Dynamic Evolution Model of Rural Tourism Trend Based on High-Resolution Remote Sensing Image Mining

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Abstract:Based on the in-depth analysis of the research status of association rule mining technology, the paper selects high spatial resolution remote sensing images to carry out image association rule mining research. Rural tourism mainly helps by promoting employment, driving industry, improving supporting facilities, and promoting environmental protection. On-site urbanization is realized; on-site urbanization drives the development of rural tourism through the advancement of population, economy, society and ecology. The evolution process of my country's rural tourism development policy is roughly divided into four stages, the evolution law and characteristics of my country's rural tourism policy and the development trend of my country's rural tourism are analyzed, and the nonlinear weighted kernel function and guide image of generalized guided filtering are estimated respectively. The experimental results show that the method can effectively suppress the speckle noise in the simulation and actual acquisition of high-resolution SAR images.

Keywords: Dynamic Evolution Model, Rural Tourism Trend , High-Resolution, Remote Sensing Image Mining

1. INTRODUCTION

Today, the Internet has become an indispensable part of people's lives, especially for the younger generation of college students, which provides an important channel for interpersonal communication and resource acquisition [1]. Data mining is defined as the process of extracting implicit, unknown, but potentially useful information and knowledge from massive, incomplete, noisy, fuzzy, and random data.

Remote sensing, as the name implies, is "remote perception", which refers to the non-contact reception of electromagnetic radiation reflected or radiated from objects at a certain distance through detection equipment mounted on different platforms (satellites, aircraft or vehicles, etc.) [2]. The signal and indicator system is a tree-like classification structure formed by a number of relatively independent and interrelated statistical indicators that reflect the overall characteristics of social and economic phenomena. The establishment of an index system is the premise and basis for predicting or evaluating social and economic phenomena [3].

Based on the actual development of urban and rural areas in my country, in the face of outstanding problems in rural areas, in 2017, General Secretary Xi proposed the "rural revitalization" strategy for the first time, emphasizing the importance of agriculture, rural areas, and farmers to my country's modernization drive [4], emphasizing the need to integrate agriculture and rural areas. The development of rural areas is the primary consideration in economic and social development. The real rural tourism in my country emerged in the 1990s [5]. In 2002, my country promulgated the "National Inspection Standards for Industrial and Agricultural Tourism Demonstration Sites and Industrial Tourism Demonstration Sites (Trial)", which provided policy support for the development of rural tourism in my country [6].

Under the background of rapid urbanization and new urbanization construction, many rural areas with convenient transportation have increasingly become important travel destinations for urban residents for weekend leisure vacations [7]. Real needs have inspired many villages around cities to develop rural tourism. Remote sensing Technology itself is an interdisciplinary subject it comprehensively applies mathematics, physics, electronics, computers, communications and other disciplines [8].

This technology was proposed by an American scientist in the early 1960s. Generally speaking, remote sensing is called a kind of distance from the target, which is determined by indirect contact [9]. However, due to the openness and inclusiveness of the Internet, both positive and negative public opinion information can be quickly spread on the Internet, and it is easy to distinguish between It has a greater impact on young students with poor ability [10].

Remote sensing image data mining refers to the use of data image analysis technology, pattern recognition, artificial intelligence, geographic information system, spatial data mining related theories and methods to discover and mine the information hidden in remote sensing images [11]. At the same time, it is the rapid development of remote sensing data acquisition, remote sensing data processing and remote sensing data application technologies that has effectively promoted the continuous improvement of the overall technical level of remote sensing earth observation [12]. Especially after entering the 21st century, with the further strengthening of globalization and regional economic integration, to scientifically grasp the development trend of public opinion and take appropriate actions, it is necessary to build a public opinion index system [13].

The purpose of constructing the public opinion index system is to quantify the public opinion information, which is helpful to comprehensively understand the occurrence, development and trend of public opinion [14]. According to the analysis above, it can be seen that the interaction and coordination relationship between rural tourism and local urbanization is relatively complex. As a result of the combined action of a variety of complex factors [15], in order to optimize the interaction and coordination between the two, we must start from various factors to identify the impact of rural tourism. "The Eleventh Five-Year Plan issued in the same year proposed the development of leisure and sightseeing agriculture to increase farmers' income [16].

Although the rapid development of rural tourism can have many advantages such as improving the rural economy and increasing employment opportunities, negative effects are inevitable. For example, there will be economic disputes among villagers, rural managers, and foreign investors [17]. A "tragedy of the commons" emerges in development. Parallel computing technology has become more and more widely used in recent years, its goal is to solve large-scale or computationally-intensive scientific computing problems in a short time. Parallel computing has also been introduced into the field of image processing to solve the problem of massive data processing or massive computing [18].

2. THE PROPOSED METHODOLOGY

2.1 The High Resolution Remote Sensing Image Mining

The traditional image analysis technology is a kind of image analysis: the image analysis of the pixel operation level, so the features that can be described and extracted are very limited, which are nothing more than the basic visual features of the pixels, such as spectral features, texture features and the characteristics of the pixel set in the limited neighborhood range, and so on. From left to right, the direction parameter gradually increases from 0 to 7 (ie, K=8).

It can be seen that the larger the scale of the 2D Gabor function is, the more significant the suppression of speckle noise is, and conversely, the smaller the scale is, the more sensitive it is to image details. Due to the complexity of the natural environment and the different resolutions of remote sensing images, the remote sensing information we are interested in presents complexity and diversity. Next, we first analyze the diversity and complexity of remote sensing image features containing road information. This is an important basis for designing extraction methods. The rural reconstruction process of rural tourism destinations is not just the repair of a single ancient building, nor is it a simple renovation of the village appearance, but in the process of tourism development and modernization, the core characteristics of more rural areas are well integrated into the village. In the development of the tourism industry. The difference index between patches is the weighted sum of the spectral merge cost and the shape merge cost, and the sign of the end of the merger is that the pairwise merge cost between the patches exceeds the square of the scale parameter.

Setting different scale parameters can realize the multi-precision image segmentation process. Based on the in-depth study of existing theoretical methods, this chapter proposes a high-resolution SAR image target detection method based on context-aware saliency. Firstly, through the analysis and induction of the overall statistical characteristics of the SAR image, the feasibility of using the saliency method for target detection is proved. The three remote sensing images above show different types of roads. The remote sensing image shows the urban road with a relatively simple structure. It can be seen that the morphological and color characteristics of the road are very uniform, the surrounding green space information, and the interference information on the road is very little.

2.2 The Dynamic Evolution Model of Rural Tourism Trend

The most common demographic phenomenon in rural areas is that young and middle-aged laborers go out to work, while the elderly, children, and disabled people stay behind in villages, resulting in labor shortages and population loss in rural areas.

However, rural tourism has a lower threshold for employment and is more inclusive, which is very suitable for rural labor force participation. Second, policies directly support the development of rural tourism. In terms of land use, the 2017 Central Document No. 1 provides land use support on the premise of insisting on land use management and control. In terms of finance, in 2016, the application for the 12 billion yuan tourism infrastructure fund was launched. It is characterized by the fact that the number of growth has entered a state of rapid and continuous growth.

The fourth stage is the stable stage. During the stable stage, the growth rate of the number of tourists in the tourist destination declines, and the growth rate is relatively stable; They are all combined on the basis of erosion and dilation operations. The composition of these filters ranges from simple to complex, but complex does not mean effective. Each filter has its own application characteristics. Therefore, in high-resolution remote sensing In the process of designing the image road extraction algorithm. One is the original ecological principle. Because the countryside is close to nature, it can provide a natural visual landscape, which meets people's landscape needs for the countryside, allowing tourists to fully perceive the aesthetics of the idyllic natural landscape. The development of rural tourism cannot destroy the existing natural ecological environment.

Because each index of the system has certain differences in concept, content and selection criteria, the dimensions of the data are basically different, which is not conducive to unified comparative analysis. Therefore, in order to have certain comparability between the data, in the grey relational analysis, first of all, it is necessary to strengthen the construction of rural tourism development system, build institutions, make plans, strengthen management, and provide more support, and promote the standardized, orderly, and sustainable rural tourism. continuous development. Secondly, the development of rural tourism involves multiple departments, and it is necessary to strengthen the coordination and cooperation of various departments, and a coordinated development mechanism for rural tourism should be established.

2.3 The Rural Tourism Prediction Model Based on High Resolution Remote Sensing Image Mining

This study uses FP. The Growth algorithm analyzes the structured transaction database of the two preprocessed remote sensing images in the rule generation area, and obtains strong association rules that are greater than the minimum support and minimum confidence. Verification. From the average point of view, the correlation between each indicator of rural tourism and the on-site urbanization system is relatively balanced. Among them, the number of rural tourists (X1) and the number of farmhouse (homestay) operating households (X5) are related to the on-site urbanization. The highest degree, that is, the two indicators are the main driving factors for rural tourism to influence on-site urbanization.

my country's rural tourism has developed to a certain stage, not only need to pay attention to the current development issues, but also need to think about sustainable development issues; it is necessary to pay attention to both the domestic market and the international market, and to create a world-renowned and enduring tourism product. direction efforts. The influencing factors of the rurality of rural tourism destinations are complex, therefore, this paper needs to find hidden representative factors among many variables through factor analysis, and group the variables of the same nature into one

factor, which is convenient for induction, analysis and summary.

Yuanjia Village is located in the Guanzhong Plain of Shaanxi Province, about 66.5 kilometers away from Xi'an City and less than 50 kilometers away from Xianyang City. Expressway and Provincial Highway 107. This paper uses SPSS 21.0 to conduct Exploratory Factor Analysis (EFA) on rural perception factors, extracts factors by principal component analysis (extracts items with factor loading greater than 0.50, and deletes factor loadings) There are more than two items with a quantity greater than 0.40).

3. CONCLUSIONS

After summarizing the characteristics of roads in remote sensing images, in-depth analysis of mathematical morphology, and summarizing and discussing parallel computing technology, a road extraction method based on mathematical morphology in high-resolution remote sensing images is proposed. By sorting out and analyzing the literature related to rural tourism and in-situ urbanization and summarizing the interaction mechanism, it is believed that there is indeed an interactive relationship between rural tourism and in-situ urbanization at the theoretical level. Among them, rural tourism mainly absorbs rural labor, promotes employment, and realizes population urbanization. Through the analysis of the literature related to rural tourism and in-situ urbanization and the summary of the interaction mechanism, it is believed that rural tourism and in-situ urbanization are theoretically related. There is indeed an interaction at the level. Among them, rural tourism mainly promotes employment and realizes population urbanization by absorbing rural labor force.

4. REFERENCES

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