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Research on New Cultural and Tourism Consumption Scenarios in the Context of Artificial Intelligence

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Abstract: With the rapid development of artificial intelligence (AI) technology, the cultural and tourism industry has ushered in new development opportunities. From intelligent guided tours, intelligent robots, and VR immersive experiences to new models such as big data-driven precision marketing and live-streaming e-commerce, a diversified range of cultural and tourism consumption scenarios has been created. These scenarios are more conducive to stimulating tourists' consumption desire and promoting the high-quality development of the cultural and tourism industry. This paper elaborates on the application advantages and challenges of AI technology in cultural and tourism consumption scenarios, and proposes countermeasures, including leveraging AI to empower precision marketing, developing immersive experience projects, improving consumer service quality, and carefully creating digital collectibles. The aim is to enable AI to boost the high-quality development of the cultural and tourism industry.

Keywords: Artificial intelligence; Integration of culture and tourism; Consumption scenarios; Application paths

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1. Introduction

As "digital cultural tourism" and "smart tourism" become new trends, emerging technologies such as big data, VR, and artificial intelligence have been increasingly widely applied in the cultural and tourism market. These technologies have promoted the integration and sharing of cultural and tourism resources, ignited a new engine for the consumption market in the cultural and tourism industry, and provided strong impetus for the development of the sector. In the context of artificial intelligence, scenic spots and museums can use VR technology to create immersive experience projects, allowing tourists to learn about history and the creation process of cultural relics in virtual scenarios. Meanwhile, intelligent guided tours and intelligent robots can provide intelligent services, leaving a positive impression on tourists and thereby stimulating their consumption enthusiasm. In addition, scenic spots and museums can launch digital collectibles using AI technology, promoting fine traditional Chinese culture

and intangible cultural heritage (ICH) through videos, audios, and other means. This not only deepens tourists' impressions of the scenic spots and cities but also drives the vigorous development of related industries such as local catering, accommodation, and shopping.

2. Advantages of applying artificial intelligence technology in new cultural and tourism consumption scenarios

2.1. Providing intelligent navigation and personalized recommendations

In the era of artificial intelligence, intelligent navigation systems have gradually become popular, allowing tourists to learn about scenic routes, brief introductions to cultural relics, and life stories of historical figures by scanning QR codes or via WeChat official accounts. This deepens their understanding of the scenic spots and helps stimulate their consumption desire within the scenic area [1]. Meanwhile, scenic spots can push information about cultural and creative products, VR experience projects, etc., through WeChat official accounts and intelligent navigation systems, facilitating tourists to purchase products online and book VR experiences. This realizes online transactions, improves tourists' consumption experience, and increases the revenue of scenic spots.

2.2. Launching virtual tourism and immersive experience projects

Tourist attractions and museums can use virtual reality (VR) and augmented reality (AR) to create virtual tourism and immersive experience projects, building realistic historical scenes. Tourists can experience these by wearing VR glasses or headsets, making them feel as if they have traveled back in time through the long river of history. This allows them to experience thousands of years of history online, enhances their tourism and visiting experience, and helps stimulate greater consumption enthusiasm among more tourists. For example, the Dunhuang Research Academy launched the "Digital Dunhuang" project, which uses VR technology to display the mural restoration process and explain the stories behind the murals. This enables tourists who cannot visit the Mogao Grottoes to experience Dunhuang's history online, stimulating their enthusiasm for purchasing Dunhuang-related cultural and creative products and souvenirs, thereby increasing the sales of cultural and creative products and souvenirs in the scenic area and creating more economic benefits for it [2].

2.3. Intelligent customer service and language interaction

AI-driven intelligent customer service has become a standard feature in major scenic spots, museums, and hotels. It can provide multilingual services for tourists, answer their questions in real-time about classic routes, cultural history, local cuisine, tickets, weather, etc., and intelligently recommend related souvenirs and local products, enriching new cultural and tourism consumption scenarios [3]. In addition, intelligent translators also support the creation of new cultural and tourism consumption scenarios, facilitating communication between foreign tourists and staff of scenic spots, museums, hotels, merchants, and Chinese tourists. This helps foreign tourists understand Chinese history, cultural background, scenic spot history, and cultural and creative products, stimulates their shopping enthusiasm, and increases the revenue of tourist attractions, merchants, and museums.

2.4. Big data-driven market forecasting and marketing

In the context of artificial intelligence, technologies such as big data and cloud computing can help cultural and tourism departments and tourist attractions accurately predict passenger flow during major festivals and reservation volumes of various scenic spots. This enables intelligent adjustment of tourist flow density in scenic areas and

improves tourists' experience. At the same time, big data can help tourist attractions and museums accurately capture tourists' consumption data, clarify consumers' preferences, carry out targeted marketing, achieve precise push, actively promote online and offline orders, and comprehensively increase the economic income of the cultural and tourism industry [4].

3. Challenges faced by artificial intelligence in empowering new consumption scenarios in the cultural and tourism industry

3.1. High costs of AI Technology development and maintenance

The development, introduction, and maintenance costs of intelligent navigation systems, AI explanation systems, and VR experience projects are relatively high, which poses a severe challenge to tourist attractions, museums, and science and technology museums in underdeveloped areas with limited funds. For example, although some museums and scenic spots in underdeveloped areas have introduced intelligent navigation systems, due to insufficient funds and a lack of professional and technical personnel, the voice introductions of the systems are brief, information updates are not timely, and once the intelligent navigation systems break down, it is difficult to repair them promptly [5]. Many scenic spots in various regions have not introduced VR immersive experience projects due to insufficient funds, which has hindered the development of virtual tourism and immersive experience projects, resulting in a single range of consumption projects in the cultural and tourism industry and making it difficult to stimulate tourists' consumption enthusiasm.

3.2. Singularity of smart consumption scenarios

Against the backdrop of smart tourism, tourist attractions, museums, and other venues across the country have launched smart services, focusing on optimizing services such as intelligent navigation, voice explanations, and online reservations. Smart consumption scenarios mainly focus on the sales of cultural and creative products and souvenirs, lacking the marketing of digital collectibles and VR experience projects. This singularity of smart consumption scenarios has affected tourists' consumption experience [6]. For example, some museums have launched services such as online explanations and cultural and creative product reservations, but have neglected the online promotion of VR experience projects and digital collectibles, making it difficult to meet the consumption preferences of different tourists and affecting the overall income of the cultural and tourism industry chain.

3.3. Imbalance between intelligentization and cultural authenticity

Although AI technology can enhance tourists' experience of visiting, sightseeing, and services, it may cause the loss of authenticity of cultural attributes due to computer algorithms. For example, some scenic spots over-rely on AI explanation systems and pursue the accuracy of AI explanations, which may lead to tourists' understanding of scenic spots and cultural relics becoming fragmented, and affect the real interaction between tourists and culture. In addition, AI voice translation has certain limitations; its translation of traditional Chinese culture, such as oracle bone inscriptions, ancient poems, and historical allusions, is not accurate enough, which affects tourists' understanding of historical culture. How to find a balance between intelligentization and cultural authenticity is a question that the cultural and tourism industry needs to ponder deeply [7].

4. Optimization paths for new cultural and tourism consumption scenarios in the context of artificial intelligence

4.1. Empowering precision marketing with artificial intelligence to stimulate tourists' consumption enthusiasm

In the context of artificial intelligence, tourist attractions, museums, and travel agencies can use big data and AIGC technology to carry out precision marketing and achieve personalized recommendations, thereby creating more attractive personalized tourism content. Firstly, scenic spots and museums can collect data such as tourists' visits, searches, and consumption evaluations from official websites, WeChat official accounts, Meituan, and other platforms. By using big data to accurately analyze tourists' preferences, interesting historical stories, and suggestions, they can conduct personalized pushes based on the results of data analysis to meet tourists' personalized consumption experiences [8]. For example, scenic spots can use big data to analyze consumers' consumption in the scenic area, accurately understand consumer preferences at different times, thereby adjusting the quantity and timing of catering, cultural and creative products, and performance projects in the scenic area, realizing precision marketing, stimulating tourists' consumption desire, and thus better generating revenue for the scenic area. Secondly, scenic spots and museums can use AIGC technology to produce short videos for cultural and tourism promotion, intelligently generate and edit travel Vlogs, insert animated characters, background music, etc., and promote local history, culture, and humanity through exquisite and interesting videos to deepen tourists' impression of local culture [9]. In addition, scenic spots can launch personalized customization services, automatically generating travel plans according to tourists' travel budgets, time, and preferences. For example, personalized travel plans can be designed based on keywords such as "three-day weekend trip to XX + 3,000 yuan budget", recommending photo check-in spots, characteristic foods, and cultural performances to tourists, and helping them book hotels and tickets, providing them with a unique consumption experience, thereby increasing the income of scenic spots, catering, and hotels, and promoting the development of the local cultural and tourism industry.

4.2. Creating VR technology to create immersive experience projects and enhance tourists' consumption experience

VR technology can create realistic scenes, enabling tourists to travel through time and space to explore history and experience different landscapes, thereby enhancing their travel experience. This not only enriches the consumption items of scenic spots but also increases their revenue. For example, the Changbai Mountain Scenic Area in Jilin Province has launched a "flight experience" project, equipped with motion seats and VR glasses. Tourists can sit on the motion seats to feel the thrill of passing through Changbai Mountain canyons and flying over lofty mountains, enjoy the beautiful scenery of Tianchi, and admire the magnificent landscapes of Changbai Mountain throughout the four seasons. In the virtual scenes, knowledge about Changbai Mountain's unique geographical location, geological conditions, climate, and vegetation is interspersed, closely integrating tourism with culture and improving tourists' travel and consumption experiences [10]. The Sichuan Museum, on the other hand, has launched the "Ancient Kingdom of Sanxingdui" experience project. Through VR headsets, tourists can travel back to the Ancient Kingdom of Sanxingdui, where they can learn about the mysterious history of the ancient Shu Kingdom and the stories behind the museum's treasures, such as the golden staff, bronze standing figures, bronze sacred trees, bronze vertical-eyed masks, jade bianzhang, jade tooth zhang, bronze beast masks, and gold masks. This allows tourists to experience the depth and splendor of ancient Shu culture. VR technology can create immersive consumption scenarios integrating culture and tourism, enriching the consumption items of scenic spots and

museums, and stimulating cultural and tourism consumption. It enables tourists to learn about the history, culture, and customs of different dynasties, regions, and ethnic groups in virtual scenes, deepening their understanding of the motherland's history, enhancing their national pride and cultural confidence, and providing a strong driving force for the upgrading of integrated culture and tourism consumption [11].

4.3. Promoting intelligent robots to improve tourism service quality

In the era of artificial intelligence, scenic spots and museums should actively deploy intelligent robots to build "digital and intelligent scenic spots", providing tourists with more professional and humanized guidance, explanation, and other services. This leaves a good impression on tourists, thereby stimulating their consumption desire and increasing the income of the cultural and tourism industry. Firstly, scenic spots can purchase simulation robots and arrange them in indoor exhibition halls and tourist service centers. These robots can communicate with tourists through voice recognition, answer questions about visiting routes, catering, performance times, etc., and recommend characteristic cultural and creative products, local snacks, and performance information in the scenic area to stimulate tourists' consumption desire [12]. For example, the Wuzhen Ancient Town Tourist Area in Zhejiang Province is equipped with high-simulation robots and digital pets, which kindly introduce Wuzhen's history and culture, architectural style, and food culture to tourists, leading them into the tenderness and historical heritage of the water town and driving the vigorous development of related industries such as catering, accommodation, and shopping in the ancient town. Secondly, scenic spots can also apply intelligent robots in cultural performances to present the close connection between high technology, tourism, and culture, improving the innovation of scenic spot performances and attracting more tourists to buy tickets to watch the performances, thereby expanding the cultural and tourism integration consumption scenarios [13]. For example, a scenic spot in Sichuan Province combined robots with traditional dance and ancient poems to launch the large-scale real-scene performance "The Hardship of Shu Road." Robots recite Li Bai's poem "The Hardship of Shu Road" and dance with real actors, presenting a unique performance for tourists, allowing them to appreciate the beauty of ancient poems and the characteristics of Bashu culture, and improving their experience of watching cultural and tourism performances.

4.4. Carefully creating digital collectibles to increase consumption selling points in cultural and tourism integration

Local cultural and tourism departments should comprehensively promote the transformation to smart tourism, deeply explore regional tourism and cultural resources, introduce new technologies such as artificial intelligence and digital imaging, and actively launch digital collectibles to increase the selling points of scenic spots. Digital collectibles can help tourists record beautiful travel memories, thereby promoting the high-quality development of the cultural and tourism integration industry. Firstly, cultural and tourism departments should organize major scenic spots and museums to form expert teams, use AI technology to restore ancient buildings, cultural relics, and collections, create digital collectibles, and disseminate local tourism culture through short videos, electronic documents, etc., to enhance the popularity of cultural and tourism integration and attract domestic and foreign tourists to visit [14]. For example, the Yuelu Academy in Hunan Province launched "digital plaques", allowing tourists to learn about the history of Yuelu Academy through digital collectibles, providing them with unique cultural collections, and offering exclusive benefits such as queue-free access and catering discounts in the physical scenic area, stimulating tourists' enthusiasm for purchasing digital collectibles and increasing the scenic area's economic income. Secondly, major museums can launch characteristic digital collectibles and use them to

promote their collections and cultural and creative products, thereby stimulating tourists' consumption enthusiasm. For example, the Three Gorges Museum in Chongqing used AI technology to collect and restore ancient music, launched a unique digital music album, allowing tourists to enjoy the sounds of ancient chunyu (a type of bronze musical instrument) through the electronic album. This enables them to listen to the digital album on their mobile phones and computers at any time, improving the cultural value of digital collectibles, enriching new cultural and tourism consumption scenarios, and driving the development of related industries [15].

5. Conclusion

In conclusion, artificial intelligence technology has injected new vitality into the development of the cultural and tourism industry, reshaping new scenarios, new formats, and new consumption in the industry, and building a new development model of "digital intelligence empowerment, cultural and tourism symbiosis", which is conducive to promoting the high-quality development of China's cultural and tourism industry. In the future, local cultural and tourism departments, tourist attractions, museums, and hotels should continue to introduce and apply artificial intelligence technology, optimize precision marketing models, develop new digital collectibles, create "immersive cultural and tourism" consumption scenarios for tourists, stimulate their consumption enthusiasm, improve their travel experience, and lay a solid foundation for the long-term development of the cultural and tourism industry.

Disclosure statement

The author declares no conflict of interest.

References

[1] Zhao L, 2024, Theoretical Connotation and Practical Paths of Artificial Intelligence Empowering the In-depth Integration of Agriculture, Culture, and Tourism. Gansu Agriculture, 2024(11): 57–65.

[2] Deng F, 2024, An Analysis of the Innovative Paths of Micro-short Dramas Empowering the Integration of Culture and Tourism from the Perspective of New-quality Productivity—Taking Jiangsu Province as an Example. Central Plains Culture and Tourism, 2024(11): 19–21.

[3] Fu Y, 2024, Analysis of Destination Brand Image Communication Strategies Based on Artificial Intelligence—Taking "Hometown Henan" as an Example. Time-honored Brand Marketing, 2024(19): 9–11.

[4] Xiao L, Wu JH, Li YL, 2024, Current Situation and Countermeasures of the Integration Development of Culture and Tourism in Du Fu's Relics in the AI Era. New Chu Culture, 2024(28): 77–80.

[5] Yang JL, 2024, Research on the Integration Path of Changde's Culture and Tourism through Digital "Cultural Relics + Cultural and Creative Products". Central Plains Culture and Tourism, 2024(9): 22–24.

[6] Wei M, 2024, Internal Logic, Core Issues and Path Selection of New-quality Productivity Empowering the Integration of Culture and Tourism. Journal of Guizhou Provincial Party School, 2024(5): 53–62.

[7] Pan XX, Liu XR, 2024, Reshaping Tourism Experience: Research on Generative AI Empowering Digital Cultural and Tourism Design. Textile Reports, 43(7): 28–30.

[8] Zhang Y, 2024, Research on the Digital Construction of Cultural and Creative IP in Chengdu Public Libraries from the Perspective of Culture and Tourism Integration. New Legend, 2024(21): 113–116.

[9] Liu X, 2024, Innovative Applications of Large AI Models in the Field of Smart Culture and Tourism. China Security

& Protection, 2024(6): 54–58.

[10] Li D, Yu RP, Gu XY, et al., 2024, Research on the Optimization of the Development Strategy of Cultural Investment Platforms in the Context of Artificial Intelligence. All-media Exploration, 2024(5): 41–43.

[11] Zhang SR, Liu Y, Yin CY, et al., 2024, Research on Artificial Intelligence Empowering Hebei's Culture and Tourism Communication. Western Tourism, 2024(2): 17–19.

[12] Zhang S, Yan WL, Cao W, et al., 2023, Practical Exploration of AI-promoted Cultural and Creative Product Design on E-commerce Platforms—Taking Huaiyang Myth Culture as an Example. Shoe Technology and Design, 3(24): 73–75.

[13] Hu ZY, 2023, Application and Exploration of Large AI Models in the Digital Culture and Tourism Industry. Communications and Information Technology, 2023(4): 104–107.

[14] Ma W, 2023, Research on the Mechanism and Policy Coordination of Digital Intelligence Empowering the High-quality Development of Jiangsu's Culture and Tourism Integration. Western Tourism, 2023(7): 13–15.

[15] Xie XF, Lei WX, 2023, Research on the High-quality Development Vision and Model of China's Digital Culture and Tourism Industry in the "Intelligence +" Era. Journal of Soochow University (Philosophy and Social Science Edition), 44(2): 171–179.