Retraction

Retracted: Design and Communication of City Brand Image Based on Big Data and Personalized Recommendation System

Journal of Function Spaces

This article has been retracted by Hindawi, as publisher, following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of systematic manipulation of the publication and peer-review process. We cannot, therefore, vouch for the reliability or integrity of this article.

Please note that this notice is intended solely to alert readers that the peer-review process of this article has been compromised.

Wiley and Hindawi regret that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

References

[1] Y. Lin and G. Hu, "Design and Communication of City Brand Image Based on Big Data and Personalized Recommendation System," *Journal of Function Spaces*, vol. 2022, Article ID 9378800, 10 pages, 2022.

Research Article

Design and Communication of City Brand Image Based on Big Data and Personalized Recommendation System

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In order to define the positioning of the urban brand image, design the urban brand image, integrate and optimize the communication channels, improve the public participation awareness, and enhance the core competitiveness of the city. In this paper, a personalized recommendation search engine based on big data identifies keywords input by urban users. And give more accurate results based on some relevant information that can be extracted. This paper analyzes how to make better use of big data for tourism destination brand image management, and the existing shortcomings, and puts forward relevant suggestions. The industries related to cultural creative design and tourism elements constitute an intertwined cultural and tourism industry chain, and data technology plays an important role in the cultural and tourism industry chain. Through the development of tourism, tourists will produce comprehensive and diversified consumption in the city. Based on the analysis of big data, it can provide strong decision support for the government and industry managers, and realize the image design and communication of the urban brand identification system. Through the big data platform, establish the brand management strategy, improve the communication content of the city's brand image, and timely feedback the opinions and suggestions of tourists on the tourism destination, so as to adjust the communication strategy of the tourism image according to the feedback information of tourists. The results show that the big data personalized recommendation system can achieve ideal results in urban brand value and urban tourism related factors.

1. Introduction

With the accelerated development of urban civilization, a kind of cultural flavor permeates everywhere, and more cities are aware of the nationality and the positive spread price of urban traditional culture. More importantly, cities need to build new and unique urban cultural images on the basis of inheriting traditional culture. As a business model combining information technology with traditional business, big data is now in the ascendant, and is full of vitality. This allows data analysis to go beyond the traditional statistical sampling, and can analyze according to the correlation of different data sets, and make predictions for the whole or different individuals, thus influencing people's decision-making. In terms of machine intelligence, it also needs a lot of real data for training because it imitates human thinking [1]. Industries related to tourism elements form an inter-twined tourism industry chain. Through the development of tourism, tourists will have comprehensive and diverse consumption in cities. Then the whole city and tourism-related industries form the agglomeration of consumption economy, thus promoting the development of urban economic benefits, employment opportunities, ecological environment, and urban planning. However, with the rapid development of the Internet, information has also increased geometrically. Traditional recommendation systems are prone to storage and calculation bottlenecks under massive data. By collecting, cleaning, and analyzing these data, we can find the characteristics of customer churn, tap the hidden value behind it, and give early warning to customers who may lose in the future, so as to reduce the customer churn rate. In the era of big data, in addition to the consumption information on the current website, consumers may also have a lot of shopping information on other

websites. However, with changes in consumer demand and increasingly fierce market competition, the appeal of traditionally positioned city images has declined. In order to improve economic benefits and tap the potential of economic growth, major cities are gradually looking for effective ways to develop urban brands, taking advantage of long-term cultural development and historical accumulation [2]. Each city has formed its own unique urban temperament and unique urban symbols. The energy of the city's social functioning is transformed into a symbolic form of stored value through the city's public utilities.

With the increase of the number of users, projects, and information, the recommendation system is also facing problems such as massive data processing. Especially when new consumers do not have any historical information on the current website, their preference information on other websites is particularly important. Personalized recommendation system can provide learners with personalized learning resources according to their learning objectives, learning foundation, hobbies, and status. The economic development of any city will experience the transfer of agricultural labor force to industrial labor force in the industrialization period. In the field of big data, people often say that big data is better than good algorithms. This shows the importance of user data, especially in the era of big data. Further promote the transformation of the focus of urban construction from the traditional urban development mode focusing on the pursuit of life, production, residence, and simple economic needs to the artistic, cultural, and ecological urban development mode focusing on people with cultural connotation and maintaining the balance of the ecological environment. Regional core competitiveness roughly includes industrial competitiveness, enterprise competitiveness, opening up, economic strength, science and technology, human resources, local governments, financial activities, natural environment and resources, infrastructure, living environment, etc. These indicator systems are very comprehensive and comparable [3]. In recent years, China's information technology has developed rapidly, "Internet +" has been widely used in various fields and has made great achievements in the commercial field. At this stage, whether it is personal knowledge or collective thought, whether it is social public opinion or legal norms, it is far behind the pace of algorithm development in the era of big data. However, compared with other groups, current urban brands are less satisfied with their active choice and travel experience, and the contradiction is more prominent. The tourist destinations they often choose are almost urban outbound tourism or first tier city tourism. From the perspective of information dissemination, the dissemination of urban brand image is actually the process of brand marketers disseminating urban brand information to the audience through the media [4]. Almost all traditional behaviors can be mapped to the network: online shopping, online social networks, online music, online reading and news, and various searches [5]. But at the same time, it needs to be further improved to make the big data personalized recommendation system more mature and perfect, which is worth thinking and studying by every big data practitioner.

The era of big data has come, and it has actually changed people's lives. The key to the era of big data is not only the exponential increase of data volume, but more importantly, various algorithms can greatly improve the ability of data collection and analysis. Tourism is a strategic pillar industry of the national economy, accounting for a significant proportion in the gross product of modern service industry. It is an important part of the service industry, and it can also promote the development of related service industries. Exploring the influence of the recommendation system on consumers' shopping behavior through field experiments can effectively avoid the endogenous problems and the lack of external effectiveness of traditional research methods [6]. With the continuous growth of the national economy, people's material life is extremely abundant, and tourism demand also shows a rapid growth trend. China's tourism is in a golden period of development, and tourism has gradually become the main force of tourism consumption, and it has become a market crowd actively sought by various tourist destinations. From the marketing point of view, running a city brand is like running an enterprise brand. Moreover, the assets of the city itself include the brand image of the city, which can create considerable benefits for the city [7]. Therefore, cloud computing and big data technology are used to integrate the computing resources and storage resources of multiple servers. At present, it is an effective solution to distribute the heavy computing and storage tasks to server clusters through the network, and to combine the scattered computing results. Faced with this problem, coding and disseminating the symbol system of the city image can make the symbol system of the city image dissemination orderly and more easily recognized and accepted by people. In addition, our city has entered the stage of accelerating the development of a modernized well-off society in an all-round way, and the economic structure and spatial structure of large, medium, and small cities have undergone tremendous changes [8]. Due to the application of artificial intelligence, cloud computing, big data, and other high-tech, the big data personalized recommendation system has become more and more mature and has achieved relatively ideal results. On the other hand, the rapid development of algorithms has in fact further highlighted the relative lag of algorithm ethics research. The research of personalized recommendation system has become a field of increasing attention from many scholars and researchers, and recommendation system has become another popular research direction supporting the development of cloud computing. Therefore, planning and disseminating the image of urban tourism, shaping, and enhancing the image of urban tourism can promote the development of tourism, so that the development of tourism can promote the development of the city and the adjustment of the industrial structure. Brand is the most valuable urban wealth. The most charming thing about brand value is that it can cause fundamental changes in people's consciousness, ideas, and thinking mode. Brand value also lies in its great potential to create wealth and continue to create new value. Now, Chinese cities at all levels have deeply felt that "brand is the commanding height of urban competitiveness" and have taken measures. While many

cities have achieved success in branding, some cities have also gone into misunderstandings. What are the misunderstandings in the process of urban branding? How to avoid going astray has become an important topic in the study of urban branding in China. This paper expounds this hot issue and puts forward corresponding countermeasures.

2. Related Work

With the increasingly fierce competition among cities in China, many cities have carried out the practice of city image dissemination, and it is no exception. In the study of city image communication, some scholars discussed the communication of city image from the angle of brand and marketing. Cui et al. put forward that the perception of tourism image should be divided into "gray area" and "halo area", and discussed the tourism product integration mode of tourism image planning in "gray area" [9]. Niu et al. established: according to the nature of perceived objects, it is divided into two parts: hardware image and software image; it can be divided into five parts according to different sensory organs: visual image, auditory image, olfactory image, taste image, and tactile image [10]. Tai believes that the influencing factors can be divided into attraction factors, cultural factors, and related subsidiary factors. If these evaluation factors are consistent with tourists' perceived image, tourists will be satisfied, and vice versa [11]. Ren put forward: CIS system has been used to study the design of city identity [12]. Zhang et al. put forward the concept of "local marketing", he believes that: treat the city as an enterprise, regard resources as a product, shape the image of the city, and finally build a strong city brand [13]. Alalhesabi et al. discussed: Cities can be branded, and the main means of brand building is communication. Cities can promote themselves through advertising and other means of communication, increase awareness, and shape brand image [14]. Zigmund analyzed that the purpose of people's travel is to relax and release the pressure of life through tourism activities [15]. Fan et al. established a model of the tourist experience content [16]. Shan et al. established: from the perspective of the formation process of tourism perception image, the tourism perception image is divided into 8 types: obvious induction, hidden induction, and autonomous native [17]. Tu believes that factors such as the perceived distance of tourists and the cultural events of the destination affect the perception of tourists' tourism image [18]. Choi demonstrated the relationship between city image and city brand. He believed that "connecting image and association with city" is the final result of city branding [19]. However, it is not difficult to find that in the process of urban image dissemination, there are still few researches on the problems of the signifier and the signified of the urban image, as well as the communication strategy and the media strategy.

3. Strategies for Improving Personalized Recommendation System for Large Data

3.1. Optimize Bid Guidance Tool. In order to better analyze the development of a certain urbanization, this paper collects indicators in representative sampling cities. The sampling city should be representative in the size of the city, economic development, geographical location, or other aspects related to the human settlements system of the country. Urban brand image design needs to be related to urban history, culture, style, natural environment, and other elements. Only when it fits well with the city's status, characteristics, and economy can the city's brand image be deeply rooted in the hearts of the people. For big data, controlling bidding is an important way to control traffic, which requires big data platform to analyze the reference basis of daily price change that is, ranking. In the 20th century, with the development of science and technology, especially computer science, people pay more and more attention to algorithms that are closely related to people. In addition, looking for the nearest neighbor users, the recommended results can only be the items selected by the nearest neighbor users, and some items that few people pay attention to cannot be found, so that the diversity of recommended results cannot be satisfied [20]. With consumer demand as the core, reorganize corporate behavior and market behavior, use various communication methods in a comprehensive and coordinated manner, send unified product information and service information with a unified goal and a unified image, and achieve two-way communication with consumers. The investigation on the tourism motivation of young and middle-aged and elderly people is shown in Table 1.

Page rankings can actually be calculated as degrees of a graph, but how they are calculated has been a problem for engineers until page raises the question of multiplying two-dimensional matrices and solves it by iterating. More than half of young people use social networks for at least three hours a day, based on their average daily use. As shown in Table 2.

After data processing, it is the selection of the algorithm. In the process of selecting the algorithm, consider the applicability of the algorithm and select the appropriate algorithm to build the model for the problem itself. When we decide which algorithm to use, the type and shape of data we have play a key role. Some algorithms can work with a small set of samples, while others require a large number of samples. Specific algorithms work on specific types of data. Average recommended consumption time comparison. As shown in Figure 1.

An important property of self is self-reference effect, which mainly means that the result of people's coding information depends on how much self is implied in the information. Returns the average recommendation number comparison. As shown in Figure 2.

Therefore, the promotion of urban image can be defined as the process of carrying out both spiritual and material dissemination of the city. The method is to first excavate the core value of the city and summarize it through visual identification design. The reason for the division of city brand types is to enable city operators to precisely define the city brand image according to the city's resource advantages and environmental characteristics. After the task, scheduling node receives the task; it will divide the task and assign the subtasks to the nodes with rich computing resources in the

TABLE 1: A survey on the tourism motivation of middle-aged, young and old people.

(a)

Young and middle-aged					
Experience and growth insights	Study	Conformity and show off	Relax and relieve stress	Star chasing and curiosity	Share feelings
25%	6%	12%	14%	28%	15%

(b)

Elderly					
Experience and growth insights	Study	Conformity and show off	Relax and relieve stress	Star chasing and curiosity	Share feelings
41%	6%	4%	22%	12%	15%

TABLE 2: Statistics on media exposure time of young people.

Time	More than 8 hours	6-8 hours	3-5 hours	1-2 hours
Percentage	11%	13%	45%	31%

cluster. The dissemination of city image has important political significance. Political image dissemination is the planning and dissemination of images in terms of political status, political development level, and political construction. However, the vast majority of city brand research is unilaterally limited to the stage of city mutual imitation, unable to fully penetrate into the strategic implementation. It also failed to systematically analyze the shaping of city brand image recognition system as a whole. In addition, big data platforms must use real time recommended prices as the core reference for price adjustment to make as many consumers as possible and help new customers adapt to the new launch environment as soon as possible. The formula is as follows:

$$\forall c \in C, s_c = \arg \max_{s \in S} u(c, s). \tag{1}$$

Euclidean distance is defined as follows:

$$d([x_1, x_2, \cdots, x_n][y_1, y_2, \cdots, y_n]) = \sqrt{\sum_{i=1}^{n} (x_i - y_i)^2}. \tag{2}$$

It is defined as follows:

$$d\left(\vec{x} - \vec{y}\right) = \sqrt{\left(\vec{x} - \vec{y}\right)^T \sum^{-1} \left(\vec{x} - \vec{y}\right)}. \tag{3}$$

$$J_\delta = 1 - J(A, B) = 1 - \frac{|A \cap B|}{|A \cup B|}$$

The weight of each item's feature in each cluster is calculated using the following formula:

$$W(f_i) = \frac{N(f_i)}{\sum_j f_i},$$

$$N(f_i) = \frac{\sum_{j \in k} f_i}{\sum u_m}, \tag{4}$$

$$\bar{r}(f_i) = \frac{\sum_i r_i}{\sum_{j \in k} f_j}.$$

The formula for the sum of squared errors is as follows:

$$\sum (x_i - \bar{x})^2. \tag{5}$$

3.2. Accuracy Optimization of Personalized Recommendation System. In practice, the big data platform can improve the accuracy of recommendation by using crowd optimization assistants, and further understand customers' shopping demands. Of course, due to the limitation of computing technology, when faced with a huge amount of data, the algorithms at that time generally estimated the big data by reducing the complexity of the data and using a method similar to statistical sampling. In order to reveal the causal relationship between data sets and get the commonness between data sets. In the concrete implementation of information retrieval system, it is necessary to quickly find the keywords contained in the document. For the number of documents, the number of terms is relatively small. At the same time, timely feedback tourists' opinions and suggestions on tourist destinations, so as to adjust the communication strategy of tourism image according to the feedback information of tourists. After discovering the user's interest contained in the user's search terms, that is, long-term interest, further study how to make personalized recommendations according to the content of the user's search keywords. However, the decision tree also has corresponding shortcomings, such as its complicated classification rules, because the decision tree uses greedy algorithm to construct branches, and only one attribute can be selected to split each time, and then it goes down in turn to continue splitting. Because self-reference is easy to retrieve, consumers can recall self-reference more quickly. The traditional communication mode basically considers how to transmit the information about the image of the tourist destination to the target audience and potential audience from the perspective of the tourist destination. So as to create a good brand image in the audience's mind. As the main body of the city, if the city residents can actively participate in it, it will be beneficial to the shaping and spreading of the city brand and make the city brand image more vivid. Collaborative filtering recommendation technology mainly adopts strong item recommendation within the group and association difference recommendation, while content filtering recommendation technology will adopt common domain knowledge analogy recommendation. In this system, the strong item recommendation within the group and the associated difference
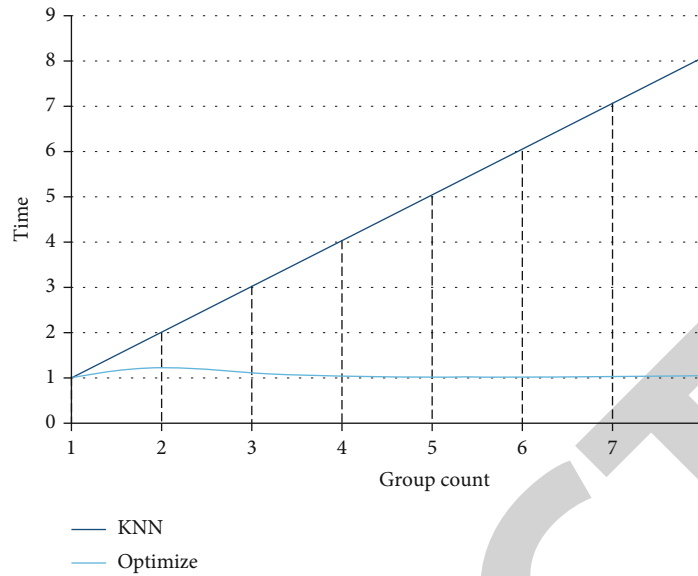
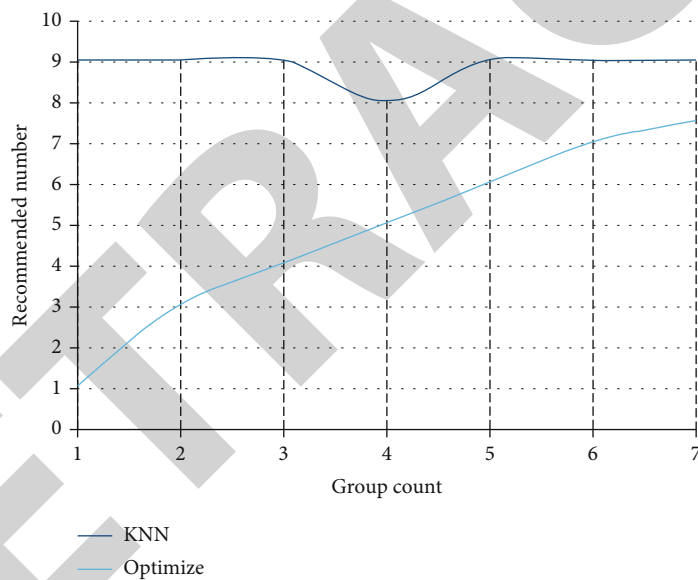FIGURE 1: Average recommended consumption time comparison.

FIGURE 2: Comparison of the average number of recommendations returned.

recommendation algorithm are mainly used. The development of economic strategy not only requires rapid economic development, but also needs to promote rapid economic development through the dissemination of economic images to make people fully aware of the economic strength, economic foundation, and level of economic development. The dissemination of economic image is of great significance. Then it analyzes and sorts out the city image theory, and analyzes that the city image design only pays attention to material construction, ignoring the role of the brand on the city image. Crowd optimization tools can tag users as they collect user information, thereby forming different user tags, according to these different tags. The personalized recommendation system makes it easier to delineate different

shopping groups, thereby improving the accuracy of recommendation and improving the shopping experience of consumers.

4. City Brand Image Dissemination

4.1. The Elements and Classification of Chinese City Brands. The implementation of brand strategic planning begins with research. Because before determining a city brand, we must understand how the outside world views and evaluates the city, rather than being wishful thinking. The research starts with the resource advantages, future development, citizens' intentions, and the government's urban development planning of the region. The second is to use professional

institutions to conduct various forms of interviews and questionnaires to local and overseas audiences to understand the public, surrounding cities, and the international community's evaluation of cities. On this basis, an objective and scientific conclusion is drawn to provide decision-making basis for the next stage of work. Many elements have an impact on the city brand, but these elements have also become the key basis for dividing the city brand image. The computing node reads the data required by the mining task from the data storage node. And calculate according to the modified data mining algorithm, and finally send the mining results to the task scheduling node for merging, and the task scheduling node will store the final data mining results for use by the recommendation system. The economic image is based on hard power such as the level of economic development, economic foundation, and economic strength. It is the charm of the overall economic strength and drives rapid economic development. The city brand image behavior recognition system refers to the behavior of the city, and it is the activity mode of each city. The visual recognition system of city brand image is the performance outside the city, which will directly and tangibly show the spiritual appearance of the city. When big data starts to be used in big data, shopping bars like big rotation, guessing what you like, seeing and looking, and buying appear, which is an early form of big data recommendation system. Thus, most tourists agree that the impression before and after the tour is the same, indicating that the products and services provided basically meet the needs of tourists. As shown in Figure 3.

In the big data algorithm, besides dealing with more complicated data sets, another notable feature is that it no longer pursues the causal relationship and commonality between things. Instead, we should accurately mine the individual characteristics of different individuals, and deal with each analysis object in a personalized way to the greatest extent. On the cold start of the recommendation system, the optimization scheme is designed and implemented. The core is to use offline computing to solve the problem of instant computing and long tail effect in cold start recommendation. This requires us to formulate a media combination strategy through internal and external factor evaluation and public relations, so as to achieve a unified and most effective communication influence. And establish a long-term relationship with the target tourists, two-way interactive communication can be carried out, so as to effectively achieve the goal of communication and marketing. Therefore, user behavior data can be extracted from the log system of the search engine and the basic user information database of the search engine. The comparison of the curve results is shown in Figure 4.

However, the historical data of consumers in external companies can better represent consumers' shopping preferences if the current website makes use of such consumers outside the public. Therefore, the key to impress your audience is to find critical moments in which visitors will accept and resonate with them at some point throughout the travel process. The city's historical culture, natural landscape, historical celebrities, geographical location, humanistic customs, and architectural landscape are the
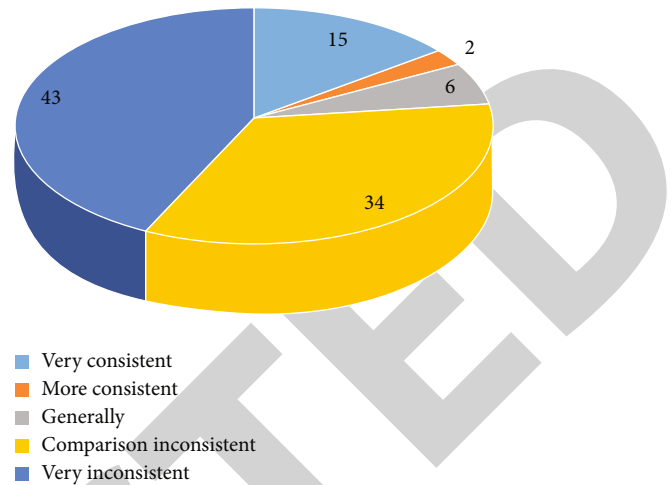

Figure 3: Analysis of impression consistency before and after tourism.

main components of city brand culture, such as mountain city, which takes its unique city culture as an important content of shaping city brand.

4.2. Big Data Communication Model of Chinese City Brand Image. Since the 21st century, the awareness of Chinese urban brand image communication has gradually increased, and the communication methods have become more and more diverse. After the learner logs into the system through the browser, the recommendation system makes recommendations based on the learner's data mining results. To build a local cultural brand, we should strengthen investigation and research, and explore the historical origin, development context, and basic trend of local culture in a multidimensional and in-depth manner. Strive to promote the organic integration of national style, traditional charm, characteristics of the times, and people's needs, so that the rich connotation of Fuzhou culture can adapt to contemporary culture and coordinate with modern society. The charm of the city image lies in the individualized cultural characteristics. Common things can only leave a cookie-cutter impression, while personalized things leave an impression that will last a lifetime. As a result, a dynamic subjective impression is formed in the minds of consumers or the public. Brand is a virtual vocabulary, it does not have an independent entity, does not occupy space but belongs to the intangible assets of a city, enterprise, and product. But the ultimate goal of a brand is to give the public a relatively simple and easy way to remember a product or business. Both students at school and young people at work have the same access to travel information. As shown in Figure 5.

At present, the personalized recommendation search engine for big data is mainly based on the keywords entered by users to identify, and based on some relevant information that can be extracted to give more accurate results. This works well for some shoppers with vague intentions. The development of algorithms corresponds to the development of productivity. Unlike the traditional relationship between productivity and means of production, the new goal of
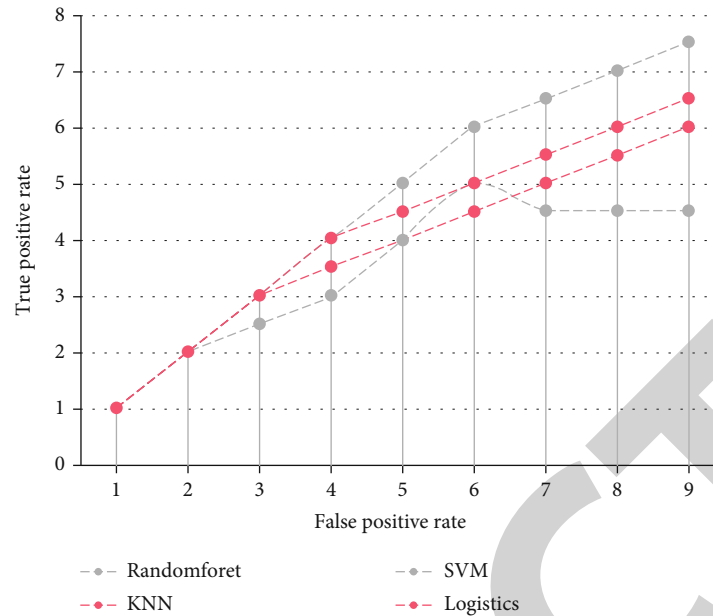
Figure 4: Comparison of Curve Results.

productivity development and algorithms, is to process larger and more complex means of production faster and better. The main function of the project index module is to calculate the index information of the project offline and store it on disk. The recommendation module is a module. The recommendation system provides instant recommendations for new users and directly faces users. Although the slogan "ecological leisure, hundred mile corridor" can have a certain impact, it cannot be used as a historical and cultural city to receive tourists. As shown in Figure 6.

Instead, it is necessary to first analyze the characteristics of user behavior in a specific search engine scenario, design a personalized recommendation model that can effectively mine the value of user data according to this characteristic, and then execute the corresponding recommendation algorithm to obtain a good recommendation effect. Let customers make retention suggestions for the first time in case of loss to reduce business losses. Workplace youths like national customs, most followed by natural scenery and urban gardens. Both show a general preference for festival activities, which are crowded by large numbers of people. As shown in Figure 7.

If the consumer comes from an external company with high correlation, because the goods or services provided by the current website are similar to those of the websites he visited before. Then the current website can provide goods close to the consumer's previous preferences. Mainly, some local governments have put the construction, development, and management of urban brands on the agenda, and started systematic planning with a plan and layout. Good tourism image the construction of city tourism image is a very complicated problem. This is because its influencing factors involve many aspects. Generally speaking, the urban tourism image is mainly expressed through various image carriers, image hardware, and image software. Therefore, when we carry out the construction of urban tourism image, we must start from various image carriers. Coordinate all factors, make overall planning for all aspects of the city, and at the same time, implement the principles of serving tourism and aesthetics. The city and its surrounding scenic spots and urban gardens are the main carriers of the city's tourism image and the most important material basis for establishing its tourism image.

4.3. City Brand Image Design Strategy. Planning content of urban brand image design: thinking about urban positioning industry, transportation, tourism, and other aspects, based on the in-depth excavation of urban historical and cultural heritage; systematically and comprehensively provide the core demands of urban strategy. Urban positioning will organize interdisciplinary experts to conduct on-the-spot investigation, investigation, diagnosis, and evaluation, which is a necessary prerequisite for urban visual design system. City symbol is the core element of the city brand image system, the embodiment of the materialization of city culture and the concentrated embodiment of city values. It is unique and exclusive, and it is the core language of urban personalization.

4.3.1. Establish brand management strategy. The confusion of city brand image positioning will cause the core value of city brand to be unable to be effectively conveyed, and the competitiveness of city will be greatly reduced. Therefore, if the city brand image communication wants to convey the soul and temperament of the city in a unique way, it must carry out unique brand image positioning. Brand image positioning is the core link of city brand image communication. Positioning is conducive to the formation of core competitiveness, and once it is formed, it has strong extension ability and exclusiveness. With the intensification of competition among cities, distinctive and unique city
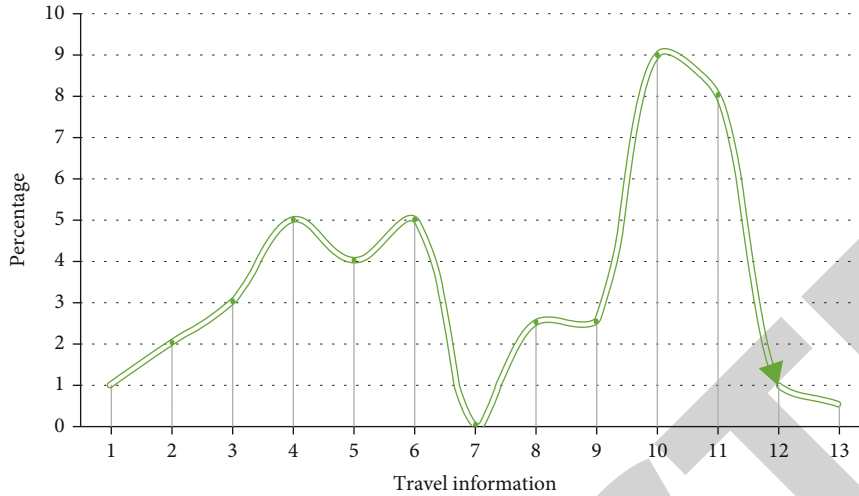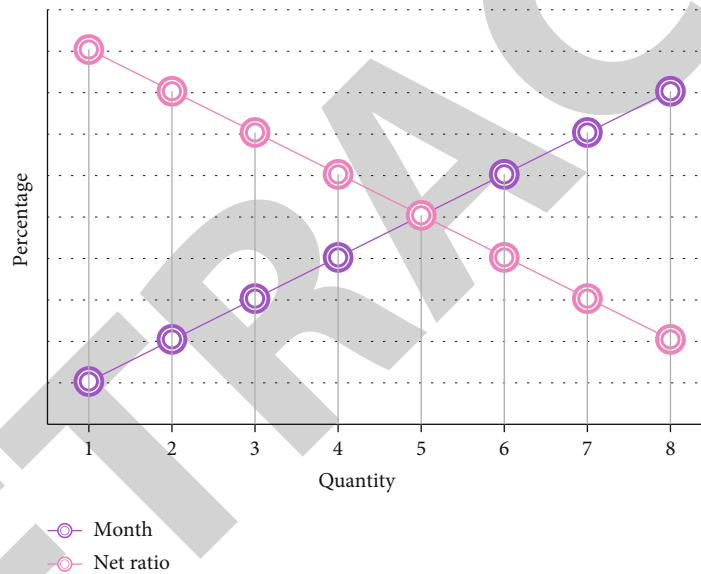
FIGURE 5: How to Get Travel Information.

FIGURE 6: Tourist reception.

brand image plays a key role in improving the effect of city brand communication. The shaping and spreading of city brand image is a long-term and trivial work related to the development strategy of the city and the implementation of specific projects. The specific activities of city brand image communication should be consistent with the orientation and policy of city brand image, and corresponding adjustments should be made according to the specific conditions of specific activities. Driven by the "big data" technology, the media contact habits of the target audience can be clearly presented, and problems such as which programs the target audience chooses to watch, how long they are, and how much they like the programs can be solved, which facilitates the efficient integration of various communication means. In addition, with the continuous emergence of new media, the channels for the public to obtain information are constantly updated. Therefore, while the traditional means of commu-

nication are used in urban brand image communication, more attention should be paid to the application of new means of communication.

4.3.2. Upgrade city brand image communication content. As a new communication platform, social media can quickly transmit any kind of emergency to every corner of the earth, thus causing public crisis. Because of the different social groups and individual needs of the audience, the demand differentiation trend of the audience gradually becomes obvious, resulting in the diversity and differentiation of the audience's demand for information content. This has led China's media industry to gradually shift from the sender-oriented to the audience-oriented, and began to pay attention to the audience's demand for different content. Due to the development of China's commodity economy, the increasingly fierce competition in the media market, the
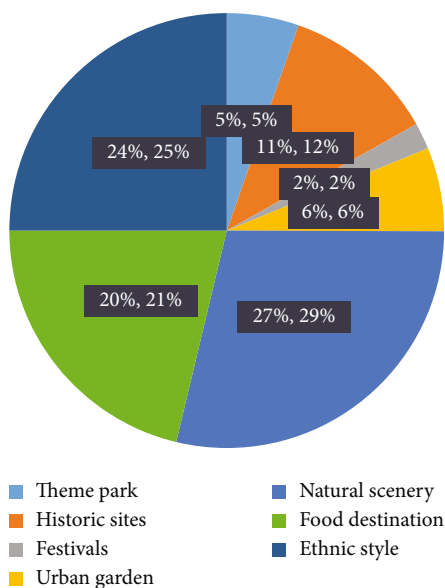
FIGURE 7: Preferences of tourist attractions.

continuous development of media technology and many other reasons, the audience has been given unprecedented initiative, and their self-awareness is also increasing. Taking the audience as the center and deciding the content style of communication has become the primary condition for the media to survive. The establishment of city image is an administrative concept established in combination with the current situation of government resources, the direction of urban development, social environment, and development trend. It is also to establish a good administrative image through the work recognized by the public and development goals, which coincides with the main development concept of the modern urban brand plan. Through the construction of city brand, the society can better understand the culture, development direction, and government work of a city. The combination of the construction of city brand and the establishment of government image is conducive to the realization of the public management function of the government, and the creative combination of the country and government concept with the city image. Promote the realization of the government's political, economic, cultural, and social service functions. City managers can pay attention to the trend of public opinion in real time with the help of data analysis charts, and should disclose information comprehensively and fairly when necessary, so as to minimize the possibility of rumors and negative emotions of the audience. When the crisis is in the outbreak period, the guidance of public opinion must strive for every possible time. Organizations or governments should release information at the first time, take the initiative in discourse as quickly as possible, and strengthen interaction with emerging media to reflect real public opinion.

5. Conclusions

This paper analyzes how cities in the big data era can better carry out brand image design. This paper analyzes a series of

brand image management work, such as the maintenance and evaluation of brand image. With the support of big data and related theories of urban tourism destination brand image management, this paper proposes that in the era of big data, the collection and analysis of data will help tourism destinations better manage their brand image. Cultural and creative industries and industries related to tourism elements constitute an intertwined cultural and tourism industry chain. Through the development of tourism, tourists will produce comprehensive and diversified consumption in the city. On the basis of inheriting traditional culture, cities should strive to create new and unique urban cultural images. Data technology plays an important role in urban planning and development as well as industrial development. Based on big data analysis, it can provide powerful decision support for government and industry managers.

However, the study has certain limitations. The research did not analyze from accurately targeting the national standard audience and mining their consumption demand. The research also needs to accurately position the city brand image and effectively integrate the brand communication means. Real time interactive public opinion guidance and intuitive and accurate effect evaluation.

Data Availability

The data used to support the findings of this study are available from the corresponding author upon request.

Conflicts of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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