SYNERGIZING HUMAN AND ARTIFICIAL INTELLIGENCE FOR ADVANCING RESEARCH IN RELIGION AND SOCIETY IN NIGERIA'S TERTIARY INSTITUTIONS

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Abstract

This paper explores the transformative potential of integrating human intelligence with artificial intelligence (AI) to enhance research in the field of religion and society. The study examines how AI technologies, such as machine learning, natural language processing, and big data analytics, can complement traditional research methodologies to provide deeper insights into the complex interactions between religion and societal dynamics. This research work patronized both the primary and secondary means of data collection. It adopts the Socio-technical Systems Theory (STS) in evaluating its deliberations. The necessary generalizations and conclusions were delineated strictly on the qualitative scrutiny and synthesis of the gathered data made through phenomenological and narrative analysis approach. Findings posit that by leveraging AI, researchers can analyze vast amounts of textual and social media data, identify patterns and trends, and uncover previously inaccessible information. This synergistic approach not only augments the analytical capabilities of scholars but also facilitates more comprehensive and nuanced understandings of religious phenomena. The paper also addresses the ethical considerations and challenges associated with the use of AI in socio-religious research, advocating for a balanced and responsible integration of these technologies. Ultimately, the study demonstrates that the collaboration between human and artificial intelligence holds significant promise for advancing the study of religion and society, paving the way for innovative research methodologies and enhanced scholarly discourse.

Key words: Synergizing, Artificial Intelligence, Human Intelligence, Advancing, Research, Religion, Society.

Introduction

As the world is veering towards the incorporation of AI in every facet of social and corporate institutions; and with the success recorded in this initiative globally, no nation should allow itself to be left behind in this venture. Regarding the education system in Nigeria, Nwanguma (2023) et al assert that including AI in the instructional structure can be a panacea to all

academic difficulties that has bedeviled the country's pedagogical framework; and also serve as a major driver of technological advancement in today's evolving world. Also, Bali, (2024) highlights that the integration of artificial intelligence in education by some institutions in Nigeria has significantly transformed the technological landscape, enhanced online learning and yielded positive outcomes. He observes that many educational institutions in Nigeria have yet to adopt AI technologies: Moreover, there is prevalent use of AI in Nigeria for tasks like student performance prediction and multimedia e-learning. However, the author laments that advanced AI techniques are rarely applied in these institutions. Thus, he suggests that Nigerian education institutions should adopt AI practices from advanced nations to improve learing opportunities, and bridge the technological gap.

Okunade (2024) evaluates the impact of artificial intelligence in teaching of science education in Nigerian secondary schools; positing the key AI roles as including Adaptive Learning Systems (ALS) for personalized learning, Intelligent Tutoring Systems (ITS) for interactive instruction, and Virtual Laboratories for digital experiments. The author regrets that challenges to integrating AI in teaching of science education in Nigeria's secondary schools comprise infrastructural limits, teacher readiness, and ethical issues: While opportunities lie in government support, teachers training, and industry partnerships. Okunade affirms that the future prospects include personalized learning, data analysis, VF/AR integration, and global educational cooperation. Alimi et al (2021) once underscores that most university students in Nigeria are unaware of artificial intelligence for learning, and that there is no significant difference in awareness between male and female students regarding its use. This is quite unfortunate since AI has been proven to be a veritable technology in advancing academics globally. In this context, Apie (2024) suggests that improving educators AI knowledge and ethical understanding will significantly enhance skills in AI powered institutions in Nigeria, including primary educational structure.

Pertinent to the importance of understanding teachers' readiness to teach artificial intelligence in Nigerian schools, Ayanwale et al (2022), suggest that teachers' confidence in teaching AI predicts their intention to teach it, while the perceived relevance of AI strongly predicts their readiness. The authors aver that AI anxiety and the perception of AI for social good do not significantly influence teachers' intention or readiness. They hence streamline the need to address these factors for successful AI education implementation in Nigeria. The inability of many educational institutions in Nigeria to integrate artificial intelligence into their academic system as Bali (2024) observes, prompts concern. Understandably, Alagbe (2021) explores the readiness of Nigeria for integrating artificial intelligence in schools. He identifies that AI has evolved from science fiction to a tool that enhances daily life, including education. The author highlights the values of AI in education including its ability to automate administrative tasks, create smart content, personalize learning, provide 24/7 assistance, and secure online exams among others: Lamenting that while AI holds great potential for transforming education, Nigeria is not yet fully ready to leverage its benefits in schools.

This study lends a voice to the ongoing reflections on leveraging the values of artificial intelligence to improve education structure in Nigeria: Insisting that promoting the integration of human and artificial intelligence in academic framework, particularly in research on religion and society in Nigeria's tertiary institutions, can provide deeper insights into religious and social dynamics, aid in the development of innovative educational programs, and contribute to more informed policy-making. To this end, this study uses the Socio-Technical Systems Theory (STS) in evaluating its contemplations. The study employs both the primary and secondary means of data collections: All the gathered data were delineated utilizing phenomenological and narrative analysis approach.

The Meaning of Human Intelligence

Sternberg (2024) advances that human intelligence is the mental capacity that includes the skills to learn from experiences, adjust to new circumstances, grasp and work with abstract ideas, and apply knowledge to influence and shape one's surroundings. Colom et al (2010) suggest that human intelligence involves a general mental ability that encompasses various cognitive functions like reasoning, problem-solving, and learning. They argue that intelligence however; can be measured through standardized tests, which predict outcomes such as educational achievement, job performance, health, and longevity. Thus, understanding the brain mechanisms behind intelligence, particularly the frontoparietal network, is crucial in this premise. They delineate that this network is linked to functions such as perception, short-term memory, and language; highlighting the integrative nature of intelligence apposite to human intelligence.

Mayer et al (2023) deliberate that the nature of human intelligence, whether it is a single, general ability or multiple, district abilities, affects how humans measure and understand intellectual abilities, with significant implications for educational approaches. They specify that human intelligence rests on the substratum of living bodies while machine intelligence has no living body and it may not even be accurate to call it intelligence in the proper sense. They aver that true knowledge necessitates discussing what one knows in an intelligent manner, rather than speaking incoherently or merely following trends.

Ooi (2016) elucidates that human intelligence refers to the ability to know, perceive, remember, solve problems, reason, and understand. He stresses that it is primarily studied in children and adolescents to understand cognitive development. The author highlights that researchers have aimed to understand complex knowledge systems and optimize human development, especially in education. Hence, since the 1960's, the study of human intelligence has expanded to include neuropsychology and neuroscience, marking a cognitive revolution in psychology. Ultimately, and germane to this study, human intelligence encompasses the cognitive abilities of humans to learn from experience, adapt to new situations, understand and handle abstract concepts, and use knowledge to manipulate the environment. It includes several mental processes such as perception, memory, reasoning, problem-solving, decision-

making, and language. Human intelligence is often measured through various IQ tests and is influenced by both genetic and environmental factors. It can also be categorized into multiple types, including logical-mathematical, linguistic, spatial, musical, interpersonal, intrapersonal, and naturalistic intelligence, among others.

Clarifying Artificial Intelligence

Copeland (2024) expresses that artificial intelligence (AI), refers to the capability of computers or robots to perform tasks that typically require human intelligence, such as reasoning, learning, and problem-solving. He exposits that since their inception in the 1940's, digital computers have been able to execute complex tasks, including proving mathematical theorems and playing chess, with high proficiency. Craig et al (2024) elucidate that artificial intelligence mimic human intelligence using machines, especially computers. It includes applications like expert systems, natural language processing (NLP), speech recognition, and machine vision. They illustrate that AI development relies on specialized hardware and software to create and train machine learning algorithms. Popular programming languages for AI include python, R, Java, C++, and Julia. The authors also demonstrate that AI systems operate by processing large volumes of labeled data, identifying patterns and correlations within that data, and using these patterns to predict future outcomes.

Glover (2024) elaborates that artificial intelligence involves computer systems performing tasks typically requiring human intelligence, such as predictions, object identification, speech interpretation, and natural language generation. He affirms that these systems learn by processing large datasets and identifying patterns, often with human supervision to guide their learning. Glover streamlines that over time, AI improves its tasks performance, adapting to new inputs and making decisions autonomously, aiming to automate work and solve problems more efficiently. The expositions so far depict that artificial intelligence (AI), refers to the simulation of human intelligence processes by machines, especially computer systems. These processes include learning (the acquisition of information and rules for using it), reasoning (using rules to reach approximate or definite conclusions), and self-correction. AI applications include experts' systems, natural language processing, speech recognition, and machine vision. AI can also be categorized into two types: narrow AI, which is designed for a specific task, and general AI, which possesses the ability to perform any intellectual task that human can.

Programming, Controlling and Managing Excesses of Artificial Intelligence

Artificial intelligence (AI) is programmed by human beings. This implies that artificial intelligence may not be capable of functioning on their own without human direction and inputs. Thus, whatever an AI can actualize, owes its gratitude to human proficiency and intelligence. This as well is part of the rationales that prompts the choice of this article's topic. Consequently, the creation and implementation of algorithms and software that enable AI (or machines) to perform tasks quintessence of humans capacity typically require human

intelligence: The processes involved as culled from DDI Development (2023), Tableau (2024) and Alcoforado (2024) are: Inputation of various data collected by humans from various sources such as databases, sensors or user inputs, that AI systems uses to learn and make decisions; development of algorithms and models that define how AI processes information; training AI by feeding its systems with large amounts of data to learn patterns and make predictions or decisions; programming rules and logic into AI systems to guide their behaviour; testing and validation to ensure they perform as expected; finally, once the AI system is developed and tested, it is deployed to perform real-world tasks.

Overall, artificial intelligence is shaped and controlled by human programming, relying in the expertise of developers to design, train and refine AI systems for specific applications. Against these backdrops, humans can control and manage the excesses of artificial intelligence in order to enforce maximum utility in every field by; defining strict guidelines and ethical standards for AI behaviour; continuous observation of AI actions to detect and correct errors or biases; ensuring that AI operations are understandable and explainable to humans; always keeping humans in the loop for critical decisions and interventions; and adapting laws and policies to keep pace with AI advancements and challenges. These steps can help to ensure that AI operates safely and ethically within human-defined boundaries.

Experiential Validation

In Nigeria, the need for the integration of human and artificial intelligence in socioreligious research cannot be overemphasized. The absence of AI in such undertaking will no longer be beneficial to sociology of religious studies considering the extent to which the world has evolved in all ramifications. Ty (2023) explains that incorporating artificial intelligence in religions studies has positive impacts including easy and cost effective access to relevant and contemporary data; limiting drastically, proximity challenges pertinent to interviewing respondents; virtual assistance for the purpose of counseling, guidance and support for individuals residing far away from a peculiar researcher's milieu; simultaneous interpretation of languages; gathering tools for different religions and cultures at one fullswoop; along with sending customized alerts to fellow researcher's located all over the world for latest information in the field of religious studies. Irrespective of the fact that AI has its down-slides; its effect is highly limited since it can equally be easily controlled by human intelligence.

The problem enumerated by Ukpa (2020) as associated with studying religion in tertiary institutions in Nigeria posits that religious studies is averse to scientific inquiry. Synergizing human and artificial intelligence in research in religion and society will have a considerable influence in breaking religious resistant to scientific inclinations since AI wields the capacity to reflect religious thoughts in empirical scientific interpretations. It is obvious that if there is total decline in religious studies, there will not be researchers in the field of religion and society: Integrating human and artificial intelligence in researching socioreligious issues will encourage more students to enroll in religious studies as there will be sufficient research works

that emphasizes on the relevance of religion in the contemporary milieu. Ayuba (2024) asserts that Islam as a religion does not underestimate the advancement in the global affairs particularly in the study of religion courtesy of the integration of artificial intelligence in social and corporate affairs. He delineates that Nigeria will definitely be backward without integrating AI in the secular, sacred and educational spheres of the country. Ayuba avers that Islam supports the integration of AI as one of the technical methods for tackling education, religion and economic issues in Nigeria. The author concludes that more awareness should be made pertinent to the significance and effective incorporation of AI in addressing socio-religious cum socio-economic challenges facing Nigeria as a nation since a significant number of the citizens including researchers are still in ignorance of its potentials to foster advancement.

Kamai (2023) affirms that artificial intelligence has the potential to positively impact Nigerian society when leveraged prudently by religious institutions, especially Christian religious scholars. He insists that the shortcomings of AI can be easily controlled by human intelligence. The focal point is for researchers in religion and society to utilize it responsibly and with discernment, acknowledging that while AI can aid in religious outreach, it should not replace the care values and existential questions that religion addresses. Additionally, Ariyo (2024) discusses the incorporation of artificial intelligence in inquiries into religion from the African traditional religious perspective, primarily within Nigeria' context, emphasizing its potential to enhance spiritual connections which in turn can attract favour, protection and progress on localities; preserve traditional knowledge, and improve accessibility to religious teachings. He instructs that AI technologies, such as chatbots, virtual assistants, and digitization, can offer personalized guidance, disseminate ancient texts, and perform rituals, ensuring consistency and preserving cultural heritage. The author, advices that challenges like ethical considerations, cultural preservation, and access to technology must be addressed to balance modernization with maintaining traditional values. Ariyo's studies clarify that one of the challenges facing African traditional religion is the inability to align it with technological gadgets and outlets. To this end, African traditional religion has no documents and proper social media presence, and thus can easily be eroded. Integration of artificial intelligence in African traditional religious practices can be a medium of preserving as well as transmitting its doctrines and rituals intergenerationally. Moreso, it can serve as an easy route to get more adherents and keep binding Africans in diaspora to their root.

J. Ihetu and K. Ozor (personal communication, July 10th, 2024), express that artificial intelligence primarily aids human thinking and idea generation in solving problems, posing few challenges if used properly. They caution against over-reliance on AI in the study of religion and society, as it could lead to a loss of human touch and objective views. They streamline that while sound research is possible without AI; its ability to generate ideas is valuable. However, they argue that sole reliance on AI could dehumanize mankind. As robots, regardless of their intelligence; AI cannot replace human qualities. This is a major reason for

embarking on this study; hence, the emphasis on the synergizing of human and artificial intelligence to promote research in religion and society.

Lastly, S. Izuegbu and B. Ozeoha (personal communication, 11th July, 2024) contend that artificial intelligence has become essential and indispensable in modern endeavours, including research. They emphasize that AI should not be ignored in the study of religion, as doing so would be outdated. They highlight that AI enables students to quickly access information, and not integrating it into religious studies would be a missed opportunity to modernize the field. They affirm that using AI can help bring religious studies in line with 21st century standards and enhance current knowledge. This study's approach aims to leverage the strengths of both human and artificial intelligence to gain deeper insights and foster innovative solutions in the field of research in religion and society.

Socio-technical Systems Theory (STS)

Stranks (2007) and Long (2013) elucidate that the term socio-technical systems theory was coined by Eric Trist, Ken Bamforth and Fred Emery, in the World War II epoch, derived from their work with workers in English coal mines at the Tavistock institute in London. They delineate that the theory is an approach to complex organization work design that acknowledges the interaction between human beings (individuals) and technology in workplaces. They affirm that the term in organizational developments additionally refers to coherent systems of human relations, technical gadgets, and cybernetic processes that inhere to large, complex infrastructures. In this perspective, social society, along with its various subgroups and structures, can be considered as intricate systems that involve both social and technical elements. Ntara et al (2023) expound that a socio-technical system combines the social and technical aspects of an organization with the aim of improving the structure and performance of an institution or a firm. The socio-technical system perceives the social and technical features as dependent aspects of a complicated system. The authors posit that companies such as facebook and Microsoft employ socio-technical systems as they leverage people and technology for maximum benefit. The clients also participate in the sociotechnical system by consuming their products.

Abbas et al (2023) in their record, stipulate that socio-technical theory originated in the 1950s at the Tavistock institute in London, led by Trust Bamforth and Emery, resulting from industry-based action research directed at coal mining and labour research in Britain.
Founded on an open structure base, the authors stress that the theory promised a "new paradigm" that defied the dominant technological imperative at the era, in favour of an approach that viewed people as more than extensions to machines. The authors outline that the socio-technical paradigm shifted from viewing people as expendable to recognizing them as valuable resources to be developed, fostering collaboration, commitment, and a risk-taking culture instead of competition, alienation and minimal risk-taking. Pasmore et al (cited by Abbas et al) express that the socio-technical system perspective perceives organizations as

interconnected systems of people and technology, where both influence each other's functioning and the organization's overall interaction with its environment. Leads University Business School (2024) highlight that socio-technical systems theory asserts that understanding and improving an organizational system requires integrating and treating both its social and technical aspects as interdependent components of a complex system. They maintain that organizational change programs often fail because they focus too narrowly on technology and neglect to consider the complex interdependencies within the entire system. Socio-technical systems theory (STS) is highly suitable for promoting the integration of artificial and human intelligence in the study of religion and society since AI can easily collect data from areas that might be inaccessible to researchers; at the other hand, human intelligence will be leveraged in censuring the data it collects to ensure that they are suitable and ethically sound or appropriate for the Nigerian tertiary institutions. Granted that the theory emphasizes the interrelatedness of social and technical contexts; it makes it particularly relevant for understanding how AI and human intelligence can be synergistically combined.

The Essence of Research on Religion and Society in the Nigerian Universities

The Department of Religion and Human Relations, Nnamdi Azikiwe University, Awka (2014) along with the Department of Religious Studies, National Open University of Nigeria (2020), posit that research in religion and society encompasses the dynamics, practice and place of religion in the pre-historic societies of the world through to the contemporary society of the modern times: Vis-a-vis the political, cultural, scientific, and sociological development of the times. It showcases how religion has operated and influenced all other phenomenon of human endeavour.

B. Obiefuna, O. Uche, C. Chiegboka and P. Nmah (personal communication, August 12th, 2012) elucidate that religion and society refers to the interplay between religious beliefs, practices, institutions, and their influence on social structures, behaviours, and cultural norms. They aver that this relationship is multifaceted and encompasses various dimensions, including, how religion shapes cultural traditions, values and norms within a society; the role of religion in creating a sense of community and social solidarity among individuals; the influence of religious movement on social reform and change, such as in the realms of civil rights, gender equality, and social justice; the impact of religious beliefs in political systems, laws, and governance, including the relationship between church and state; how religious beliefs and practices influence personal behaviour, ethics and lifestyle choices; the dual role of religion in both causing and resolving conflicts within and between societies; and how religion contributes to individual and group identity, providing a sense of belonging and purpose. They insist that research in religion and society explores these dynamics to understand how religion shapes and is shaped by the social context in which it exists.

P. Van der Veer (1999) and Pradhan (2021) attest that studying religion and society is crucial for understanding how religious beliefs and practices influence individuals and communities:

It reveals the relationship between religion and various societal aspects, such as ethics, values, social behaviour, and national identity. They additionally clarify that research in religion and society highlights religion's role in shaping political parties, cultural preferences, and ethnic identities, providing insights into the dynamics of different civilizations and their value systems. Overall, as the authors verify, it helps researchers comprehend the complex interplay between religious beliefs, social structures, and human behaviour along with seeking various avenues in leveraging religious virtues to actualize socio-economic and value system development of individuals within given societal settings. Obi (2021) and Ottuh et al (2022) maintain that research in religion and society enables the importance of integrating traditional values in theological education, basing Christian faith contextualization on pre-Christian heritage, and ensuring that African Christian theology reflects cultural, socio-economic, political diversity, and the varied influences of Christian missionaries in Africa. They equally showcase that it is relevant for the effective curbing of moral decadence in the Nigerian society. At length, Enweonwu et al (2023) conclude that the essence of research in religion and society include the fact that religion positively influences Nigerian life and culture by encouraging people to act morally and interact well with others, thus enhancing their cultural values. Research on religion and society in Nigeria thus examines the inter faith relations, highlighting both positive contributions and potential conflicts within academic environments in Nigeria.

The Challenges of Excluding Human and Artificial Intelligence in Research on Religion and Society in Nigeria's Tertiary Institutions

Pertinent to personal communication with A. Okanimee, B. Somtochukwu, J. Odetawa and K. Adegbite (July 15th, 2024), and findings of this research work; the exclusion of human and artificial intelligence in contemporary research on religion and society in Nigeria's Tertiary Institutions presents the following several challenges:

- **Limited analytical capacity:** Without AI, the ability to analyze large datasets for patterns and trends in religious practices and societal impacts is significantly reduced.
- **Bias and subjectivity:** Human-only research may be more susceptible to biases because of incomplete and versed data collection, thereby leading to less objective and comprehensive findings.
- **Slow research processes:** Manual data collection and analysis are time-consuming. It thus, hinders the timely development of insights and solutions. Moreover, AI aids in addressing the problems associated with proximity in research.
- **Underutilization of resources:** The absence of AI means missing out on advanced tools and technologies that could enhance research quality and efficiency.
- **Global competitiveness:** Nigerian research may fall behind global standards, where AI integration in Arts and social sciences is increasingly common.

Incorporating both human expertise and AI can address these issues pertinent to research on religions and societal structures, by improving data handling, analysis accuracy, and research speed.

Potential Barriers to Synergizing Human and Artificial Intelligence in Research on Religion and Society in Nigeria's Tertiary Institutions

Pertinent to the intelligence realized from this study together with E. Chukwuogo, H. Eze, I. Abdulahi, E. Bakare, O. Babatunde, and M. Faruke (personal communication, July 17th, 2024), exposes that incorporating human and artificial intelligence in research on religion and social interactions in Nigeria's tertiary institutions presents the subsequent potential challenges:

- **Data privacy and ethical concerns:** Research involving religious beliefs and practices including how it impacts the society touches on deeply personal and sensitive aspects of individuals' lives. This requires strict confidentiality and respect for participant's privacy owing to the sensitive nature of such data. Ensuring that participants or respondents understand how their data will be used and obtaining their consent is critical but can be challenging in practice since AI releases information's at will. However, provided that human intelligence is applicable, it can still be leveraged in moderating AI possible breaching of data privacy and ethical regulations.
- **Bias and fairness:** AI systems can perpetuate existing biases present in the data they are trained on, potentially leading to biased or unfair conclusions about certain religious groups: This is often fostered by Algorithmic prejudice. Furthermore, ensuring that the data used in AI research is representative of all religions and social groups in Nigeria can be difficult.
- **Cultural sensitivity:** AI algorithms may struggle to accurately interpret the cultural and contextual nuances of diverse religious practices and beliefs: Such can lead to oversimplifications or misinterpretations.
- **Technical expertise and resources:** Implementing AI technologies requires significant investment in infrastructure, which many tertiary institutions may lack. There is also the need for training researchers and students in AI methodologies, which can be resource-intensive. Presently, such resource lecturers and students are still scarce.
- **Interdisciplinary collaboration and diverse methodologies:** Bridging the gap between computer science, sociology, theology, and other disciplines can be challenging due to differences in research methods and terminologies. More so, establishing and maintaining effective interdisciplinary and international research networks requires ongoing effort and coordination: Resilience and tenacity is paramount in actualizing such feat. Effective synergizing of human intelligence, especially by prioritizing on and consistently training AI-complaint resource persons,

will greatly aid in addressing this challenge as researchers can always utilize required methodologies in the case of AI irregularity or erratic response.

- **Regulatory, legal and ethical issues:** Navigating existing and evolving data protection regulations is complex, and there may be gaps or ambiguities in the legal framework regarding AI use in research apposite to religion and society. Inasmuch as developing and adhering to robust ethical guidelines for AI research in the field of religion and society, which invariable is a sensitive area, is crucial; it can as well be difficult to standardize and enforce.
- **Public trust cum acceptance, together with engagement and communication:** There may be public skepticism or mistrust towards AI technologies, particularly in sensitive areas like religious faith and societal or cultural issues, which can affect participation and acceptance of research findings. Effectively communicating the benefits and safeguards of AI-integrated research to the public is essential to build trust and ensure community engagement: Creating a cost effective cum efficient mode of accomplishing this task can pose another challenge.

The Potential Prospects of Synergizing Human and Artificial Intelligence in Research on Religion and Society in Nigeria's Colleges

Apposite to the findings of this study and from the research works of Robinson (2018), Andriansyah (2023), and Mohammed et al (2023), the integration of human and artificial intelligence (AI) in research on religion and society in Nigeria's tertiary institutions holds several significant potentials and presents the ensuing prospects:

- **Enhanced data analysis:** AI can handle large volumes of data more efficiently than traditional methods. This capability can help researchers analyze complex data sets, such as survey results or social media content, to uncover trends and patterns in religious practices and societal impacts.
- **Interdisciplinary research:** AI can facilitate interdisciplinary research by combining insights from fields such as sociology, theology, anthropology, and computer science. This integration can lead to a more comprehensive understanding of the interplay between religion and society.
- **Predictive modeling:** AI algorithms can be used to create predictive models that forecast changes in religious behaviour and societal trends. These models can help policy makers and scholars anticipate and address potential issues.
- **Cultural preservation:** AI can assist in the documentation and preservation of religious practices, languages, and cultural heritage. This is particularly important in a diverse country like Nigeria, where numerous ethnic and religious groups coexist; coupled with the fact that Nigerian cultural values influence religious practices largely in recent times.
- **Improved accessibility:** AI-powered tools can make research more accessible to a broader audience, including students, academics, and the general public. For instance,

AI can be used to translate research findings into multiple languages or create interactive platforms for knowledge dissemination.

- **Ethical considerations:** The integration of AI and human intelligence in research on religion and society raises important ethical questions. AI can help address these by ensuring that research adheres to ethical standards, such as respecting religious sensitivities and ensuring data privacy.
- **Resource optimization:** AI can optimize the use of resources in research by automating repetitive tasks, thus allowing researchers to focus on more complex and creative aspects of their work.
- **Collaborative networks:** AI can facilitate the creation of collaboration networks among researchers, both within Nigeria and internationally. This network can foster the exchange of ideas, resources, and best practices.
- **Educational enhancement:** AI can be integrated into the curriculum to teach students about the intersection of technology, religion, and society. This can prepare a new generation of scholars equipped with both traditional and modern research skills.
- **Policy development:** AI can support the development of evidence-based policies that address issues related to religion and society. Through the provision of accurate and timely data, AI can help policy makers to make informed decisions that promote social cohesion and development.

Leveraging Socio-technical Systems Theory in Synergizing Human and Artificial Intelligence for Research on Religion and Society in Nigeria

Socio-technical Systems Theory (STS) can provide a comprehensive framework for integrating artificial and human intelligence in studies in religion and society in Nigeria. This can be effectively leveraged through the successive avenues:

i. **Building diverse research teams:** it is relevant to form research teams that include sociologists, theologians, data scientists, AI experts, and local community representatives. This interdisciplinary collaboration ensures that diverse perspectives are considered and that both technical and social insights are integrated into the research process.

ii. **Creating collaboration platforms:** It is exigent to develop digital platforms in this regard. These digital platforms facilitate collaboration, data sharing and joint analysis among researchers from different disciplines. These platforms can include features for real-time communication, collaboration coding, and data visualization.

iii. **AI-powered data processing:** AI tools should incessantly be utilized in collecting and analyzing large datasets from social media, religious texts, surveys, and interviews. AI can help identify patterns and trends that human researchers might miss.

iv. **Contextual understanding:** There should be perpetual sustenance of the combination of AI-driven analysis with human expertise to interpret data within the specific cultural

and religious context of Nigeria. Human researchers can provide the necessary contextual understanding that AI lacks, ensuring that findings are culturally sensitive and relevant.

v. **Enforcing the development along with the observation of ethical guidelines:** Ethical guidelines for use in AI research on religion and society should be developed and implemented. These guidelines should address issues such as data privacy, bias mitigation, and the respectful treatment of religious and cultural beliefs.

vi. **Community engagement:** Local communities should be engaged to ensure that their views and concerns are incorporated into the research process since studies on religion and society hinges on the impacts of religion on individuals in various societal settings. This participatory approach helps build trust and ensures that the research respects and reflects the perspectives of those being studied.

vii. **Human-centered and user-friendly AI tools design:** Technology experts in Nigeria should capitalize on designing AI tools that are user-friendly and support researcher's needs in the field of religious studies. This should include creating interfaces that are easy to use along with providing training for researchers to effectively utilize these tools.

viii. **Transparency and explainability:** Guaranteeing and certifying that AI systems are transparent and that their decision-making processes can be easily understood by human researchers. This helps in building trust and allows researchers to critically assess and validate AI- generated insights.

ix. **Continuous feedback; development of adaptation systems together with the establishment of iterative processes:** Iterative processes for continuous feedback and improvement should be established. This involves regularly evaluating the effectiveness of AI tools and making necessary adjustments based on feedback from researchers and community stakeholders. Prioritizing on adaptive AI systems that can evolve based on new data and emerging trends in the study of belief system and social interactions. This flexibility is crucial for staying relevant in the dynamic and diverse context of religion and society in Nigeria.

x. **Capacity building, training and knowledge sharing:** There should be provisions for training programs targeted at equipping researchers with the skills needed to effectively integrate AI into their research. This should include training in AI methodologies, data analysis, and ethical considerations. Subsequently, a culture of knowledge sharing and collaboration among researchers should be fostered. This can be achieved through workshops, seminars, and online forums where researchers can share their experiences and best practices in using AI for socio-religious research.

xi. **Evidence-based policy making and practical interventions:** Insights from AI-enhanced research should be utilized in informing policy decisions related to religion and society. This can help address issues such as religious conflict, interfaith dialogue, and social cohesion: This may even extend to actualizing genuine ecumenism grounded on deep, sincere, religious tolerance. Practical interventions focused on research

findings to address societal challenges should also be developed. For instance, AI-driven analysis can help identify and counteract religious misinformation and hate speech on social media.

Conclusion

In the evolving landscape of Nigeria's tertiary institutions, this study posits that the synergistic integration of human and artificial intelligence in research on religion and society holds transformation potential: This balanced approach not only enriches the academic landscape pertinent to socio-religious studies, but also prepares students of religion and human relations to contribute effectively to the societal development of Nigeria; which enforces addressing contemporary challenges with informed and innovative solutions.

Whereas this inquiry highlights the promising potential of integrating human and artificial intelligence in research on religion and society within Nigeria's tertiary institution; it is however, not exhaustive. The complexities and multifaceted nature of religious and societal dynamics require ongoing exploration beyond the scope of this study. Additionally, the rapid advancement of AI technologies necessitates continuous updates and adaptations to maintain relevance and effectiveness in research methodologies. Therefore, further comprehensive studies are essential to fully realize and address the evolving challenges and opportunities in this interdisciplinary field pertinent to the Nigerian milieu; and with the intention of consistently aligning with global academic standards.

Recommendations

Sequel to the realizations of this work, the following recommendations are deemed substantial:

1. The federal government of Nigeria should allocate funding for research projects that integrate human and artificial intelligence in studying religion and society. They should invest in advanced technological infrastructure, including high-performance computing facilities and data centers, to support AI research.
2. There should be concerted efforts between the Nigerian citizens and the government focused on engaging in public awareness campaigns to educate citizens about the benefits and ethical considerations of using AI in social research. Community education programs to increase digital literacy and understanding of AI technologies should be promoted.
3. The federal government of Nigeria should establish innovation hubs and incubators focused on AI and social research to nurture startups and projects that address religious and societal issues. They should equally create grant programs specifically targeted at projects that combine AI and human intelligence to solve social challenges.
4. The government of Nigeria should liaise with university administrators to foster partnership with international research institutions and technology firms to bring global expertise and resources to Nigerian projects. There should be incessant promotion of

knowledge exchange programs where Nigerian researchers can learn from global best practices in AI and social religions research.

5. University administrators in Nigeria should ensure that research projects are designed with sustainability in mind, considering long-term impacts on society and religious harmony. They should regularly assess the impact of AI-driven research projects on communities and make necessary adjustments to enhance positive outcomes.
6. Both the lecturers and students in the field of religion and society should always be ready to adapt to the steady evolutions pertinent to AI driven research in their field. They should embrace teachable mindset and eschew from all forms of inflexible or intractable viewpoint apposite to grasping various spheres of AI-prospective research valuable options.
7. University administrators should aid in establishing advocacy groups that push for policies supporting AI use and human-centered research. They should always participate in public consultations and forums to voice opinions on how AI should be used in researching religion and society.

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