather, it must be examined through an integrated framework encompassing Islamic values, legal principles, and epistemology. This integrative approach serves to bridge the gap between religious knowledge and modern science while ensuring that technological advancement does not alienate Muslims from the spiritual essence of revelation. By combining theological perspectives, philosophy of science, and information technology, digitalization can be directed as a scholarly process firmly rooted in faith-based principles and the sanctity of sacred texts. This study further emphasizes that collaboration between religious scholarship and digital innovation is a fundamental prerequisite for maintaining the authenticity, relevance, and sustainability of Islamic teachings in an increasingly interconnected global era.

Digitalization constitutes a form of *shar'i* responsibility for Muslims to preserve revelation and expand *da'wah* in the global era. The utilization of digital technology functions not merely as a means of information dissemination but also as a medium of intellectual worship that facilitates the broader, faster, and more inclusive transmission of Islamic values. In this context, digitalization symbolizes the integration of spirituality and modern innovation oriented toward the welfare of the *ummah*. The findings indicate that digitalization is not merely a technical advancement but an expression of religious consciousness aligned with the principles of *maqasid al-shari'ah*, particularly in safeguarding religion (*hifz al-din*) and knowledge (*hifz al-'ilm*).

Therefore, its implementation must be directed toward preserving the authenticity of revelation, preventing the commercialization of religious teachings, and strengthening the sustainability of Islamic *da'wah* through an ethical, scholarly, and value-based digital ecosystem grounded in universal Islamic principles.

The digitalization of the Quran and Hadith has brought fundamental changes in the ways Muslims understand, access, and disseminate religious teachings. Based on the findings of Abduloh et al (2021); Fahmi & Layyinnati (2025); Firdaus (2022), digital media such as applications, online platforms, and interactive learning systems have expanded the reach of *da'wah* beyond spatial and temporal boundaries. Digital technology has rendered Islamic knowledge more open, dynamic, and accessible across generations and regions. This transformation signifies a paradigm shift from conventional learning traditions toward a collaborative and participatory learning era. However, ethical and academic supervision remains essential to ensure that the dissemination of religious teachings adheres to the principle of the authenticity of revelation. Without a strong moral and methodological framework, digitalization risks generating interpretive deviations that may obscure the spiritual values of Islam amid rapid and uncontrolled modernization.

Findings from Hakak et al (2017, 2018); Kamaruddin et al (2017) demonstrate that innovations such as watermarking, pattern recognition, and block chain play a vital role in safeguarding the authenticity of digital sacred texts. These systems ensure that the Quran and Hadith are protected from forgery, alteration, and unauthorized dissemination. Digital security technologies provide evidence that modern science can be harmonized with religious values in the preservation of revelation. Through permanent recording mechanisms and automated verification processes, any modification can be accurately detected. Nevertheless, the effectiveness of these systems requires clear ethical policies and rigorous scholarly regulation to prevent misuse. Therefore, digital security is not merely a technical issue but a manifestation of moral responsibility in preserving revelation. The integration of technological disciplines and Islamic ethics must be strengthened to ensure that digitalization maintains the sanctity of sacred texts while reinforcing faith-based and spiritually grounded scholarship.

According to Rouf (2025); Yuningsih & Ghany (2024), digitalization has generated a phenomenon described as an interpretive revolution, marked by a shift from conventional exegetical methods toward more interactive and contextual digital interpretations. This process enables Muslims to actively participate in understanding Quranic verses through tafseer applications and online discussion platforms. While open access to exegetical sources enhances critical awareness, it also poses the risk of unregulated interpretations lacking scholarly authority. Consequently, guidance from qualified scholars and adherence to methodological principles are imperative to ensure that digital interpretation remains within the boundaries of Islamic scholarship. This revolution should not be understood as a displacement of authority but rather as an expansion of religious epistemology that integrates classical scholarly traditions with modern technology to strengthen authentic and contextual understanding of revelation.

Research by Firdaus (2022); Setiani & Makkaraka (2024); Suhartawan & Hasanah (2023) confirms that digitalization has become a primary catalyst in the transformation of Islamic education. Information technology has made the teaching and learning of the Quran and Hadith more flexible and interactive while enabling cross-national academic collaboration. Students and educators can access a wide range of tafseer, hadith collections, and classical sources in digital formats, thereby enriching global Islamic literacy. However, this transformation also introduces moral challenges, including reduced direct spiritual interaction and the potential misuse of religious content. Therefore, the integration of technology in Islamic education must

be balanced with principles of authenticity, moral responsibility, and academic integrity. When ethically managed, digitalization can function as a medium of scholarly *da'wah* and an educational tool that not only enhances efficiency but also nurtures spiritual awareness, bridging knowledge and faith in the context of digital globalization.

Hidayah & Musaddad (2025); Wahid (2024) caution that technological advancement entails ethical risks, such as the commercialization of religious knowledge and the erosion of spiritual meaning. Conversely, studies by Agarwal et al (2018) highlight the potential of artificial intelligence (AI) in strengthening Hadith authentication through systems such as the Hadith Browser Verification Extension, which is capable of automatically detecting fabricated hadiths. Despite its efficiency, AI cannot fully replace the role of scholars, as the contextual analysis of *sanad* and *matan* still requires human judgment. A synergistic combination of algorithms and traditional scholarship can produce a robust and ethically grounded verification system. Accordingly, technology must be positioned as a supportive tool rather than the ultimate authority in determining the authenticity of sacred texts. The integration of ethics, technology, and hadith scholarship ensures that digitalization proceeds in alignment with the values of *maqasid al-shari'ah*, maintaining a balance between innovation and faith.

As emphasized by Abduloh et al (2021); Wahid (2024), digitalization represents a manifestation of the *shar'i* responsibility of Muslims to preserve the purity of revelation while expanding da'wah in the global era. Digital technology functions not only as a communication instrument but also as a medium of intellectual worship that connects knowledge with spirituality. The digitalization process affirms that technological innovation can serve as a means of preserving revelation when managed in accordance with the principles of *maqasid al-shari'ah*. The values of *hifz al-din* (protection of religion) and *hifz al-'ilm* (protection of knowledge) form the foundation for the development of ethical, scholarly, and civilized digital systems. Thus, digitalization is not merely a technical advancement but an expression of religious and epistemological consciousness that affirms the role of Muslims as *khalifah*, responsible for safeguarding knowledge, values, and revelation amid the dynamics of the global technological revolution.

The digitalization of Islamic knowledge entails not only technical transformation but also epistemological change, reflecting how Muslim scholars increasingly engage with and master the digital realm a domain once perceived as divided between technologists and religious scholars. This mastery is evident in their ability to integrate religious competence with digital literacy by employing innovations such as watermarking, pattern recognition, and block chain to preserve the authenticity of digital texts and strengthen the protection of the Quran and Hadith. Automated verification systems utilizing AI technologies, such as the Hadith Browser Verification Extension, further support the detection of fabricated hadiths, as noted by (Sani & Abdulmumini, 2025; Umanah, 2024). This technological engagement represents not merely digital sophistication but a form of moral responsibility. The presence of *ulama* and academics as epistemological guides ensures that digital interpretations remain within the methodological framework of Islam. Consequently, Muslim scholars play a strategic role in bridging classical traditions and modern technology, reinforcing the values of *maqasid al-shari'ah* in every ongoing digital transformation (Rusli, 2023; Wahid, 2024).

CONCLUSION

This study affirms that the digitalization of the Quran and Hadith is a multidimensional phenomenon encompassing technical, epistemological, ethical, and spiritual aspects. The findings indicate that the application of digital technologies

such as block chain, watermarking, pattern recognition, and artificial intelligence plays a crucial role in preserving the authenticity of revealed texts and strengthening scientific verification systems for digital Hadith. Digitalization also expands access to Islamic knowledge, enhances learning efficiency, and encourages broader global participation among Muslim communities. However, these advancements are accompanied by challenges, including the potential for interpretive deviation, the commercialization of religious content, and the weakening of *sanad* validity in the absence of adequate methodological oversight. Therefore, digitalization must be guided within the framework of *maqasid al-shari'ah* to ensure that technology functions as a means of preservation rather than the profanation of revelation.

The primary contribution of this study lies in its integrative approach, which combines juridical, philosophical, and theoretical dimensions through a Systematic Literature Review method. This approach produces a conceptual synthesis of the relationship between Islamic scholarly traditions and technological innovation, thereby reinforcing the development of Islamic epistemology in the digital era. Although the study is based on secondary literature and does not yet extensively examine empirical practices, its findings provide a conceptual foundation for the development of an ethical, authentic, and sustainable Islamic digital ecosystem, while also opening avenues for future empirical research in more specific social and institutional contexts.

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