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Artificial Intelligence and Tourism Experience in Akwa Ibom State: A Study of Technological Integration in Destination Management

[1]Obot, Mary Ifiok & [2]Gideon C. Uboegbulam
[1&2]Department of Hospitality and Tourism Management,
Faculty of Management Sciences, University of Port Harcourt, Choba, Rivers State

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Abstract

This study analyses how artificial intelligence (AI) integration promotes tourism experiences in Akwa Ibom State, Nigeria, an area with great but underutilised tourism potential. Grounded in the Technology Acceptance Model (TAM), the research studies how AI technologies influence the affective (emotional) and cognitive (intellectual) dimensions of tourism experiences. Despite Akwa Ibom's abundant assets, difficulties include inadequate infrastructure, poor service delivery, and little awareness restricting tourism growth. Through a quantitative survey of 198 tourists who utilised AI-enabled services (e.g., chatbots, digital maps, recommendation systems), the study employed Pearson correlation analysis. Results demonstrate a considerable positive connection between AI integration and both affective (r=0.723) and cognitive (r=0.689) experiences, underscoring AI's significant role in promoting emotional involvement and intellectual stimulation. AI technology boosted service responsiveness, enhanced cultural understanding, and gave better personalisation, leading to more memorable and meaningful encounters. These findings underline AI's ability to bridge infrastructural and service delivery gaps, giving practical solutions for rebranding Akwa Ibom as a competitive tourism destination. This study contributes to tourism literature in emerging nations and verifies TAM's utility in evaluating digital innovation in destination management. Recommendations include strategic AI adoption, capacity building, public-private cooperation, and feedback mechanisms to sustain innovation and visitor happiness.

Keywords: *Artificial intelligence, Tourism experience, Affective experience, Cognitive experience, Destination management, Technology acceptance model, Smart tourism.*

Corresponding Author: Obot, Mary Ifiok
ORCID ID: https://orcid.org/0000-0001-6127-5866

Background to the Study

Akwa Ibom, a state in Nigeria's Niger Delta area, has great potential for tourism growth. The state is known for its beautiful coastline, rich cultural heritage, and developing infrastructure. This gives it significant yet largely untapped tourism potential (Udoh et al., 2024). Some of its unique features include the serene Ibeno Sand Beach along the Atlantic coast, cultural events like the Ekpe and Ibom masquerades, and historical sites such as the first aviation terminal in Black Africa (Umana & Akpan, 2023).

These attractions show that Akwa Ibom can become a major tourist destination. A recent survey highlighted that the state can support socio-economic development, generate revenue, and create job opportunities for its residents (Umana & Akpan, 2023). Tourism is more than just visiting a place; it involves the complete experience of travel. This idea, often called a 'holistic experience', includes various sensory, emotional, cognitive, and social elements that shape a traveller's view and memory of a location (Haque & Sabani, 2023). Ooi and Chou (2022) emphasise that tourism is a complex psychological process where people interact with their environment, leading to personal growth and lasting impressions. A memorable tourism experience is crucial for understanding travel behaviour. It affects satisfaction, creates unforgettable moments, and encourages future visits (Almuhrzi & Al-Habsi, 2024; Sthapit et al., 2024b). The quality of the tourism experience significantly impacts a location's competitiveness and improves tourists' overall well-being (Perles-Ribes et al., 2024).

Despite its vast potential, tourism in Akwa Ibom faces several challenges. The state has historically relied too much on oil, causing government neglect of the tourism sector. Poor infrastructure, like bad roads and a lack of modern hotels, coupled with security issues, deters potential visitors (Umana & Akpan, 2023; Udoh et al., 2024). Additionally, environmental problems such as oil spills threaten the state's natural beauty. There is also a lack of public awareness about available hospitality options, making things worse (Udoh et al., 2024). These factors often lead to fragmented and inconsistent tourism experiences, preventing the state from fully leveraging its potential. Given these challenges, adopting Artificial Intelligence (AI) appears to be a practical way to improve destination management and, ultimately, the tourism experience in Akwa Ibom.

Globally, AI is quickly changing the tourism industry, bringing in a new era of personalised and efficient travel (Munar & Gyimóthy, 2022). AI is broadly defined as the simulation of human intelligence processes by machines, particularly computer systems. It includes learning, reasoning, problem-solving, perception, and language understanding (Kaplan & Haenlein, 2018). Its uses in tourism are varied and expanding. They include intelligent chatbots for customer service, personalised recommendation systems, dynamic pricing, enhanced security through smart surveillance, and robotics to improve operational efficiency (Li et al., 2022; Tyan et al., 2023). These trends highlight AI's potential to transform how tourism experiences are created and experienced, making a strong case for its use in a developing region like Akwa Ibom.

There are many reasons to study AI in the context of Nigeria, particularly in Akwa Ibom. Nigeria, as Africa's most populous country, has a unique socio-economic environment that is perfect for technological innovation (Omede et al., 2023). While AI offers transformative opportunities for economic growth, efficiency, and better public services, its broader use faces challenges such as underdeveloped infrastructure, limited data systems, and gaps in STEM education (Omede et al., 2023). Still, the advantages are significant. AI can greatly improve service delivery, enhance customer experiences through personalisation, and even tackle important issues like security with smart monitoring and effective crowd control. In Akwa Ibom, where tourist potential remains largely unrealised due to these challenges, AI integration could provide tailored solutions, boost destination management, and elevate the tourism experience to global standards (Udoh et al., 2024). Local research shows AI's potential in areas like hotel management. It can enhance efficiency, even with financial constraints and high implementation costs (Aliu et al., 2022).

Despite Akwa Ibom's rich natural, cultural, and historical tourism resources, its tourism sector is underdeveloped, resulting in inconsistent and often disappointing tourist experiences (Umana & Akpan, 2023). Ongoing issues like inadequate infrastructure, security concerns, environmental damage from oil spills, and a lack of strategic government investment have traditionally hindered growth and competitiveness (Udoh et al., 2024). As a result, tourists frequently describe experiences that fall short of expectations, with limited chances for meaningful engagement and poor service delivery (Almuhrzi & Al-Habsi, 2024; Sthapit et al., 2024b).

While global trends show the potential of artificial intelligence to improve various aspects of the tourism industry, particularly in personalisation, efficiency, and responsiveness (Munar & Gyimóthy, 2022; Li et al., 2022), there is a significant gap in knowledge regarding its specific use and impact within the unique socio-economic and infrastructural context of Akwa Ibom, Nigeria. Current research mainly focuses on AI in developed countries, with little attention paid to how AI tools can address the specific challenges of destination management in emerging economies like Nigeria, where infrastructure issues and operational complexities are significant (Omede et al., 2023; Aliu et al., 2022). The extent to which AI tools can genuinely enhance emotional and cognitive aspects of the tourism experience and how these improvements appear in terms of responsiveness and tangibility in a place like Akwa Ibom is still not well explored in academic discussions.
This study aims to examine how Artificial Intelligence (AI) technologies can improve the tourism experience in Akwa Ibom State, focusing mainly on their effects on emotional and cognitive experiences in destination management.

The specific objectives of the study are to:

i. Evaluate how AI tools enhance the affective experience of tourists in Akwa Ibom State.
ii. Assess how AI tools improve the cognitive experience of tourists in Akwa Ibom State.

Based on the aim and objectives, the following research hypotheses will be tested:

Ho1: The integration of AI tools has no significant relationship with the affective experience of tourists in Akwa Ibom State.

Ho2: The integration of AI tools has no significant relationship with the cognitive experience of tourists in Akwa Ibom State.

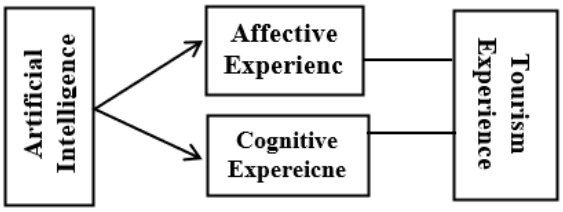

Fig. 1: Researcher's Conceptualization of the Relationship Between Artificial Intelligence and Tourism Experience

Source: Measure of Tourism Experience are adapted from Hosany & Gilbert (2010) and Kim, Ritchie & McCormick (2012)

Theoretical/Literature Review

The Technology Acceptance Model (TAM), initially suggested by Davis (1989), provides a rigorous theoretical lens for understanding user acceptance of new technologies, making it particularly important to the integration of artificial intelligence in tourism destination management. At its foundation, TAM proposes that two major psychological aspects influence an individual's intention to use a technology: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). Perceived Usefulness refers to the degree to which a person believes that adopting a certain system will boost their job performance or achieve desired objectives (Davis et al., 1989). In the context of tourism, this could translate to a tourist's perception that an AI-powered tool will actually improve their vacation planning, enhance their on-site experience, or deliver more important information. Conversely, perceived ease of use is defined as the degree to which an individual believes that using a system will be devoid of effort (Davis, 1989). This factor is vital, as even a very valuable technology may be rejected if it is viewed as burdensome or difficult to navigate. These two perspectives, in turn, directly impact a user's attitude towards using the technology, which then influences their behavioural intention to accept and employ it (Venkatesh & Davis, 2000).

Applying the Technology Acceptance Model to the study of AI integration in Akwa Ibom's tourist sector offers vital insights into the possible success or failure of such endeavours. For tourists and destination managers in Akwa Ibom, their propensity to engage with AI tools, whether intelligent chatbots, personalised recommendation systems, or smart surveillance, will primarily depend on their impressions of these systems' utility and ease of use. If AI technologies are viewed by visitors as efficiently increasing their affective experience by alleviating unpleasant feelings or promoting good ones and improving their cognitive experience by giving innovative insights or enabling learning, then their perceived usefulness

will be high. Similarly, if destination managers find AI technologies actually responsive in managing operations and creating tangible changes to service delivery without substantial effort, their adoption will be boosted. Understanding these nuanced perceptions within the specific socio-cultural and infrastructural landscape of Akwa Ibom is paramount, as local context can significantly influence technology acceptance, thereby determining the ultimate efficacy of AI in transforming the tourism experience (Teo et al., 2015; Venkatesh et al., 2012).

Literature Review

Concept of Artificial Intelligence

Artificial intelligence (AI) is a paradigm shift in computing, typified by machines' ability to replicate human intellectual functions, including learning, reasoning, problem-solving, perception, and language understanding (Kaplan & Haenlein, 2018). In the tourism landscape, AI manifests in various forms, from conversational agents (chatbots) providing instant customer support and travel information (Li et al., 2022) to sophisticated recommendation systems that personalise itineraries and suggestions based on traveller preferences and past behaviours (Tyan, 2023). Other significant examples are smart maps giving real-time navigation and places of interest, dynamic pricing algorithms optimising income, and robotics employed for hotel services or security (Li et al., 2022).

Current trends demonstrate that AI is transforming the tourist industry into a more automated, personalised, and efficient travel environment. The usage of AI in tourism is fast rising due to the demand for enhanced customer experiences and operational efficiency (Munar & Gyimóthy, 2022). Studies have continually highlighted AI's promise in enabling service customisation, which is crucial for addressing various visitor needs and promoting loyalty (Tyan, 2023). By examining huge datasets, AI systems may adapt services, from accommodation preferences to activity ideas, leading to heightened customer involvement and pleasure (Li et al., 2022). This customisation extends to predictive analytics, allowing destination managers to forecast demand, optimise resource allocation, and even manage crowd movement in real-time, hence boosting total visitor happiness (Munar & Gyimóthy, 2022). The emergence of augmented reality (AR) and virtual reality (VR) powered by AI further enriches pre-travel planning and on-site experiences, delivering immersive previews and interactive interactions (Tyan, 2023).

While AI's disruptive potential is universally known, its use inside the Nigerian tourism industry is still in early stages, wrestling with distinct contextual constraints. Nigeria, as a fast-expanding nation, presents both great prospects for AI adoption and considerable challenges, including poor digital infrastructure, restricted data ecosystems, and a notable skills gap in STEM education (Omede et al., 2023). Despite these challenges, there is a growing awareness of AI's capacity to boost economic growth and better numerous public services (Omede et al., 2023).

In the broader Nigerian hospitality sector, research indicates that AI adoption is mostly driven by the demand for greater efficiency and enhanced customer experience, notably within hotels (Aliu et al., 2022). However, financial restrictions and the high cost of implementation typically impede extensive integration (Aliu et al., 2022). Integrating AI in Akwa Ibom State, with its vast untapped tourism potential, could bring about tremendous changes. Given its existing constraints such as poor infrastructure, security issues, and historical underinvestment in tourism (Udoh et al., 2024), AI technologies could offer tailored solutions. For instance, AI-powered systems could assist in managing security surveillance more effectively, provide real-time information to tourists navigating unfamiliar environments, or offer personalised recommendations that cater to the diverse interests of visitors to sites like Ibeno Sand Beach or cultural festivals (Umana & Akpan, 2023). While direct documented applications of AI in Akwa Ibom tourism are scarce, the burgeoning interest in technology across Nigeria suggests a fertile ground for pilot programmes and future integration, particularly in enhancing aspects like online presence, booking systems, and visitor information services.

Concept of Tourism Experience

The tourism experience is a comprehensive and complicated construct, reaching much beyond the mere consumption of services or visitation of landmarks. Scholarly definitions stress its holistic aspect, covering sensory, emotional, cognitive, and social dimensions that collectively influence a traveller's impression and recall of a trip (Haque & Sabani, 2023). Some experts consider it a difficult psychological process (Ooi & Chou, 2022), where travellers actively participate with their environment, leading to personal growth and enduring impressions. Other viewpoints highlight it as a lived occurrence where individuals draw value and purpose from their interactions within the tourism ecosystem (Almuhrzi & Al-Habsi, 2024).

While there is considerable unanimity on its multidimensionality, nuances in definition might often appear conflicting. For instance, some definitions highlight the active co-creation of the experience by the visitor, while others lean towards the role of the location or service provider in planning and delivering the experience (Ooi & Chou, 2022). These different perspectives show the dynamic interplay between the tourist's unique qualities, the destination's attractions, and the surrounding socio-cultural setting. Regardless of the precise theoretical emphasis, the benefits of a well-curated travel experience are universally acknowledged. A nice and memorable experience is vital for influencing future behavioural intentions, fostering return visitation, and creating favourable word-of-mouth referrals (Almuhrzi & Al-Habsi, 2024). Beyond financial rewards, tourism experiences contribute considerably to a tourist's total well-being, encompassing dimensions of pleasure, engagement, significance, and accomplishment (Perles-Ribes et al., 2024; Sthapit et al., 2024b).

The decision to focus on emotive and cognitive experiences as core metrics of the tourism experience is established in their basic roles in shaping tourist satisfaction, memory, and

future behaviour. The tourism experience is not only a physical journey but a significant psychological and emotional one. Affective experiences capture the emotional responses and feelings elicited during travel, which are major drivers of overall satisfaction and memorable events (Sthapit et al., 2024b). Cognitive experiences, on the other hand, pertain to the intellectual engagement, learning, and information acquisition that occur, leading to a sense of novelty, meaningfulness, and personal enrichment (Sthapit et al., 2024a). By examining these two distinct yet interconnected dimensions, this study aims to provide a comprehensive understanding of how AI integration specifically influences the qualitative aspects of a tourist's interaction with Akwa Ibom as a destination, moving beyond mere transactional efficiencies to deeper experiential value.

Measures of Tourism Experience

Affective Experience

Affective experience in tourism refers to the subjective emotional states and sentiments evoked in tourists throughout their journey. These emotions can span over a broad spectrum, from joy, excitement, and love to surprise, astonishment, or even moderate disappointment (Haque & Sabani, 2023; Sthapit et al., 2024b). Scholars continuously highlight that emotions are extremely subjective constructions, substantially impacted by human personality, cultural background, and the immediate social and geographical settings of the destination (Haque & Sabani, 2023). Crucially, pleasant affective experiences are paramount since they greatly impact overall satisfaction, contribute to the construction of memorable experiences, and serve as strong indicators of revisit intentions and favourable recommendations (Almuhrzi & Al-Habsi, 2024).

For the present study, the affective experience is deemed crucial because a destination's ongoing success is increasingly connected to its ability to regularly inspire good emotions in its visitors. In Akwa Ibom, where the strategic purpose is to enhance the overall tourism appeal and create sustainable growth, understanding and deliberately improving the emotional journey of tourists is vital to establishing deeper ties and encouraging repeat visits. By assessing this specific component, this research will obtain crucial insights into how AI tools contribute to generating positive emotional responses, thereby making the location feel more inviting, thrilling, or culturally enriching for varied visitor groups.

Despite its crucial relevance, offering consistently favourable emotional experiences in tourism is fraught with major problems. The inherent subjectivity and cultural heterogeneity of emotional responses among tourists hamper efforts to create consistent happy experiences (Haque & Sabani, 2023). Moreover, service failures or the prominence of unfavourable internet reviews can swiftly generate significant negative feelings like betrayal or rage, emotions that are typically compounded by disappointed tourist expectations (Haque & Sabani, 2023). Furthermore, the pressures of mass tourism can unwittingly contribute to hasty consumption and a dehumanising sensation, preventing true emotional engagement (Udoh et al., 2024). Beyond operational features, external issues such as a tourist's perceived risk associated with a place or a negative public destination image can also considerably hamper the development of positive emotional outcomes (Umana & Akpan, 2023).

Artificial intelligence, however, offers various intriguing avenues to solve these multiple issues in producing positive emotional experiences. AI-powered personalisation systems, for instance, can assess individual tourist preferences and prior behaviours to adapt experiences, thereby considerably improving the possibility of evoking good emotions by offering highly relevant and engaging options (Li et al., 2022). Proactive and responsive AI chatbots can provide instant support, handling queries swiftly and avoiding any service failures that might otherwise lead to irritation (Tyan, 2023). Furthermore, real-time data analysis capabilities of AI can equip destination administrators to identify and respond to possible concerns swiftly, minimising negative effects on tourist emotions. Beyond direct encounters, AI-driven crowd control systems can prevent overcrowding at popular venues, creating a more pleasant and less stressful environment that is particularly favourable to fostering positive emotional states (Munar & Gyimóthy, 2022).

Cognitive Experience

Cognitive experience in tourism refers to the mental processes that tourists engage in, including learning, knowledge acquisition, intellectual stimulation, and the perception of novelty and meaningfulness (Sthapit et al., 2024a). This dimension involves the ability to store, transform, and apply acquired knowledge, contributing to a sense of intellectual engagement and personal growth (Ooi & Chou, 2022). It's particularly crucial for tourists who want educational value, cultural awareness, or a distinct intellectual challenge throughout their trip.

For Akwa Ibom, delivering a rich cognitive experience is vital for attracting segments of tourists interested in its significant cultural heritage, historical landmarks, or natural ecosystems. By enhancing the cognitive aspect, this project hopes to uncover how AI may support deeper learning, providing greater depth of insights into local culture, history, and environment, and ultimately make the experience more intellectually stimulating and memorable. This elevation can change the destination beyond a regular pleasure spot into a place of discovery and personal enrichment.

However, fostering intellectual engagement and information acquisition in tourism meets many problems. The dynamic and extremely distinctive nature of cognitive processes, coupled with context variability, makes it difficult to produce uniformly stimulating experiences (Sthapit et al., 2024a). There's sometimes a paucity of thorough understanding of what actually drives cognitive engagement in different tourism circumstances, making it impossible to plan and design such interactions successfully (Ooi & Chou, 2022). Issues like diminishing authenticity in cultural presentations or overtourism, which leads to shallow meetings, can further reduce the chance for meaningful intellectual connection (Udoh et al., 2024). Additionally, impediments to effective social engagement, such as a lack of stakeholder involvement or strategic planning, can restrict prospects for deep learning through cultural exchange (Umana & Akpan, 2023).

AI presents an excellent chance to tackle these challenges. Personalised learning systems, driven by AI, can customise material and pace to individual tourist preferences, enhancing engagement and information retention regarding Akwa Ibom's attractions (Li et al., 2022). Customised itineraries, generated by AI algorithms, can bring novelty and ensure that tourists discover characteristics of the destination that fit with their specific intellectual interests (Munar & Gyimóthy, 2022). Augmented Reality (AR) and Virtual Reality (VR) applications, powered by AI, can offer immersive and engaging educational experiences, allowing tourists to explore historical landmarks with digital overlays of information or virtually interact with local traditions (Tyan, 2023). Furthermore, AI-driven translation tools can allow deeper cross-cultural communication, hence expanding prospects for meaningful social contact and intellectual exchange (Tyan, 2023).

Empirical Review

Artificial Intelligence and Affective Experience

Francis (2024) studied the application of Artificial Intelligence (AI) in tourist accommodation outlets in Abuja, Nigeria, concentrating on its function in effective service delivery and consumer satisfaction in the post-COVID-19 age. This qualitative study, employing a snowball sampling technique, obtained perspectives from 17 people across 12 hotel businesses, 2 academics, and 3 industry consultants. Thematic research found that AI solutions like mobile booking and facial recognition are vital for optimising operational efficiency and, significantly, improving customer happiness, which directly affects the emotive experience. The findings imply a need for supportive measures, such as tax credits for smaller hotels, to encourage greater AI implementation and harness its beneficial influence on guest affect.

Xu et al. (2025) studied the impact of ChatGPT on user emotional responses, continuous use intention, and word-of-mouth behaviour for travel-related services in China. Employing a quantitative research design, their empirical study employed Structural Equation Modelling (SEM) on data from an online survey of 428 Chinese respondents. The research, anchored in the Pleasure, Arousal, Dominance (PAD) theory, found that service ubiquity, entertainment, and anthropomorphism greatly influence user emotions (dominance, pleasure, arousal). Critically, both dominance and pleasure favourably affected ongoing usage and word-of-mouth, with pleasure demonstrating the highest effect. This emphasises the fundamental impact of emotional elements in creating a visitor's affective experience with AI-powered travel services.

Chandra Shekhar (2022) did an empirical study on the overall impact of artificial intelligence on tourist satisfaction within the global tourism and hospitality industry. This quantitative descriptive research design includes administering structured questionnaires to 149 tourists who have engaged with AI services in hotels or destinations. Analysing data through frequency tables, graphs, and one-way ANOVA, the research indicated that AI has a major impact on the tourism and hospitality sectors, resulting in noticeable disparities in tourist satisfaction levels for those employing AI services. The findings imply that AI, by giving

automated, tailored, and informational services, contributes positively to the emotive experience of tourists, underlining its value for boosting consumer happiness.

Artificial Intelligence and Cognitive Experience

Kekeocha et al. (2025) evaluated the influence of artificial intelligence, specifically Alexa and chatbot applications, on sustainable development, community engagement, and capacity building within the hospitality sector of Southeast Nigeria. This quantitative descriptive survey employed random sampling to collect data from 304 staff across 15 hotels. Applying the Pearson Product Moment association coefficient for analysis, the study found a substantial positive association between AI tools and both community engagement ($r=0.782$) and capacity building ($r=0.923$). These findings show that AI boosts cognitive characteristics such as information processing, learning, and decision-making within the hospitality profession, improving operational efficiency and contributing to sustainable development outcomes for the region.

Ivasciuc et al. (2025) studied tourism experiences by comparing the perspectives of Generation Z with insights generated by artificial intelligence (ChatGPT-4o mini) in Romania. This mixed-methods study comprised a comprehensive literature review, an online survey of 399 Romanian Generation Z respondents (by snowball sampling), and AI-generated outcomes. The research employed quantitative analysis for survey data and comparative evaluation for AI findings. Findings demonstrated both convergences and divergences, suggesting AI can complement traditional research by proposing alternate cognitive interpretations of tourist behaviour and preferences. The study emphasises AI's capacity to absorb and deliver information that helps comprehend tourist decision-making and preferences.

Orea-Giner et al. (2022) gave a holistic perspective on cultural tourists' user experience with artificial intelligence, set within the Industry 5.0 paradigm. This qualitative study, based on a deductive method, evaluated two roundtable talks including experts and users (total 12 participants via intentional and snowball sampling). Thematic analysis utilising NVivo demonstrated that AI greatly increases cognitive experiences by aiding knowledge acquisition, decision-making, and understanding within cultural organisations. AI's capacity to automate communication and deliver personalised recommendations illustrates its significance in altering how tourists receive information and engage with cultural content, ultimately creating deeper relationships and immersive experiences.

Methodology

This study utilised a quantitative survey research approach to investigate the function of Artificial Intelligence (AI) in increasing tourism experience in Akwa Ibom State. A structured questionnaire was developed and delivered to tourists who have interacted with AI-enabled services (e.g., digital maps, AI chatbots, recommendation systems, facial recognition systems, language translators) within the state's tourism destinations. The population comprises domestic and international tourists visiting key sites, including Ibeno Beach, National

Museum Uyo, and Ibom Plaza. A stratified random selection procedure was employed to assure representation across diverse age groups, ethnicities, and visit purposes. A total of 210 questionnaires were distributed, out of which 198 were valid and appropriate for statistical analysis. Data were analysed using SPSS version 25. Descriptive statistics (mean and standard deviation) were employed to describe sample characteristics and variable distributions. The Pearson product-moment correlation coefficient was performed to analyse the association between AI integration and affective/cognitive tourism experience. Cronbach's alpha was utilised to verify the internal consistency of the structures. Finally, hypotheses were assessed using correlation analysis with a significance level of $p < 0.05$. The use of correlation analysis is comparable with past studies that examined AI's influence on experience variables using similar inferential statistical approaches (see Kekeocha et al., 2025; Xu et al., 2025).

Results and Discussion of Findings

Table 1: Cronbach's Alpha Values for Constructs

Variable Measured	No. of Items	Cronbach's Alpha
Artificial Intelligence	6	.871
Affective Experience	6	.843
Cognitive Experience	6	.864

Source: SPSS Result of Field Survey, 2025

Interpretation: All values exceed the 0.7 threshold (Nunnally, 1978), confirming the reliability of the constructs.

Data Analysis

Hypothesis Testing

Test of Hypothesis 1

H_{01}: The integration of AI tools has no significant relationship with the affective experience of tourists in Akwa Ibom State.

Table 2: Pearson Correlation Test for Hypothesis 1

Correlations

		Artificial Intelligence	Affective Experience
Artificial Intelligence	Pearson Correlation	1	.723**
	Sig. (2-tailed)		.000
	N	198	198
Affective Experience	Pearson Correlation	723**	1
	Sig. (2-tailed)	.000	
	N	198	198

**. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS Output, version 25

Decision Rule:
If p-value ≤ 0.05, reject the null hypothesis.

Decision:
Since p = 0.000 < 0.05, we reject the null hypothesis.

Interpretation: Since the p-value is less than 0.05 and the correlation coefficient suggests a very strong positive link, we reject the null hypothesis. This suggests that AI solutions such as chatbots, smart booking platforms, and tailored service systems are highly connected with improved emotional experiences among tourists in Akwa Ibom. This is congruent with Xu et al. (2025), who demonstrated that AI-enabled services (such as ChatGPT and virtual assistants) boosted users' pleasure and emotional satisfaction in tourism contexts, hence driving continued use and positive word-of-mouth. Similarly, Francis (2024) observed that AI tools like smartphone check-in and facial recognition boosted consumer emotional happiness in Abuja hotels, validating the emotional benefits of AI in Nigerian tourism.

Test of Hypothesis 2

H_{01}: The integration of AI tools has no significant relationship with the cognitive experience of tourists in Akwa Ibom State.

Table 3: Pearson Correlation Test for Hypothesis 2

Correlations

		Artificial Intelligence	Cognitive Experience
Artificial Intelligence	Pearson Correlation	1	.689**
	Sig. (2-tailed)		.000
	N	198	198
Cognitive Experience	Pearson Correlation	.689**	1
	Sig. (2-tailed)	.000	
	N	198	198

**. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS Output, version 25

Decision Rule:
If p-value ≤ 0.05, reject the null hypothesis.

Decision:
Since p = 0.000 < 0.05, we reject the null hypothesis.

Interpretation: With a p-value below 0.05 and a significant correlation value, the null hypothesis is again rejected. This shows that tourists who engage with AI-driven systems are

more likely to report enriched learning, information processing, and intellectual stimulation during their vacation. This study coincides with Kekeocha et al. (2025), who observed a statistically significant association between AI and capacity building in Southeast Nigerian hotels, suggesting increased information flow and decision-making. Additionally, Orea-Giner et al. (2022) found that AI use in cultural tourism settings boosted tourists' knowledge and cognitive engagement with cultural artefacts and historical contexts, confirming the idea that AI tools deepen cognitive experience through better access to valuable content.

Research Implications, Conclusion and Recommendation

Research Implications

The findings of this study considerably contribute to the burgeoning literature on technology innovation in tourism, especially in under-researched places like sub-Saharan Africa. The empirical evidence demonstrating the substantial influence of AI tools on both the affective and cognitive dimensions of tourist experience in Akwa Ibom State has profound theoretical implications for understanding technology's role in destination management and practical implications for enhancing visitor experiences and destination competitiveness. Theoretically, the study validates the significance of the Technology Adoption Model (TAM) in tourism research, notably in explaining user adoption of intelligent technologies in destination environments (Venkatesh & Davis, 2000; Teo et al., 2015). It highlights that perceived usefulness and ease of use, core constructs of TAM, manifest not only in utilitarian outcomes such as convenience or efficiency but also in experiential outcomes like emotional satisfaction and intellectual engagement, thus extending TAM's utility in tourism experience design.

Practically, the findings show that tourism destination managers and policymakers in Nigeria can employ AI to bridge infrastructural and service delivery gaps that have historically impeded the tourism sector (Aliu et al., 2022). The favourable associations identified between AI tools and emotional involvement (affective experience) as well as information acquisition (cognitive experience) show that AI can serve as a tool for rebranding Akwa Ibom into a more competitive location. Moreover, the result supports the view that digital transformation is not limited to developed markets; when appropriately contextualised, even destinations with modest infrastructure can use intelligent systems to provide personalised, engaging, and memorable tourist experiences (Xu et al., 2025; Orea-Giner et al., 2022).

Conclusion

This study investigated the extent to which artificial intelligence tools influence the affective and cognitive elements of visitor experiences in Akwa Ibom State, Nigeria. Using a quantitative study approach, it discovered a strong and statistically significant association between AI integration and both forms of tourism experience. These results show that AI may greatly revolutionise tourism when used correctly and in line with visitor needs and local conditions. In particular, AI tools were proven to create positive emotional responses among tourists through customisation and responsiveness, while also increasing cognitive engagement by enhancing access to relevant cultural, historical, and logistical information.

These conclusions are consistent with previous research by Kekeocha et al. (2025), who found that AI contributes to cognitive development and operational efficiency in hospitality settings, and Xu et al. (2025), who observed that emotional responses to AI services significantly affect tourist satisfaction and behaviour. The findings reinforce the premise that AI goes beyond technical innovation to promote more meaningful tourism experiences, especially in places facing structural and reputational concerns.

Recommendations

Based on the empirical data, the following recommendations are proposed:

1. Strategic AI Adoption in Tourism Planning: Destination management firms in Akwa Ibom should integrate AI tools, such as chatbots, interactive maps, and personalised recommendation engines, into their service delivery platforms. These technologies should be personalised to enhance both emotional and cognitive experiences by delivering real-time support, personalised material, and culturally enriching narratives (Munar & Gyimóthy, 2022).
2. Capacity Building and Infrastructure Investment: For efficient deployment of AI, the state government and tourist stakeholders should invest in digital infrastructure and staff training. As stated by Aliu et al. (2022), lack of technical knowledge and insufficient infrastructure are important challenges to AI application in Nigeria's tourism business. Building local capability assures long-term sustainability and usefulness of such technology.
3. Collaborative Public-Private Partnerships: Policymakers should encourage partnerships between government, academic institutions, and private tech businesses to co-develop and pilot AI-based products tailored to tourism in Akwa Ibom. Such cooperation can promote cost-sharing, innovation, and the integration of local material, hence boosting user engagement and technical suitability (Omede et al., 2023).
4. Continuous Visitor Feedback and Evaluation Mechanisms: As user experience is central to AI's effectiveness in tourism, regular feedback mechanisms should be embedded into all AI tools to monitor satisfaction levels, detect issues early, and make data-driven improvements (Tyan, 2023). Such comments will also act as a significant source of insight for tailoring AI tools to shifting visitor expectations.

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