

CULTURAL PRESERVATION IN THE DIGITAL ERA: APPLYING ARTIFICIAL INTELLIGENCE (AI) FOR SUSTAINABLE ANCESTRAL VENERATION PRACTICES IN IGBOLAND, NIGERIA

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Abstract:

Attention has been drawn to the difficulties that urbanization, globalization, and shifting social practices presents to ancestor veneration in Igboland of Nigeria. The loss of cultural memory due to modern digital innovation threatens traditional practices and rituals, diminishing the complexity and richness of collective identity. Ancestral veneration serves as a vital link between the past and present, fostering a sense of connection, rootedness, and cultural identity among people. This study recognizes the unexplored scholarly discourse on the danger that rapid urbanization possess to culture and tradition of Igboland. The paper studied the consequences of urbanization and investigated how the intergenerational transfer of ancestral knowledge and rites has been undermined by the movement of younger generations to urban areas, which has further reduced the role of ancestral veneration in modern Igbo culture. The paper employs Cultural Sustainability Theory to determine how Artificial intelligence (AI) can contribute to the sustainability of cultural practices such as ancestral veneration by digitizing and preserving traditional knowledge, artifacts, and rituals and how AI can facilitate intergenerational knowledge transfer by creating digital platforms for sharing oral histories and cultural ceremonies, thus safeguarding and revitalizing ancestral veneration practices for future generations. The data was collected through oral histories and secondary sources, while qualitative were used in the analysis of data. The study reveals that traditional ancestral veneration in Igboland are declining due to globalization and digital advancements. Younger generations are less involved in these sacred practices due to urbanization and Western cultural influences. Moreover, the rise of digital platforms has shifted attention away from traditional community rituals towards virtual spaces, further undermining the legitimacy of ancestral veneration. The survival of these customs is seriously threatened by the growing digital divide between the younger and elder generations. The paper proposes the utilization of AI because it has the potential to save ancestral practices by integrating them into the digital age, including the next generation, and raise public consciousness through educational initiatives.

Keywords: Intergenerational, Knowledge, Ancestral Veneration, Artificial Intelligence, Ritual

Introduction

Ancestral veneration has enormous historical and cultural significance in Igbo culture as a bridge between the living and the dead. It entails honoring ancestors via rituals, prayers, and sacrifices. It is predicated on the notion that ancestors still have a spiritual impact on their descendants, guiding them, ensuring their prosperity, and maintaining the safety of society. The Igbo people consider ancestral veneration to be more than just a ceremonial practice; it is a fundamental component of their worldview as they believe that the ancestors continue to contribute to upholding moral and social order. According to Ossai (2024), every Igbo ritual, from the serious rites of passage that signaled the shift from childhood to maturity to the intricate ceremonies honoring ancestors and pleasing the divinities had a specific function in preserving balance and order. Historically, this

practice has been used to improve social cohesion and group identity. By paying respect to their ancestors, the Igbo people acknowledged their heritage, acknowledged their connections to the past, and passed along collective memories that shaped their beliefs and customs. Before making important decisions for the community, including selecting new leaders or resolving disputes, the ancestors' approval was sought since they were seen as the guardians of tradition. The ceremonies also seemed continuous since ancestral reverence was employed to honor and safeguard the genealogy of communities and households. Ancestor reverence served to further solidify the Igbo worldview, particularly their strong sense of moral duty. It was believed that ancestors influenced the lives of their children and ensured that they followed traditional values. By honoring their ancestors, the Igbo people maintained their respect for the past while wishing for blessings for the future.

Maintaining values like justice, respect, and honesty as well as cultivating a sense of duty to the community required this practice. Therefore, in addition to being a means of remembering departed family members, ancestor respect had an impact on the moral and social framework of Igbo culture. Sosis (2004) writes that the primary adaptive benefits of religion are their ability to facilitate cooperation within a group. A key component of conflict resolution and peacebuilding among Nigeria's Igbo people is ancestral veneration rituals. Ajito, Talan, & Nay (2022) note that the socio-cultural framework that surrounds the decision, the employment of rituals and mediation in conflict resolution is internalized in society, extending the duration of the decision's appreciation and acceptance.

According to Igbo cosmology, ancestors act as a bridge between the supernatural and the living, regulating the community's moral and social behavior. Members of the community are encouraged to take responsibility for their activities because they believe that upsetting the peace would anger the ancestors and result in spiritual consequences. Therefore, a culture of respect and collaboration is fostered by the dread of ancestral disapproval, which serves as a deterrent against activities that can result in conflict. There are also opportunities for peacemaking and reconciliation through ancestor-focused rituals and ceremonies. Elders or other traditional authorities often call upon the ancestors during mediation procedures to resolve conflicts, stressing the need of honesty and equity. Pouring libations or making sacrifices to the ancestors is a symbolic act of relational purification and resettlement. The procedure acquires spiritual credibility when the ancestors are involved in dispute settlement, which forces contending parties to uphold the agreements made. The efficacy of conventional conflict resolution techniques is increased by this spiritual component.

Ancestral reverence upholds group ideas and accountability, both of which are essential for promoting peace. The idea of "Igwebuike" (unity is strength), which has its roots in traditional teachings, is highly valued in Igbo culture. The community is reminded of the value of unity and the need of putting the good of the group ahead of the interests of any one person by calling upon the knowledge and direction of the ancestors. Conflicts are less likely to escalate under this common set of values because members are more likely to settle disputes peacefully in order to preserve the heritage of their ancestors. Ancestral ritual also encourages respect for conventional dispute settlement techniques and intergenerational communication. For Stobbe (2011), ritual in conflict resolution is to repair the harm that has been done in conflict, rebuild relationship, and create healing in the communities. Regarded as the keepers of ancestral knowledge, elders are essential in helping the society resolve conflicts by using historical precedents established by the ancestors. The persistence of traditional knowledge guarantees the cultural relevance and efficacy of conflict management techniques. In addition to resolving conflicts, ancestor veneration fortifies the social cohesion and ensures long-term peace and stability by firmly establishing peacebuilding initiatives

in the spiritual and cultural legacy of the Igbo people.

In Igboland, children's characteristics are shaped and corrected by ancestral veneration, which is profoundly ingrained in the Igbo people's cultural and spiritual traditions. Respect for ancestors is a moral code that guides family values and social ethics, not only a religious practice. This idea gives younger people feeling of responsibility and motivates them to behave in ways that respect their heritage. The significance of moral behavior is emphasized by the fact that misbehavior is often seen as an affront to both the immediate family and the ancestors. Ancestral reverence and knowledge by elders instills in younger people the virtues of accountability, honesty, and respect via oral traditions, storytelling, and rituals. That indigenous type of education was what helped the Igbo to transmit their cultural values, beliefs, norms, history and language from one generation to another. Iwunna, Ndukwu, Dioka, Alaribe, & Alison (2021) assert that the traditional educational system encouraged Igbo sons and daughters to participate actively in matters of community development, as well as imparting in the youth the love for good character development. A child's character is shaped by the moral teachings that folktales and proverbs provide, which emphasize the qualities supported by the ancestors. These highlight the benefits of good conduct as well as the repercussions of disrespecting community and family values. For example, as the ancestors are thought to punish dishonesty and wrongdoing, children are taught to respect truth and integrity. Children are certain to acquire these values as essential to their identity and the heritage of their family.

Children are taught that their actions affect not only themselves but also their family and ancestry. Since any dishonorable conduct might bring disgrace or bad luck to the family and community, this interconnection creates a feeling of obligation to maintain good character. Community members participate in rituals like pouring libations or making sacrifices to ancestors, which serve as a reminder of shared accountability and the need to preserve ancestral values. When kids start acting out of character, ancestor veneration offers a framework for redress and reconciliation. As stewards of ancestors' customs, elders use reprimands and atonement rites to steer youngsters back toward the correct path. Restoring peace within the family and appeasing the ancestors are common justifications for these remedial actions. To reinforce the idea that acts have social and spiritual repercussions, a kid who disobeys could be given a duty that represents humility and remorse. Ancestral reverence ensures that children develop into morally upright members of society by acting as a preventative and corrective mechanism.

Theoretical Framework

The study adopts Cultural Sustainability Theory. The Cultural Sustainability Theory is a multidisciplinary concept that has been developed throughout time by a number of scholars and thinkers from disciplines such as anthropology, sociology, environmental studies, and cultural studies. However, economist David Throsby has made significant contributions to the discussion about economic and cultural sustainability, especially through his book "Economics and Culture" published in 2001. He has also made significant contributions to the broader ideas that support cultural sustainability. Throsby emphasizes the need of incorporating cultural values into sustainable development. Cultural sustainability theory's primary goals are to maintain cultural practices, beliefs, and history while making sure they remain relevant and adaptive in a changing environment. In order to promote the generational transfer of cultural knowledge for the benefit of both current and future communities, it aims to strike a balance between tradition and innovation. Cultural Sustainability Theory is relevant to the study as it emphasizes the preservation and transmission of cultural heritage in a way that maintains its integrity while adapting to modern challenges. By integrating AI into ancestral veneration practices in Igboland, the theory provides a framework to safeguard these traditions, ensuring their continuity and relevance in the digital era.

Challenges to Ancestral Veneration in Igboland Globalization, Modernity, and Migration

Africa is going through deep crises resulting from modernization. Ude (2024) observed that institutionally, the colonial rule was successful in creating a continent that was essentially structured after the old Europeans' political, social, economic, and religious institutions inherited from the former colonizers. Ancestral veneration is one of the traditional activities of the Igbo people that have been greatly touched by globalization. Younger generations are becoming more interested in contemporary ideologies that contradict traditional beliefs as global ideas and technology permeate Igboland. A major problem has been the globalization of Christianity and other world religions, which usually consider the reverence of ancestors to be idolatry. The continuation of ancestral veneration is under danger because of this change, which has made Igbo young people more reluctant to engage in traditional activities. Indigenous customs are often marginalized as a consequence of exposure to international media and education, which feeds the idea that ancestor devotion is outdated or unnecessary. Rapid urbanization and economic transformations brought about by modernity also threaten the ancient community institutions that are essential to the reverence of ancestors.

Ancestral veneration in Igboland is mostly based on group family and community rituals that are carried out in rural areas. These community ties are broken by the growing urban migration of Igbo people, which makes it challenging to maintain the customs. Urban lives place a higher value on economic efficiency and individuality than on customary community responsibilities, leaving little time for the elaborate rituals involved in ancestor reverence. As modernity turns its attention from shared history to individual progress, the cultural transmission of these traditions to the next generation is undermined. According to Amadi & Akena (2015), with rapid urbanization, rural life and culture suffers as majority of the population migrates to the urban areas. These are made worse by migration, both domestically in Nigeria and internationally, which distances people from their ancestors' cultural and physical origins. Many Igbo migrants find it difficult to uphold customs in their new locations because honoring ancestors may be disregarded or misinterpreted. Indigenous behaviors are gradually abandoned due to assimilation efforts and the urge to fit in with host cultures. These customs are undermined by the practicalities of carrying out ancestral ceremonies in a new country without access to hallowed places or elder supervision. The survival of these customs in a society that is constantly becoming more globalized is threatened as the gap between diaspora Igbo people and their ancestral heritage widens with time.

Christianity

Christianity's advent and subsequent expansionist endeavors disrupted the peaceful arrangement. Chiegboka & Nwadior (2023) write that ancestral homage, a key pillar upon which the system was built, suffered as a result of Igbo society's converting to Christianity. In Igboland, the rise of Christianity has drastically changed traditional belief systems, directly challenging the respect for the ancestors. Okolugbo (1984) observed that according to Christian doctrine, ancestral veneration is idolatry and incompatible with the monotheistic foundation of the religion. Christians were prohibited from fulfilling filial responsibilities to their ancestors or from taking part in traditional celebrations. Also they were prevented from assuming local chieftaincy titles since, to the missionaries, this implied that they were serving or honoring the traditional deities. Both historical and modern missionary endeavors have placed a strong emphasis on avoiding customs by labeling them as demonic or pagan. A cultural change has resulted from this theological dispute, especially among younger generations who now see Christianity as a symbol of modernity and advancement. In order to avoid social or religious shame, ancestor adoration is thus sometimes rejected outright

or carried out in secret.

The communal and intergenerational elements of ancestor devotion are further undermined by Christianity's emphasis on personal salvation and direct communication with God. Ancestors' function as intermediaries between the human and the divine is highly valued in traditional Igbo spirituality. Christian doctrine, however, downplays this function and substitutes it with the idea that Jesus Christ is the only mediator. This theological change undermines the respect that was formerly shown to ancestors in addition to discouraging the religious rituals and prayers that were customarily offered to them. As a result, customs from the past are becoming less and less important or even incompatible with the Christian worldview.

The actual locations and hours that are customarily set aside for ancestor veneration are also influenced by church ideas and practices. In Igboland, a large number of Christians are increasingly focusing their attention and money on church operations and buildings rather than ancestral activities. Ancestral customs are marginalized because Christian holidays and Sunday worship sometimes clash with the dates of customary rituals. Furthermore, the construction of Christian cemeteries and memorial ceremonies have changed the way that people remember the deceased, separating these customs from the Igbo traditions' strong ties to ancestor reverence. Ancestral veneration in Igboland has been gradually declining as a result of this change as well as societal pressure to adopt Christian values.

Climate Change and Land Issues

According to Okoro (2020) the environmental crisis that has hit Africa is not timeless. The origin could be traced in various source materials to the both Christianization and colonization of the continent in the 19 century. Ancestral veneration in Igboland, a custom closely linked to the land and environment, is seriously threatened by climate change and land difficulties. Rituals and reverence are traditionally centered on sacred groves, woodlands, and designated land areas, which are said to be the homes of ancestors. Ikehukwu (2021) explained that sacred forests were areas set aside by the Igbo ancestors as sacred sites and strictly protected by customary laws, beliefs and enforced taboos. Deforestation, soil erosion, and severe weather patterns are some of the growing consequences of climate change that have disturbed these hallowed areas. The customs of paying respect to the ancestors are undermined when these places are destroyed or made useless, depriving communities of vital material and spiritual links to their roots. Climate change and land challenges pose a severe danger to Igboland's tradition of ancestral worship, which is strongly tied to the land and environment. Sacred groves, forests, and designated land areas which are believed to be the homes of ancestors are usually the focal points of rituals and veneration. These sacred places have been disrupted by the increasing effects of climate change, including deforestation, soil erosion, and extreme weather patterns. When these locations are demolished or rendered unusable, the traditions of honoring the ancestors are compromised, depriving communities of essential tangible and spiritual linkages to their heritage.

Through their rituals, festivals, and ancient practices, the Igbo people display their high appreciation for the environment and their commitment to living in harmony with nature. Ossai (2024) write that throughout the history, the advancement of environmental sustainability and harmony with nature has been greatly aided by Igbo rites and rituals. Individuals have been uprooted from their ancestral lands as a result of migration brought on by climate change. Families and individuals lose direct access to the holy places necessary for ancestor veneration when they relocate from their villages to urban areas as a result of erosion, floods, or desertification. Their relationship to the land and their ancestry are undermined by this separation since ancestral

eneration could be location specific and relies on maintaining closeness to the region where ancestors lived and were buried. As a consequence, among displaced people, these customs are gradually becoming less relevant and practiced. Development and cultural preservation must be balanced in order to address these issues. In order to maintain holy places for future generations, communities should use climate-resilient measures and sustainable land-use practices. Additionally, bringing attention to the cultural significance of ancestor veneration might motivate local groups and authorities to give its preservation first priority during development initiatives. By taking these steps, the rich tradition of Igbo ancestral veneration may be preserved.

Economic Pressures

Their relationship to the land and their ancestry are undermined by this separation since ancestral veneration could be location specific and relies on maintaining closeness to the region where ancestors lived and were buried. According to Egbeke (2000), prior to the arrival of colonialism and the associated western culture, African economies were proportional. This implied that those who work hard would get the rewards of their labor, ensuring social stability, while lazy people would be seen as the family's irresponsible members. However, Africa's economy today has become commercialized as a result of colonization. Everything is now measured in terms of money. These days, it serves as both a social security measure and a prestige symbol. Nowadays, it's commonplace to pursue personal enrichment at any costs. Madukwe & Madukwe (2010) state that numerous Africans are so consumed by the need for material possessions that there are numerous social vices prevalent in the community today.

In Igboland, economic pressures provide serious obstacles to ancestor worship as traditional customs are marginalized by the increased focus on material prosperity and contemporary lifestyles. Families and individuals emphasize upward mobility and economic survival in a society that is quickly globalizing, which often clashes with the time and money needed for customary rites. Many rituals need expensive preparations, such as food, drinks, and ceremonial objects, which put a burden on those who already struggle financially. Ancestral reverence gradually declines as a result of this costly burden discouraging individuals from practicing it. Additionally, the emphasis has changed away from the social activities that support ancestor veneration in favor of the chase of money. Although Igbo culture has always placed a strong emphasis on shared ancestry and group identity, economic forces have encouraged individuality and competitiveness. Younger generations sometimes lose touch with their villages and ancestors' customs as they pursue economic possibilities in cities or outside the country. It is difficult to maintain these traditions because of the distance from rural communities, where the majority of ancestral rites are practiced. The transfer of information and rituals required to maintain ancestor devotion is gradually weakened when younger participants are absent.

Understanding the Digital Era and Artificial Intelligence (AI)

What is Artificial Intelligence (AI)

A common definition of artificial intelligence (AI) is the capacity of robots to carry out cognitive activities that are similar to those of humans. These may include the automation of physical tasks including item manipulation and movement, perception, sensing, problem-solving, decision-making, and creativity. Benbya, Davenport, & Pachidi (2020) write that the most significant and disruptive new technology for big businesses right now is artificial intelligence. And Du-Harpur, Watt, Luscombe, & Lynch (2020) asserts that Artificial Intelligence is the term used today to describe a machine's capacity to think, communicate, and function autonomously in both known and unknown situations similarly to a person. Building robots that can do tasks that typically require human intelligence is the focus of the computer science field known as artificial intelligence (AI).

Perception, problem-solving, language understanding, reasoning, and experience-based learning are some of these activities. A wide range of techniques are included in artificial intelligence (AI) technology, from robotics and computer vision to machine learning and natural language processing. Machine learning, an aspect of artificial intelligence, enables computers to learn from data and progressively improve their performance without the need for explicit programming. Deep learning is another powerful machine learning method that makes use of neural networks that are based on the framework and functioning of the human brain to facilitate complex pattern detection and decision-making.

Globally, artificial intelligence (AI) is being used in many different industries, transforming sectors including manufacturing, transportation, healthcare, and finance. By evaluating medical imaging, predicting patient outcomes, and supporting medication development, artificial intelligence (AI) algorithms are being used in the healthcare sector to increase diagnostic accuracy and treatment efficacy. The financial sector uses AI algorithms to detect fraudulent activities, automate trading, and provide personalized financial advice. Robots and automation systems driven by artificial intelligence (AI) are enhancing industrial processes, reducing human error, and increasing productivity. The transportation industry is likewise being significantly impacted by AI. Drones, self-driving cars, delivery systems and autonomous vehicles, which utilize artificial intelligence (AI) to navigate and make decisions

However, the global use of AI raises significant ethical and societal concerns. Even while AI has a huge potential to improve people's lives, concerns have been raised about how it could impact employment, privacy, and security. As AI systems are integrated into daily life, worries about algorithmic unfairness, data privacy violations, and the potential for AI-driven surveillance are growing in importance. Additionally, as AI technology develops, questions about its governance and regulation have emerged, with many calling for international cooperation to ensure that AI is developed and used responsibly. Notwithstanding these challenges, artificial intelligence is still evolving, opening up new creative possibilities and igniting discussions about how to reconcile moral obligation with scientific advancement. Murire (2024) lamented the need to identify the best ways to handle the cultural changes brought about by AI integration so that everyone may benefit from these technology developments while maintaining fundamental principles like responsibility and inclusion.

AI in Cultural Preservation

Cultural dynamics are shaped by the integration of communication phenomena and processes, which are essential to all aspects of culture. Cultural scholars from many generations have emphasized the role that communication and information play in promoting cultural change. Cultural studies concepts now analyze technology and communication technologies to look at how culture changes over time. Spatar-Kozachenko, Krylova, Loginova & Gruzdeva (2024) opined that the change in conceptual frameworks, which took place in the 20th century amid an increase of information flow and many communication channels, recognized the critical role that communication foundations play in the development of culture. Maintaining a community's identity and legacy requires cultural preservation, although in the current day, ancient customs often encounter major obstacles. Cultural legacies are in danger of being undermined by elements like urbanization, globalization, and the slow extinction of native languages and practices. Artificial intelligence (AI) has become a game-changing technology in recent years that can help with these issues. These initiatives promote awareness and understanding in a world that is changing quickly while ensuring that cultural traditions are available to future generations. Artificial intelligence has the capacity to actively engage and revitalize traditions in addition to documenting them. AI powered technologies can potentially reproduce older music or art forms, translate endangered

languages, and evaluate old documents. People from all over the world can explore cultural significance and activities without being constrained by distances. Today distance engagements are made possible by AI powered virtual and augmented reality. Additionally, cultural data may be analyzed by AI algorithms to find patterns that help scholars unearth historical connections and insights that were previously hidden by fragmented records. As a result, AI bridges the gap between tradition and modernity by preserving the past while also facilitating creative methods to commemorate and maintain cultural identities.

AI Documentation of Ancestral Veneration Practices

Providing innovative tools for recording and analysis, the incorporation of AI into digital archives can completely transform the preservation of ancestral veneration rituals. AI devices can make it possible to digitize oral traditions, artifacts, and ceremonies, guaranteeing that they are preserved for next generations. For instance, machine learning algorithms can assess and classify oral histories in indigenous languages according to themes, geographical locations, or historical context, while AI can transcribe these narratives using natural language processing. AI driven digital imaging techniques can help preserve fragile items by creating high-resolution 3D models that enable research and virtual presentations without the risk of physical degradation. Even when Igbo culture is threatened by industrialization and globalization, these advances provide communities the means to preserve their cultural legacy. AI also helps make ancestral information more accessible and widely shared. AI enhanced virtual reality and augmented reality provides opportunities for ancestral rites, allowing people to engage in or learn from activities that would not be possible anymore because of generational or geographic constraints. AI can also help communities, scholars, and cultural organizations work together to standardize documentation practices while taking cultural sensitivity into consideration. By doing this, AI contributes to the preservation and celebration of ancestor veneration customs as essential components of human legacy.

AI in Language Preservation

Igbo and its dialects is the indigenous languages spoken in Igboland, and AI has become a potent instrument for their preservation. To keep indigenous languages current and accessible, AI powered tools such as machine learning and natural language processing (NLP) can be utilized to record, examine, and translate them. According to Low, McNeill & Day (2022), language cultures may be preserved and revitalized more successfully by the use of technology, or socio-technicality. And Ajuzieogu (2024) noted that the unparalleled chance for language preservation is presented by the development of generative AI technology. He maintained that AI can record and preserve languages in their whole cultural context, including oral traditions, gestural elements, and cultural practices. Adebayo, Fatai, & Asemota (2023) are of the view that AI has shown a great deal of promise in language preservation initiatives. Language learning apps, digital resources, and documentation of endangered languages may all be accomplished with the use of tools like voice recognition, machine learning, and natural language processing.

AI can help preserve the cultural history ingrained in the language by helping to create digital archives of oral traditions, proverbs, songs, and folk tales through the development of Igbo-specific language models and voice recognition systems. Additionally, AI based applications may provide educational resources like interactive platforms and language-learning programs, allowing the next generation to learn and value their linguistic heritage in interesting ways. In addition to protecting the language, these initiatives provide communities the tools they need to retain their cultural identity in a world that is becoming more interconnected. AI can also provide real-time translation and transcription services, increasing the accessibility of Igbo and its dialects for both speakers and non-speakers. Igbo-programmed chatbots and virtual assistants can be useful tools for everyday

conversation, encouraging the usage of the language in contemporary settings. AI in language preservation ensures that traditional knowledge and respect for ancestors be transmitted to future generations by documenting and reviving Igbo proverbs, folklore, and ancestral praise songs. AI enhances cultural identification and promotes ongoing ancestor reverence in prayers, rituals, and storytelling by increasing the accessibility of Igbo language materials using digital platforms.

Virtual Reality and Cultural Engagement

AI and Ancestral Veneration Rituals and Cultural Heritage

Bostrom (2014), assert that, technological development especially in the area of AI, has advanced quickly in recent decades and have major influence on a number of areas of human existence, including social life, religion, healthcare, education, business, and leisure. In the same view, Manik, Jimmy, & Andriyanto (2024) write that technologies that use artificial intelligence have been especially effective in passing on language and culture to the next generation. With the use of interactive apps, instructional games, and other digital platforms, these applications use contextually relevant approaches that are in line with contemporary lives and mindsets. AI-powered virtual reality (VR) technologies provide revolutionary chances for integration into culture, especially in the preservation and experience of ancestor veneration rites. These customs, which often have their roots in physical locations and oral traditions, are essential elements of cultural heritage. Because VR can replicate these situations so accurately, users may engage with virtual representations of ancestor spirits or objects, take part in ceremonies, and witness sacred rituals. By emulating the complex behaviors, languages, and symbols that are essential to these cultures, AI improves this experience while guaranteeing authenticity and complexity. For those in the diaspora or communities at danger of losing their customs, VR creates a revitalized connection to cultural origins by bridging the gap between the past and present. Experiential learning that transcends passive observation is made possible by VR's deep qualities. AI-driven images that portray elders or spiritual advisers may assist users in performing ancestral rituals through interactive modules, such as making libations or reciting invocations. In addition to teaching people about their history, this interactive method encourages involvement and respect for cultural customs. By securing the transfer of endangered rites to future generations and establishing digital archives of them, these apps may also play a significant role in cultural preservation. VR acts as a link between modernity and history by fusing technology and tradition, enabling people to discover and express their cultural identities in fresh and significant ways. In fact through these means, cultural preservation of ancestral veneration can be effectively transmitted to and preserved by successive generations in Igboland.

AI-Driven Education and Outreach

According to Wang & Li (2024), teaching and learning have changed as a result of AI's integration into education. Participation activities based on exercises have become essential in educational contexts, offering notable improvements in student engagement. The teaching and understanding of cultural behaviors, such as ancestor reverence, is being revolutionized by AI-powered educational tools and platforms. Teachers can build deep involvement that bring ancestral traditions to life by using interactive technology like VR, augmented reality (AR), and adaptive learning systems. These resources make the teachings more interesting and relevant by enabling younger generations to interact dynamically with rituals, artifacts, and tales. By overcoming linguistic and cultural boundaries, AI can help ancestor veneration rituals spread around the world. Wider accessibility is made possible by machine learning algorithms that can translate literature, oral traditions, and folklore into numerous languages. Ancestral veneration's cultural and spiritual aspects may be

better understood by consumers globally by using AI-powered platforms such as chatbots. People from many backgrounds can appreciate and benefit from these traditions, which are sometimes disregarded or misinterpreted in conventional educational institutions, by using these instruments to promote cross-cultural communication.

AI also works as a digital archive, promoting and conserving ancestral behaviors. In order to preserve cultural symbols, ritual practices, and oral histories, it may gather and preserve them. Researchers and practitioners can obtain deeper insights by using AI analytics to find linkages and trends throughout various traditions. AI makes sure that these customs are accessible and relevant to future generations by incorporating ancestor reverence into digital education platforms. This enhances cultural identity and fosters respect for history and global knowledge.

Ethical Considerations and Community Engagement in AI-Driven Cultural Preservation

Ghaith (2024) opined that a significant turning point in the preservation of the world's cultural heritage is the incorporation of artificial intelligence (AI), which includes machine learning (ML), computer vision, and natural language processing (NLP), into the field of cultural heritage conservation. This integration embodies a complex web of ethical considerations as well as a promising future for technological innovation. To guarantee respect for the social and cultural values of the communities concerned, the ethical issues raised by the incorporation of AI into cultural preservation initiatives must be properly considered. The possibility of misrepresentation or cultural appropriation is one of the main worries. AI systems can unintentionally generalize or distort distinctive cultural characteristics since they are often trained on vast datasets, which might undermine authenticity or reinforce negative preconceptions. Cultural objects, oral histories, and customs that are digitized for AI usage may also belong to the communities rather than outside parties, raising concerns about data ownership and intellectual property rights. Therefore, openness, accurate attribution, and fair distribution of the advantages resulting from these endeavors must be given top priority in ethical frameworks.

Engaging the community is essential to tackling these moral dilemmas. These efforts are in line with the values and requirements of the community by including them in all phases of the AI-driven cultural preservation process, from data gathering to application. The voices of people who are the cultural keepers are certain to be heard and valued. Additionally, this kind of engagement reduces worries of marginalization or exploitation by fostering trust and teamwork. For instance, using local specialists to assist evaluate cultural data help maintain its authenticity and integrity while fostering intellectual and economic empowerment in the community. A fundamental component of moral community involvement in cultural preservation initiatives is consent. The usage, preservation, and dissemination of cultural artifacts should be properly disclosed to communities. The community's feeling of ownership over its cultural legacy can be strengthened and any disputes can be avoided by establishing explicit permission processes. Communities are given the opportunity to choose how their culture is portrayed and conserved for next generations, which is also consistent with the more general ethical concepts of autonomy and self-determination.

Social Media and Sustainable Ancestral Veneration Practices in Ezimo Community, Udenu LGA, Enugu State

Many communities in Igboland of Nigeria, especially Ezimo in Udenu Local Government Area (LGA) in Enugu State, place a high value on ancestral veneration as a cultural and spiritual practice. The Akatakpa masquerade, a vital representation of reverence and kinship with ancestors, is one of the traditional customs that have persisted in this community. Social media has been a creative tool in maintaining, advancing, and protecting these behaviors across time. In order to ensure that

ancestor devotion endures in the contemporary day, this case study examines how social media platforms have contributed to the success of Akatakpa masquerade in Ezimo

In Ezimo, the Akatakpa masquerade is a long-standing custom that is connected to the community's festivals, cultural identity, and ancestor veneration. This masquerade is traditionally used to facilitate connection with the ancestors by acting as a bridge between the spirit and living worlds. However, enthusiasm in preserving such traditional traditions has gradually decreased in the face of modernization, urbanization, and globalization, particularly among the younger population. As a result, Facebook, Instagram, Twitter, WhatsApp, and other social media sites have emerged as crucial resources for reviving Ezimo's traditional customs. Some significant ways that these platforms have aided in the promotion and preservation of the Akatakpa masquerade are, Cultural Awareness Campaigns, Educational Content, Virtual Events and Streaming.

To increase awareness of the significance of the Akatakpa masquerade, elders and youths have started using Facebook, Instagram and WhatsApp. The historical background, images, movies, and narratives that emphasize the masquerade's importance in the community are all shared channels. Younger people who may not have previously been actively involved in the practice are now interested in it because of the attention it has gained on social media. Social media has enabled the provision of educational resources that explain the cultural and spiritual significance of the Akatakpa masquerade. Brief videos, infographics, and blog posts have made the masquerade simpler to grasp for both locals and a global audience. Due to their widespread dissemination, these educational resources aid in the preservation of information that may otherwise have been lost as a result of generational differences. For instance, physical meetings were hindered by the COVID-19 epidemic, but social media offered a venue for online parties and masquerade parties. Once conducted in real locations, Akatakpa masquerades were now broadcast live on Facebook and YouTube, reaching viewers beyond of Ezimo. Notwithstanding limitations on in-person meetings, these virtual events ensured the survival of the practice by enabling real-time interaction with community members both locally and abroad. In the same way collaboration with regional and global cultural groups has been made possible by social media. Online collaborations have helped to promote and acknowledge Ezimo's cultural history, which includes the Akatakpa masquerade. The tales, customs, and experiences related to the Akatakpa masquerade have been documented by community members via Facebook pages and WhatsApp platforms. These are disseminated as a component of an online repository that keeps the masquerade's past alive for next generations. Additionally, social media makes it possible to tell these stories in a variety of formats, including images, videos, and first-person narratives, which can be seen by both local and international audiences.

The Akatakpa masquerade in Ezimo, Udenu LGA, has been sustained in large part because of social media. Social media has contributed to the preservation and revitalization of ancestor veneration traditions, assuring their continued relevance and vibrancy in the contemporary world via targeted marketing, educational efforts, virtual events, and community participation. The Akatakpa Rebirth Project's success story is a potent illustration of how technology may be used to preserve cultural heritage, promote pride in customs, and guarantee that these customs are carried on to future generations.

Ancestral Veneration Practices and AI's Intersection AI and Oral Histories, Traditional Stories, and Songs

Communities may now preserve their cultural history in a contemporary, easily accessible manner by using AI-driven platforms to preserve oral histories, traditional tales, and songs based on ancestor reverence. These systems can precisely record and transcribe tales, songs, and oral histories in native languages while maintaining minute grammatical and melodic details. In order to

ensure that ancestors' information is preserved and transmitted to future generations, this technology also aids in the documentation of endangered languages and dialects, which are often essential repositories of cultural values and knowledge. Additionally, by developing interactive interfaces that allow users to search for tales, songs, or histories based on themes, names, or certain cultural components, AI-driven platforms may improve access to these cultural archives. AI may create links between apparently unrelated pieces by labeling information with metadata about cultural practices, beliefs, and symbolic meanings. This enables users to explore cultural narratives in a rich, multi-layered manner. This makes it possible for the next generation to interact with these tales on their own terms in addition to learning about their forebears. AI may also examine topics, language patterns, or recurrent motifs in oral traditions, offering insights that people might not notice right away. By promoting the incorporation of ancestors' stories into modern culture, these AI platforms aid in cultural revival in addition to preservation and accessibility. For example, educators may use traditional storytelling in their curriculum, while musicians and artists might find inspiration in recorded tunes. AI-driven platforms help to create a cultural renaissance by digitizing and making these histories available, enabling old narratives and customs to adapt to contemporary settings. By bridging generational divides, these systems allow people to rediscover their ancestry and develop a greater respect for their past.

Recommendations

Integration AI in Ancestral Ritual Documentation

The transcription and analysis of prayers, rituals, and symbolic activities should be done using AI techniques like machine learning models and speech-to-text. This will ensure that they are accurately passed down to future generations and assist to preserve their authenticity.

AI-Enhanced Virtual Reality (VR) and Augmented Reality (AR) for Cultural Education The use of AI-driven VR and AR technologies should be encouraged to simulate ancestral veneration ceremonies. This will allow younger Igbo people, especially those in the diaspora, to engage with traditional practices.

AI-Generated Language Processing for Indigenous Knowledge Preservation

AI-driven natural language processing (NLP) should be utilized to document and translate Igbo incantations, proverbs, and folklore related to ancestral worship. This will help in making ancestral veneration more accessible to younger generations who may not be fluent in the Igbo language.

Government and Institutional Support for AI in Cultural Preservation

AI-driven cultural preservation projects should get financial and policy support from government agencies, academic institutions, and cultural institutions. In order to protect ancestral customs, policies should support documentation, study, and digital innovation.

Public Awareness and Digital Literacy on AI Applications in Cultural Preservation

The Igbo people should be made aware of the advantages of AI in conserving their cultural legacy through the creation of awareness campaigns. Programs for digital literacy and workshops should be set up to promote the use of AI in ancestral veneration.

Conclusion

In the digital age, the incorporation of artificial intelligence (AI) into Igboland's ancestral

eneration customs offers an outstanding chance for cultural preservation. AI-driven innovations like speech recognition, digital storytelling, and virtual archives can support and revive ancestral veneration as modernization and globalization continue to undermine traditional practices. These technologies make it possible to record and pass on oral histories, indigenous ideas, and holy rites to future generations, guaranteeing that the Igbo cultural identity endures in spite of changing social norms. AI can help close the generational divide by facilitating ancestor veneration for younger Igbo people who are more active on digital platforms. Traditional methods can be authentically reinvented in ways that appeal to modern audiences through the use of AI-powered applications, virtual worlds, and interactive learning resources. To ensure that the use of AI is consistent with the philosophical and spiritual principles ingrained in Igbo ancestral veneration, it is imperative that these advancements be approached with cultural sensitivity. In the end, maintaining Igbo ancestor veneration customs in the digital age calls for a well-rounded strategy that balances customs with new technology. Designing moral and useful AI applications that uphold the integrity of these customs will require cooperation between academics, AI developers, and cultural guardians. For both current and future generations, Igboland can preserve its historical legacy and promote a stronger sense of identity, continuity, and spiritual connection by utilizing AI as a tool for cultural sustainability.

Reference

- Adebayo, A. A., Fatai, T. K., & Asemota, E. C. (2023). Artificial Intelligence (AI) in Multilingual Education: Investigating Its Potential in Supporting the Preservation and Instruction of Indigenous Languages in Formal Education. *Journal of College of Languages and Communication Arts Education*, 2(1), 194-205.
- Ajito, T., Talan, R., & Nay, F. A. (2022). Mediation and the Atoni Meto Ritual as an Alternative For Out of Court Dispute Resolution in Kupang District. *Journal Pendidikan Tambusai*, 6(1), 2505-2516.
- Ajuzieogu, U. C. (2024). Multimodal Generative AI for African Language Preservation: A Framework for Language Documentation and Revitalization. Google Scholar.
- Amadi, L., & Akena, J. E. (2015). Globalization, Culture mutation and new identity: Implications for the Igbo cultural heritage. *African Journal of History and Culture*, 7(1), 16-27.
- Anthony, I., & Nwadior, K. L. (2023). Christianity in Igboland: Opportunities, Problems and Emerging Expressions. *Nigerian Journal of Philosophical Studies*, 2(2).
- Benbya, H., Davenport, T. H., & Pachidi, S. (2020). Artificial intelligence in organizations: Current state and future opportunities. *MIS Quarterly Executive*, 19(4). Google Scholar.
- Bostrom, N. S. (2014). Paths, dangers, strategies. Google Scholar
- Du-Harpur, X., Watt, F. M., Luscombe, N. M., & Lynch, M. D. (2020). What is AI? Applications of artificial intelligence to dermatology. *British Journal of Dermatology*, 183(3), 423-430.
- Egbeke, A. (2000). Crisis of Values: A Bane of National Development in Africa. *African Humanities Onitsha: Cape Publishers International Limited*, 181-202.
- Ghaith, K. (2024). AI Integration in Cultural Heritage Conservation—Ethical Considerations and the Human Imperative. *International Journal of Emerging and Disruptive Innovation in Education: Visionarium*, 2(1), 6.
- Ikechukwu Anthony, Kanu (2021). Sacred trees/plants: The greening of Igbo-African religion. *African Indigenous Ecological Knowledge Systems: Religion, Philosophy and the*

Environment. Google Scholar.

Iwunna, P., Ndukwu, E. C., Dioka, B. O., Alaribe, O. C., & Alison, J. O. (2021). History of Igbo People and Education: A Psychological Implication. *Historical Research Letter*, 53. 51, 61. Google Scholar.

Low, D. S., McNeill, I., & Day, M. J. (2022). Endangered languages: A sociocognitive approach to language death, identity loss, and preservation in the age of artificial intelligence. *Sustainable Multilingualism*, 21(1), 1-25. Google Scholar.

Madukwe, C. I., & Madukwe, H. N. (2010). African Value Systems and the Impact of Westernization: A Critical Analysis. *International Journal of Research in Arts and Social Sciences*, 2, 264-274.

Manik, R., Jimmy, A., & Andriyanto, Y. D. (2024). Digital Transformation of Balian Tradition Among The Dayak Siang Community: A Phenomenological Analysis with an Artificial Intelligence Approach. *International Journal of Artificial Intelligence Research*, 8(1.1).

Murire, O. T. (2024). Artificial Intelligence and Its Role in Shaping Organizational Work Practices and Culture. *Administrative Sciences*, 14(12), 316. Google Scholar.

Okolugbo, E. O. (1984). A history of Christianity in Nigeria: The Ndosumili and the Ukwuani. *Ibadan: Daystar*. Google Scholar.

Okoro, K. N. (2020). African (IGBO) Traditional Religious Thoughts and Modern Nigerian Environmental Crisis: A Reconsideration. *Middle-East Journal of Scientific Research*, 28(3), 240-253.

Ossai, A. (2024). Traditional Ecological Knowledge in Igbo Society: Exploring Igbo Culture For Environmental Sustainability. *SIST Journal of Religion and Humanities*, 4(1).

Ossai, A. (2024). Understanding the Ritualistic Aspects of African Traditional Religion and Its Roles in the Establishment of Peace in Pre-Colonial Igbo Communities. *Unizik Journal of Religion and Human Relations*, 15(1).

Sosis, R. (2004). The adaptive value of religious ritual: Rituals promote group cohesion by requiring members to engage in behavior that is too costly to fake. *American scientist*, 92(2), 166-172. Google Scholar.

Spatar-Kozachenko, T. I., Krylova, T. V., Loginova, N. Y., & Gruzdeva, M. V. (2024). The Link Between The Technological Evolution of the Education System and Transformations in Societal Culture. *Cepsc plus*, 18(2), 146-154. Google Scholar.

Stobbe, S. P. (2011). *Traditional conflict resolution processes: Mediation and rituals to address conflicts in multi-ethnic cultures of Laos*. University of Manitoba (Canada). Google Scholar

Ude, D. M. (2024). *Endangered African Knowledges and the Challenge of Modernity: An Igbo Response*. Taylor & Francis. Google Scholar.

Wang, J., & Li, J. (2024). Artificial intelligence empowering public health education: prospects and challenges. *Frontiers in public health*, 12, 1389026. Google Scholar.