

Research on the Overall Development Mode of Cultural Tourism Based on Big Data Analysis Management System

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Abstract. Cultural tourism is a hot spot of tourism in recent years, and tourism without culture has no vitality. Big data is the core content in the construction of "smart tourism", and the richness of data plays a vital role in the development of smart tourism. The construction of big data information tourism has become the representative of regional specialized tourism service level. On the basis of relevant literature analysis, based on the angle of cultural form and structure and the law of tourism aesthetics, this paper puts forward the concept and mode of overall development of cultural tourism. Based on the analysis of big data analysis management system, according to the foundation and development status of cultural tourism, this paper discusses the mode of deep development of cultural tourism and the direction of decoration integration.

Keywords: Big data analysis management system; Cultural tourism; Development mode.

1. Introduction

The society is developing, the times are progressing, the national economy is qualitatively improved, and the people's living standards are constantly improving. Tourism has become a daily pastime for people. Under the background of "internet plus", smart tourism is based on focusing on individual tourists, providing high-quality and high-satisfaction services for tourists and meeting the individual needs of individual tourists [1]. Individual tourists can obtain comprehensive information services at any time, any place and through any media. The development of tourism resources has changed from extensive to intensive, focusing on quantity and quality, excavating the cultural connotation of tourism resources and embodying the cultural taste of tourism products [2]. However, due to differences in understanding of cultural tourism, there are obvious differences in the mode, level and effect of domestic cultural tourism development.

How to obtain valuable information from big data is the core content of big data analysis and processing. Traditional data analysis methods include data mining, machine learning and statistical analysis [3]. By analyzing the intelligent collaborative method of tourism information of big data, taking linear collaborative algorithm as the core, the vast amount of big data information is analyzed and judged collaboratively, and the embryonic form of tourism products is formed. Under the current market environment, tourism big data management simplifies complex data, seeks rules, strengthens tourists' sense of experience, and innovates travel modes. How to use effective development mode to develop unique ethnic cultural tourism resources can strengthen foreign cultural exchanges, develop economy and expand employment in ethnic areas.

2. Big data and the development of tourism market

Big data and tourism market, with the help of big data analysis operation, can effectively grasp the basic situation of market changes in tourist destinations in the tourism management stage. The strategy of judging massive information of big data analysis is high, which can quickly and accurately classify tourism information and extract tourism products needed by users. Tourism culture is the sum of ideas and external manifestations reflected and created by tourists and tour operators in the process of tourism consumption or business services [4]. It is a unique cultural characteristic of a nation that is different from other nations. Since tourism is national, it should have its distinctive national characteristics. Such as cultural normative features, artistic features, cognitive features and

usage features. As a product development of cultural tourism resources, we should first explore the cultural tourism elements from the distinctive features of culture.

Tourism is a wide-ranging and comprehensive industry, which is closely related to many industries, which makes it easier to penetrate into other industries. On the whole, there are two driving forces to promote the emergence, development and maturity of new tourism formats, one is the internal driving force and the other is the external driving force (Figure 1)[5].

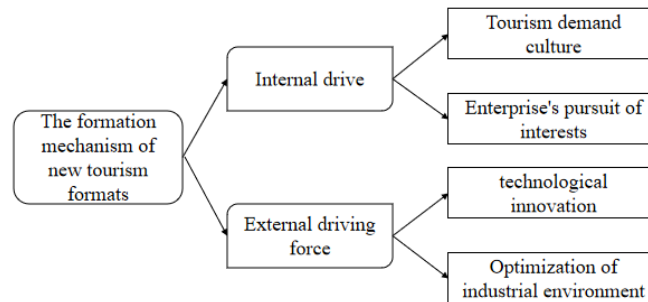


Figure 1 Generation mechanism of new tourism formats

Tourism is a special cultural activity that human beings pursue beauty and enjoy. The tourism system based on big data analysis covers the characteristics of automatic tourism collection, analysis and service, and provides accurate tourism support for users. Tourism resources should be highly integrated, innovative profit plans should be formulated, and tourism industry with regional characteristics and industrial characteristics should be created. Some tourism products developed by adding new technologies, new elements and new ideas can improve their functions and forms to some extent. This pattern is obviously a reflection of China's family system and belongs to institutional culture. The architectural decoration and indoor decoration of residential houses are art products and the spiritual culture of Chinese traditional culture [6].

3. The basic development mode of cultural tourism development

3.1 Integration and promotion development model

That is to say, integrating tourism cultural resources in one region or multiple tourism cultural resources in multiple regions, focusing on packaging and refining, and using artificial landscape to compare the development mode of reappearing traditional culture; In the direct blending with the aesthetic object, the beauty of the object can be felt instantly without any thinking, arousing the satisfaction and joy of the senses, which is the initial aesthetic feeling of tourists when they see the tourist landscape. In the era of big data, the rapid development of information technology has stimulated the transformation of traditional tourism, and many new tourism formats have been derived from the advanced western concepts and Chinese characteristics. According to the big data market data analysis and content research, managers can efficiently judge and understand the market composition, market development characteristics and consumer demand. One of its main problems is to give accurate tourism data, and describe the data information needed by iterative calculation.

Cultural tourism data includes spatial data, tourist data and background data. Tourism consumption and tourism service behavior culture, tourism resource culture, tourism product culture and tourism environment culture together constitute this scene culture system. It meets the direct practical purpose of consumers by mass production, and is a popular and secular consumer culture [7]. According to the theory of cultural circle, people of a certain race, nationality or region always create culture in a certain space and occasion. When the tourism feature collaboration center repeatedly calculates the information data in the big data analysis until the tourism collaboration does not change, this kind of tourism algorithm ends.

3.2 Intelligent collaborative system of tourism information based on big data analysis

Big data analysis is the basic means of modern information processing system with large data volume. Cloud storage computing system with big data analysis can not only be used for data storage, but also deeply mine and judge data [5-6]. On the basis of scientific information data collection operation, management operation and analysis operation, a high-quality processing mode is created to comprehensively guarantee the personalized positioning of the brand market, and on this premise, inter-industry acceptance and public recognition are improved. According to the level of economic development and the status of tourism industry in various places, we should make targeted and sustained capital investment, avoid short-term effects and achievements projects, build a smart tourism system in line with local reality, and highlight the advantages of our original business format.

The vector of coordinate values in big data analysis is represented by c_{fg} . The center point of cluster f of tourism information collaboration center has g dimension analysis attributes. G_d represents the sum of quadratic errors of tourism information data clusters. The optimal relationship between tourism information collaboration objective function and big data analysis design change vector is as follows:

$$\min G_d = \sum_{g=1}^d \sum_{f=1}^{mg} \|a_f^{(g)} - c_{fg}\|^2 \quad (1)$$

When all data information objects in big data analysis have the attributes of tourism information data, each tourism feature collaboration center in the network data information cluster is expressed by the formula:

$$Z_g = \frac{\sum_{d \in R_g} d_g}{|R_g|} \quad g \in [1, f] \quad (2)$$

In which R_g represents the number of tourism feature collaborative data based on the g -th data information cluster in big data analysis.

From the trend of tourism product development, with the improvement of people's living standards and the increase of the number of trips, tourists are increasingly not satisfied with just appreciating the external tourist scenery, but want to know the cultural connotation in the deep landscape and gain inner experience and feelings. By shaping the image of urban residents, a good citizen tourism civilization is formed, which not only plays an important role in the protection of tourism resources and urban tourism environment, but also plays an important role in the overall image and spiritual civilization construction of the whole tourist destination. With the acquisition of data and information content, we can analyze market information through statistical analysis mode, fully understand and know the business situation and the development trend of competitors, not only that, but also analyze consumer file data, etc. Tourist data includes interactive data of intelligent devices of tourists, active collection and sharing data, and background data includes data of tourism platform. Database construction refers to the acquisition and analysis of these massive and multi-type data and the design of a standardized database.

The design of tourism information intelligent collaboration method has an information feedback module, which has two main functions: one is responsible for updating the algorithm, and the other is updating the tourism generation rules (Figure 2).

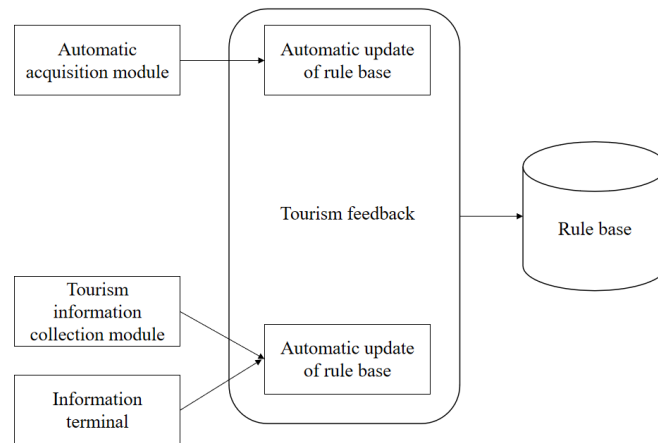


Figure 2 Work flow chart of tourism feedback module

As far as the West is concerned, when they express the concept of "tourism culture", they often place tourists at the center of the research on the structural framework of tourism culture, and think that all kinds of cultural phenomena caused by the "collision" between the host and the media in the process of tourism belong to the research category [8]. The same is true of ethnic cultural tourism, which is rooted in the fact that there are many ethnic components, vast territory and different regional and social environments in China, which makes different ethnic groups face different choices in cultural creation, resulting in great differences in ethnic cultural tourism. Influenced by post-modernism culture, tourists' experience is more the pursuit of authenticity, preferring authentic tourism products. The travel itinerary and consumption process should be taken as clues, other enterprises closely related to tourism activities should be included in the scope of construction, and an information base and resource sharing platform centered on tourists' needs should be established to provide tourists with customized, diversified, humane, fashionable and low-carbon tourism services, and finally realize the perfect experience of tourists.

3.3 Direct utilization development mode

Based on the actual situation of tourism information intelligent collaboration method, the system design adopts C/S structure, which requires that the server side of big data analysis can run tourism statistics, data warehousing and data preprocessing programs. The client side must have functional modules such as tourism information retrieval, tourism information classification, tourism information statistics and tourism feedback, as shown in Figure 3.

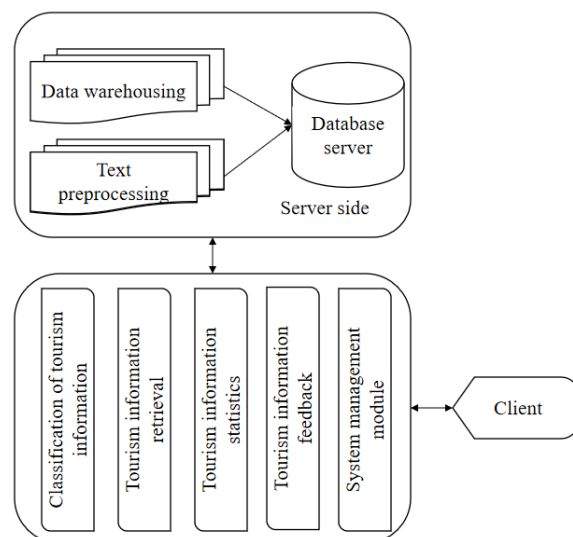


Figure 3 Schematic diagram of tourism information collaboration function

That is to say, the real cultural tourism resources are directly developed into tourism products, and their original development mode is maintained. Big data involves many contents and has obvious advantages. It can capture, store, manage and analyze data within a reasonable time. The core significance of the vigorous application of big data lies in its intelligence value, which can store and analyze massive data with high quality. To calculate and analyze the nonlinear time series of tourism collaboration, we must fit all the big data, analyze the rules of the data needed for tourism, find the mapping rules of network data, classify all the data from the cultural tourism GIS and the digital editing and publishing system of cultural tourism resources, and establish a cultural tourism big data resource library. The natural landscape, historical relics, national culture, folk art and other cultural resources elements in this region are studied and positioned qualitatively and quantitatively to see which kind or several kinds of cultural resources elements in this region occupy a dominant position.

4. Selection principle of cultural tourism development mode

4.1 Advantages and disadvantages are avoided, and the weight is different

That is to say, after sorting out the types of cultural tourism resources in this region, we should choose the dominant cultural resources in this region for key development, while delaying the development of the inferior cultural resources or putting them on hold forever. Cultural globalization, in a certain sense, means that national culture is shared by people from different countries in the world. The more national it is, the more global it will be. Tourists in experimental mode have become alienated from their usual environment, and the motivation of their experience is to seek their ideal mode by constantly experiencing foreign cultural life. Users can directly search the information in big data analysis through the module, and set the preprocessing of big data analysis information. If the query field is in the found information, the retrieval is finished. Big data is abundant, high-speed, diverse and valuable, which can accurately predict the trend of passenger flow. Then, it should guide and control the passenger flow according to the corresponding aspects, understand the needs of passengers, and then carry out the follow-up targeted development and construction of tourism resources.

4.2 Develop landscape and display material culture

The characteristics and present situation of the development of cultural tourism resources are that high-level development is better, low-level development is worse, urban development is better, and suburban counties are worse; Create new business models, develop new tourism markets, and actively guide and create new consumption demands of tourists. The intelligent collaborative method of tourism information is to analyze big data according to the needs and find out the qualified tourism products. In the process of transmission to the cluster center server, the data standardization component DSC is used to customize the standardization interface, standardize the data into various storage formats such as N, xml, txt, db, etc., then use the local data cluster component of the client to collect the data, and finally clean and decrypt the data to push the data to the cluster center. Scientific research, formulation of medium and long-term development strategy of cultural tourism, focusing on the existing situation of cultural resources, landscape occurrence, development value and development conditions, scientifically formulating the development sequence and implementing gradient development.

4.3 Tourism products of cultural relics

It mainly includes the development of cultural relics and sites in cultural heritage. These products have outstanding universal value from the perspective of history, art, science, aesthetics, ethnology or anthropology, and can meet the needs of tourists in understanding the evolution of human history, experiencing human traditional culture and understanding the development of ancient science and technology. The national cultural factors are divorced from its original social environment and

cultural atmosphere, which is suitable for survival. The commercial flavor is too strong, and it is difficult for tourists to appreciate the nature, simplicity and innocence of national culture. It is necessary to grasp the current development status and future trend of the selected development mode at home and abroad in a timely manner, try to take less or not take the old path of others, and evaluate the performance of the selected development mode in this region in a timely manner. Including the ever-expanding tourism market scale, the ever-changing tourism consumption demand and the increasingly fierce tourism competition. The change of tourism demand is the driving force for the formation of new tourism formats, and the optimization of industrial environment is the guarantee force for the formation of new tourism formats.

To develop cultural tourism in an all-round way, besides continuing to use the existing landscape to develop sightseeing tourism, it is necessary to make more use of other resources and form a complete product system. Develop special tourism with special features. Characteristics are the life of tourism, and there is no tourism without characteristics. At the same time, it is necessary to open up the special cultural tourism market to meet the real cultural tourists; At the same time, we should give attention to the development of mass cultural tourism and develop mass cultural tourism products. Because the ruins are usually incomplete, in order for ordinary tourists to fully understand their historical and cultural values, the ruins and their environment must be integrally protected and moderately restored. Tourism development can integrate spiritual culture into every landscape and activity that tourists visit, make the whole tourist area full of strong local color, and tourists can feel the charm of cultural tourism anytime and anywhere.

5. Conclusion

Cultural tourism is the dominant form of tourism in the future, but there are differences between the development of cultural tourism and other tourism development. The tourism industry uses big data to collect and analyze data, which can effectively strengthen the upgrading and transformation of the tourism industry, provide diversified services, effectively improve the economic benefits of products and gain a larger market share. The tourism information intelligent collaboration method based on big data analysis has low delay and small error. It has a high strategy for judging the massive information of big data analysis, and can quickly and accurately classify the tourism information and extract the tourism information needed by users. The big data analysis management system is not only aimed at the cultural tourism industry studied in this paper, but also applicable to other industries with similar data structures.

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