

# Retraction

# **Retracted: Hierarchical Strategies for Building Multiethnic Communities from the Perspective of Data Mining Analysis**

#### **Mobile Information Systems**

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This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

- (1) Discrepancies in scope
- (2) Discrepancies in the description of the research reported
- (3) Discrepancies between the availability of data and the research described
- (4) Inappropriate citations
- (5) Incoherent, meaningless and/or irrelevant content included in the article
- (6) Peer-review manipulation

The presence of these indicators undermines our confidence in the integrity of the article's content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

Wiley and Hindawi regrets 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 own 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

 S. Qin, "Hierarchical Strategies for Building Multiethnic Communities from the Perspective of Data Mining Analysis," *Mobile Information Systems*, vol. 2022, Article ID 7506323, 10 pages, 2022.



# Research Article

# Hierarchical Strategies for Building Multiethnic Communities from the Perspective of Data Mining Analysis

#### Suhan Qin 🕞

Guangdong Polytechnic Normal University, Guangzhou 510665, China

Correspondence should be addressed to Suhan Qin; qinsuhan@gpnu.edu.cn

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The formation of a multi-ethnic community is the need of the times for ethnic relations. Its construction must first establish a homogeneous space that can support interethnic coexistence, including national public living space and national public cultural space, and, on this basis, form a heterogeneous space that is compatible with the existence of national individuality, so as to appreciate in national understanding. The expression, communication, and broad recognition of national individuality determine its important position in the construction of national community. In the process of building the Chinese nation community, the main purpose is to strengthen the Chinese cultural identity, build a spiritual home shared by all ethnic groups, and consolidate the community consciousness of the Chinese nation. Based on this, this paper mainly studies the engineering application based on data mining algorithm and data mining algorithm in the construction of multi-ethnic community. By summarizing the experience in the process of the construction of the Chinese nation community, some solutions are put forward to the problems in the construction of the national community and strive to focus the value orientation of all members of the nation on the identification of the common values of the Chinese nation.

#### 1. Introduction

The construction of ethnic communities in multi-ethnic countries is a systematic project, which is different from the natural evolution of indigenous people [1]. As a constructive cultural group, the establishment and improvement of the ethnic minority community (state) requires external intervention. Through cultural integration, a common ideology is formed, and it is established and regarded as the common spiritual home of all citizens, so as to improve the conscious ability of the ethnic minority community, to lay a solid foundation for the establishment of ethnic minority communities [2]. In the process of establishing a national community, the French nation's formation and integration paradigm is distinctive and has achieved good results, providing reference and reference for other multi-ethnic countries to establish ethnic communities [3].

My country has been a unified multi-ethnic country for a long time in human history, and it has created an excellent external environment for us [4]. In China's long-term feudal society, due to the fact that the exchanges and unions within China's various ethnic groups were at a relatively spontaneous stage, and due to the ethnic contradictions caused by the mutual oppression of ethnic groups, there was no ethnic community consciousness (national consciousness) among the various ethnic groups. Under the external threat of genocide brought about by China's imminent national subjugation and imperialist invasion, all ethnic minorities in China are united unprecedentedly under the unified leadership of the CCP, and their national consciousness has awakened [5]. Table 1 shows the regional distribution of some ethnic minorities in my country. Through the bloody battles of the people of all ethnic groups and the success of the new democratic revolution, the People's Republic of China has established a democratic regime, and the people of all ethnic groups have entered the era of democracy together. During the founding stage of the People's Republic of China [6], the Communist Party of China established a system of regional ethnic autonomy with Chinese characteristics, combined Marxist theory with the reality of China's ethnic

TABLE 1: Distribution of some ethnic minorities in my country.

Ethnic name	Main distribution area
Mongolian	Inner Mongolia Autonomous Region, Liaoning Province, Jilin Province
Hui nationality	Ningxia Hui Autonomous Region, Gansu Province, Henan Province
Tibetan	Xinjiang Autonomous Region, Sichuan Province, Qinghai Province
Uighur	Xinjiang Uygur Autonomous Region, Hunan Province
Yi people	Guizhou Province, Yunnan Province, Hunan Province
Zhuang	Sichuan Province, Yunnan Province, Guizhou Province
Buyi	Guangxi Zhuang Autonomous Region, Yunnan Province, Guangdong Province
Korean	Guizhou Province
Manchu	Jilin Province, Heilongjiang Province, Liaoning Province
Dong nationality	Liaoning Province, Jilin Province, Hebei Province
Yao nationality	Guizhou Province, Hunan Province
Bai people	Guangxi Zhuang Autonomous Region, Hunan Province, Yunnan Province
Tujia	Yunnan Province, Guizhou Province
Hani	Hunan Province, Hubei Province, Sichuan Province
Kazakh	Yunnan Province
Ethnic name	Xinjiang Uygur Autonomous Region, Gansu Province

minorities, actively dealt with ethnic relations and strived to achieve ethnic equality, and the reunification of the motherland and the community of the Chinese nation provide the basic and necessary conditions for the establishment of the country [7].

As of December 2021, the author has retrieved a total of 1,968 related academic papers under the title "Community of the Chinese Nation" in CNKI, of which there are 977 papers in 2021 (see Figure 1) [8]. After an overall analysis of it, it is found that the most frequently occurring keywords are "Chinese nation," "cultural identity," "five identities," and "national unity" [9]. It can be seen that in previous studies, most scholars have focused on the theoretical interpretation at the macro level, the development of the context, the mining of value implications, and the design of the cultivation path [10]. The research focuses on the single-ethnic research at the meso-level and the research on colleges and universities [11]. As far as the relevant research results have been found so far, few scholars have discussed the relevant issues of "forging the consciousness of the Chinese nation's community" from the perspective of the daily production and life practice of villagers (residents) within the "interembedded community" [12].

In today's era of big data and artificial intelligence, data analysis, algorithms, and computing capabilities are particularly important [13]. It is the core of information mining research to establish a method in the analysis of a large amount of data and discover the knowledge points after "information association," so as to visualize its meaning. In the data mining algorithm, neural network is generally a systematic and effective data analysis and processing method for dividing and processing digital information such as words, pictures, and sounds [14]. According to the principle of the big neural network, the data mining method is used to realize the national community big data analysis system. At the same time, according to the software engineering concept, the requirements analysis, summary and detailed analysis, program implementation, and debugging are completed. Using the analysis of data from the visualization

platform, important information on issues such as "politics," "culture," and "society" was discovered.

So far, although various basic theoretical research results have laid a good foundation for the consciousness of the Chinese nation, there is still a large research gap, and there are still many new theoretical research contents that need to be supplemented [15]. The progress of scientific research can promote the research and development of ethnic minorities in various disciplines [16]. Therefore, this study will pay more attention to the theoretical system and practical application value of the construction of the Chinese nation's community, put forward operational strategies and measures to better protect the Chinese nation's civilization and the cohesion of the Chinese nation, and provide the necessary measures for the realization of the great rejuvenation of the Chinese nation. The basic theoretical guarantees a useful framework for evaluating and managing environmental health risks across different settings [17].

#### 2. Related Concepts and Theoretical Basis

2.1. The Essence of the National Community. The 5,000-year history of civilization of the Chinese nation is the history of the harmonious inheritance of civilizations of all ethnic groups and the history of the process of mutual recognition and peaceful development of civilizations of various ethnic groups [18]. As an open and inclusive family, the Chinese nation gathers ethnic minority compatriots of different life backgrounds, languages, appearances, and skin colors to ensure harmonious coexistence and common development with people of all ethnic groups. The free flow and open dissemination of various civilizations have always been the most important law affecting the development of human civilization. The Chinese nation should retain the diversity of civilization and rich and colorful spiritual life style, rather than undermining the civilizational advantages of all ethnic groups. The following situations can be considered.



FIGURE 1: Search results with the title "Community of the Chinese Nation".

2.1.1. Maintain the Coexistence of National Cultural Integration and Independence. History is produced under certain conditions and is the result of historical progress and development. The cultural form will change with the development and change of the economy, and various places in a city will also produce different cultural forms [4].

In order to protect our own fresh blood, we must accept foreign cultures. Teacher Chen Yinke also talked about the combination of his own cultural theory and foreign culture: "On the one hand, we must absorb foreign theories; on the other hand, we must not forget the status of primitive peoples." We learn to use the power of family and have a deeper understanding of foreign cultures to realize "one's own words."

The development of multiculturalism broke the "quiet" loneliness of the local culture. Out of the awareness of selfprotection, when a foreign culture enters, the culture will first show its own rejection and try to protect itself, but after the test of time, it is gradually found that a single cultural form is not enough to meet the needs of current social development. Through continuous running-in and practical testing, Chinese culture is gradually liberated in national independence, and more diversified cultural existence is accepted. The uniqueness of culture is manifested in a certain natural environment. It can neither be seen as a narrow self-knowledge nor can it be defined separately from the national environment. The uniqueness and integration of culture are formed together, and there is no uniqueness. People's values will lose their personal development, and if they lack integration, national communities cannot be built. The two coexist and coexist.

2.1.2. Multicultural Conflict and Inclusive Coexistence. In the reality of affirming and accepting the existence of multiculturalism, people should recognize the opposition and contradiction within civilization. Contradiction is the root and foundation of everything. People should dialectically deal with the conflict within ethnic pluralism developmentalism. "The imbalance of things is also the love of things." If all things maintained the same principle, law, consistency, and order, the development of the world and the progress of the world would stop. Cultural differences can also effectively reflect the huge space for the progress of civilization. With the development of information network and the deepening of economic internationalization, understanding the gap, strengthening communication, and identification are the only way for the development of national culture.

As Marxism said, people must be clearly aware of the objective existence of the problem. "Since ancient times, every country has been superior to other countries in some aspects." Seeking common ground while shelving differences is the gentlest way to deal with cultural conflicts. Seeking common ground "Cunqi" conforms to an important category of traditional Chinese social culture "reconciliation." "Harmony" means harmony, unity, public world, and inclusiveness. Harmony means symbiosis and coexistence. "Reserving differences" means leaving space for both parties to be more tolerant and valuing of each other. Various forms of cultural exchanges can develop together in a period of time, inclusive and mutually beneficial, exchanges and mutual learning, mutual promotion, and common development, which further reflects the inclusive characteristics of Chinese culture.

2.1.3. The Dynamic and Innovative Coexistence of *Multiculturalism*. The spread of Chinese culture is a process of not forgetting the origin of Chinese civilization and the

Differential structure	Chinese nation of all ethnic groups	Chinese nation of the Chinese people	Chinese nation of the world Chinese	
Properties of home	Home of people of all nationalities	Chinese people's home	The home of Chinese all over the world	
National attribute	Multi-ethnic republic	Sovereign state of the Chinese people	The "Motherland" of Chinese cultural identity in the world	
National attribute	The Chinese nation formed by the Han nationality and various ethnic minorities	The Chinese nation on the basis of the Chinese nation	Chinese nation	
People attribute	Chinese nation of all ethnic groups	Chinese nation	Chinese nation of the world Chinese	
Diversity of the Chinese nation	Multi-ethnic cohesion of ethnic and cultural diversity	Chinese culture of the Chinese people	Integration of Chinese culture	
Cultural identity	The cultural identity of the Chinese national community united by all ethnic groups	The cultural identity of the Chinese nation community	The cultural identity of the Chinese nation community	
Cultural awareness	Cultural consciousness of various nationalities	The connection between Chinese culture and world culture	Cultural consciousness of Chinese civilization	
Cultural connection	The connection between the cultures of various Chinese nationalities and the cultures of the world's nationalities	Narrow nationalism	The connection between Chinese civilization and the human community	
Cultural transcendence	Narrow self-nationalism	United the Chinese people	Narrow Chinese nationalism	
Chinese culture	Bringing together all nationalities	Chinese nation of the Chinese people	Bringing together Chinese at home and abroad	

TABLE 2: Differential pattern of ethnic communities in my country.

spirit of the main civilization. This is a process of re-practice, re-innovation, and sublimation of mainstream civilization. Cultural creation can also enhance the ability of social subjects to absorb, digest, and apply scientific knowledge, and it is also a reflection of the cultural enthusiasm of social subjects. Cultural creation in each era is a node of the cultural heritage of the entire Chinese nation. By absorbing overseas advanced civilizations and blending multiple civilizations at home and abroad, it reflects the general needs of human society for spiritual and cultural development. The meaning of "new" is to emphasize the contemporary value of culture to human free will.

In order to adapt to the changes of the times, conform to the trend of economic and social development, and maintain vitality, all ethnic groups need to constantly innovate and update to ensure the renewal of the blood of civilization. All members of the ethnic community should not only maintain a humble attitude and jointly absorb the essence of Chinese culture but also actively resolve internal conflicts, promote healthy development, constantly explore new ideas, and constantly create new content, so as to contribute beneficial cultural nutrition to the construction of ethnic communities.

2.2. Problems in the Process of Building a National Community. Theoretical knowledge comes from concrete reality. In the process of forming a human community, each human being must go through a stage of integration and growth, from isolation to mutual communication and understanding, from passive "freedom" to active "self-action." My country's development and construction will inevitably require the introduction of a series of national policies and regulations to meet the needs of modern development. The

reform and opening up not only provided opportunities for the establishment and improvement of our society but also caused the dilemma of national identity. Among them, Table 2 shows the differential order pattern of my country's national community.

Various political ideological trends emerged while different ethnic groups interacted. In addition, my country's frontier management system is still not perfect, which makes some ethnic minorities feel a sense of separation; some localities and individual classes have accepted the influence of separatism and religious beliefs in Western regions. Because of the impact of extremism and the indifference of community awareness, the understanding and practice of racial independence or ethnic separation in some places have had a certain impact on the development of China's community.

2.3. Overview of Data Mining Perspective. As the name suggests, a frequent pattern is a process in which data are continuously generated. Mining frequent data helps to find interesting problems hidden in a large amount of information. The mining of frequent items is the cornerstone of frequent pattern mining, and the concepts and methods are elaborated in Chapter 4.

Another important data mining task for predictive data analysis includes classification and regression. In it, the class pattern is deduced by the class of the training data set (statistical objects with class labels), and the class labels used to analyze the uncertain data objects in the class labels. Chapters 3 and 4 will elaborate on the research and application of neural network algorithms in analytical tasks. In addition, regression analysis, as one of the most common big



FIGURE 2: Data mining draws techniques from multiple domains.

Category	Function	Algorithm	Typical application
Prediction model	Classification Decision trees, neural networks, and difference analysis		Target marketing, quality control, and risk analysis
segmentation	Numerical prediction	Linear regression, nonlinear regression	Profitability analysis
Link analysis	Cluster analysis	k-means and neural network	Market segmentation and customer segmentation
Predict category prediction model	Association discovery	Statistics and set theory	Cross-marketing
	Sequence association discovery	Statistics and set theory	Time-series basket analysis
	Similar time series discovery	Statistics and set theory	Sales flow and stock price volatility
Segmentation	Time series forecasting	Statistical time series models	Sales forecast, interest rate forecast, and inventory control

TABLE 3: Functions and a	applications o	of data	mining a	lgorithms.
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data prediction and calculation methods, can also be applied to the identification of data distribution trends, as well as image fitting and trend prediction. It can be applied in the fields of stock research and biological population derivation.

After decades of vigorous development, the data resource mining profession can be said to be changing with each passing day and never out of date. The types of its applications are becoming more and more diverse, the application methods are also changing rapidly, and the use environment will also expand day by day. It can be summarized as the following characteristics: multi-disciplinary integration, oriented to specific needs and applications, large-scale and rich data, and interesting models. Figure 2 shows examples of disciplines that have had an important impact on the development of data mining.

#### 3. Related Technologies

This chapter describes algorithms for three classic data mining tasks. There is no best method for data mining, only the best method for a specific goal. Table 3 shows the different functions and typical uses of different algorithms in data mining techniques. The specific reasons are as follows:

TextCNN is used in text analysis tasks because CNN is the most commonly used module in neural networks, and because TextCNN is also a technical framework that is easy



to master and apply, it is increasingly mature in engineering applications. The output works fine; in the task of association rules, FP-Growth is selected because the improvement of its algorithm greatly improves the computational efficiency compared with the traditional similarity calculation. Its essence is to convert the operation space (memory) into operation time and perform the operation on the laboratory server. In this way, sufficient network resources are used to effectively deal with the time consumption problem.

LDA is chosen in the task of unsupervised clustering, so it can process text-like data more efficiently and is a rare algorithm suitable for the implementation on subsequent platforms. Figure 3 summarizes the actual use of the three data mining algorithms described in this paper and introduces the application scenarios, advantages, and disadvantages of several algorithms in detail. We will describe it in detail in Chapter 5. The successful application of the big data analysis platform can test the feasibility, scope, and effect of the three methods in the design.

Here, *x* represents the input of the *j* th node (j = 1, ..., M) of the input layer; wj represents the weight between the *i* th node of the hidden layer and the *j* th node of the input layer;  $\theta$  represents the *i* th node of the hidden layer;  $\phi(x)$  represents the activation function of the hidden layer; *wi* represents the weight between the *k* th node of the output layer to the *i*(*i* = 1, ..., *q*) node of the hidden layer; and *a* represents the *k* th node of the output layer (*k*).

The four models of its data mining are as follows:

(1) Node output model is as follows:

Hidden layer node is as follows:

$$O_i = f\Big(\sum w_{ij} \times x_i - q_j\Big). \tag{1}$$

Output node is as follows:

$$Y_k = f\left(\sum T_{jk} \times O_j - q_k\right). \tag{2}$$

f is nonlinear action function and q is neural unit threshold.

(2) Action function (Sigmoid excitation function) model is as follows:

$$f(x) = \frac{1}{1_e^{-x}}.$$
 (3)

(3) Error calculation model is as follows:

$$E_{p} = \frac{1}{2} \times \sum \left( T_{pi} - O_{pi} \right)^{2}.$$
 (4)

 $T_{pi}$  and  $O_{pi}$  are the expected and calculated values of *i*, respectively.

(4) Self-learning model is as follows:

$$\Delta w_{ij}(n+1) = h \times \Phi_i \times O_j + a \times \Delta w_{ij}(n).$$
 (5)

*h* and *a* are learning factor and momentum factor;  $\phi$  and *O* are the calculated outputs of *i* and *j*.

According to the flow of the BP algorithm, the formula is derived as follows:

(1) The forward propagation process of the signal, equations (6) to (9), is as follows:

$$\operatorname{net}_{i} = \sum_{j=1}^{M} w_{ij} x_{j} + \theta_{i}, \tag{6}$$

$$y_i = \Phi(\operatorname{net}_i) = \Phi\left(\sum_{j=1}^M w_{ij} x_j + \theta_i\right), \tag{7}$$

$$\operatorname{net}_{k} = \sum_{i=1}^{q} w_{ki} y_{i} + a_{k} = \sum_{i=1}^{q} w_{ki} \Phi\left(\sum_{j=1}^{M} w_{ij} x_{j} + \theta_{i}\right) + a_{k},$$

$$(8)$$

$$a_{k} = \Psi\left(\operatorname{net}_{k}\right) = \Psi\left(\sum_{i=1}^{q} w_{ki} y_{i} + a_{k}\right)$$

$$= \Psi\left(\sum_{i=1}^{q} w_{ki} \Phi\left(\sum_{j=1}^{M} w_{ij} x_{j} + \theta_{i}\right) + a_{k}\right).$$

$$(9)$$

Note: net is the input of the i th node of the hidden layer; y is the output of the ith node of the hidden layer.

Net is the input of the *k* th node of the output layer. *o* is the output of the *k* th node of the output layer.

(2) The back-propagation process of the error is as follows:

$$\Delta w_{ki} = -\eta \frac{\partial E}{\partial w_{ki}},$$

$$\Delta a_k = -\eta \frac{\partial E}{\partial a_k},$$

$$\Delta w_{ij} = -\eta \frac{\partial E}{\partial w_{ij}},$$

$$\Delta \theta_i = -\eta \frac{\partial E}{\partial \theta_i},$$
(10)
$$\Delta w_{ki} = -\eta \frac{\partial E}{\partial w_{ki}},$$

$$= -\eta \frac{\partial E}{\partial \operatorname{net}_k} \frac{\partial \operatorname{net}_k}{\partial w_{ki}},$$
$$= -\eta \frac{\partial E}{\partial O_k} \frac{\partial O_k}{\partial \operatorname{net}_k} \frac{\partial \operatorname{net}_k}{\partial w_{ki}}$$

Note: Ep is the quadratic error criterion function of sample *P*; *E* is the total error of the training sample *P*.  $\Delta wi$  is the correction amount of the output layer weight.

 $\Delta a$  is the correction amount of the output layer threshold.

 $\Delta w j$  is the correction amount of the hidden layer weight.

 $\Delta \theta$  is the correction amount of the hidden layer threshold.

$$\Delta w_{ki} = \eta \sum_{p=1}^{p} \sum_{k=1}^{L} \left( T_k^p - O_k^p \right) \psi'\left( \operatorname{net}_k \right) \cdot y_i .$$
 (11)

Additional momentum method is as follows:

$$\Delta w(i+1) = \eta \left( \Delta w(i) + u \frac{\partial E}{\partial w} \right), \quad (0 < \eta < 1), \tag{12}$$

where  $\eta$  represents the momentum factor.

The purpose is to increase the weight value on the basis of error back-propagation to achieve the effect of accelerating convergence.

Adaptive learning rate is as follows:

$$\mu(i+1) = \begin{cases} 1.05\mu(i), & E(i+1) < E(i), \\ 0.7\mu(i), & E(i+1) > 1.04E(i), \ (0 < \mu < 1), \\ \mu, & \text{otherwise.} \end{cases}$$
(13)

In the basic BP algorithm, its learning rate is fixed; therefore, when the algorithm reaches the extreme point, it may swing left and right, causing it to fail to converge. By adding formula (14) to the BP algorithm, the purpose of automatically adjusting the learning rate can be achieved, so that the algorithm can converge to the minimum value as much as possible.

The weight w adjustment method is as follows:

$$\Delta w = \left(J^T j + ml\right)^{-1} J^T E,\tag{14}$$

where *E* is the error vector; *J* is the Jacobian matrix of *E* to  $\Delta w$ ; and *M* is the scalar.

The L-M method can change in two extreme cases  $m \rightarrow 0$  and  $m \rightarrow \infty$ , so its convergence speed is faster.

#### 4. Experimental Results and Analysis

4.1. *Experimental Conditions.* Matlab7.10.0 (R2010a) implements wavelet analysis and wavelet packet analysis noise reduction algorithms, respectively.

4.2. Experimental Environment. HP Presario CQ36 laptop, Inter(R) Core(TM) i3 CPU M330 @ 2.13 GHz, installed memory (RAM) 2.00 GB (1.87 GB available), hard disk 320 GB; running on Windows 8.1 Professional Edition performed on the operating system.

4.3. *Experimental Data*. Select the Noischir signal that comes with MATLAB, and the low-frequency and high-frequency parts of the signal contain noise at the same time, as shown in Figure 3.

National culture witnesses the history, is the spiritual wealth that has been passed down from generation to generation, and is the symbol of characteristic culture. In the ecology of national culture dissemination, national culture must keep pace with the times while retaining its own uniqueness. Therefore, how to get rid of the shackles of content homogeneity in the current social environment has become a problem that we need to think about. Rooting in national characteristics, insisting that content is king, and mining innovative content output methods are important



issues to improve the communication power of national culture at present.

In the research, a data set equivalent to the content of the previous section is selected for research; that is, the content of the subset of THUCNews is trained and tested. These data sets are the same as those used by fastText and NNF, and the results are similar. These eight categories are provided, including sports, finance, real estate, education, science, fashion, news, and entertainment. These categories have a total of 6,500 short text data, as shown in Figure 4.

The data set includes 5000 \* 8 classification training sets, a total of 40000 pieces of data information; 500 \* 8 classification test sets, a total of 4000 data information; and 1000 \* 8 levels of test sets, a total of 8000 pieces of data. The number of rounds of practice is set after the first twenty rounds, and convergence has been basically achieved in the fifteenth round of practice.

4.4. Selection of Training Data and Calculation Parameters. In this paper, the following four functions are taken as 5,000 sets of values, of which the first 4,900 sets of values are used for training and the last 100 sets of values are used for prediction. The BP network structure is 9–14–1, the maximum learning efficiency is set to 0.1, and the maximum training accuracy is 10–6. Therefore, the maximum training frequency of the BP neural network is 20,000 times, as shown in Figure 5.

From the core level, the construction of ethnic communities is the construction of national cultural soft power. The core of the Chinese nation's sense of community and the general recognition of the status of all members of the Chinese nation, as well as the consistent, broad and legally binding social values, and the special strength of all members. This is an inclusive value based on the common interests of all countries, addressing the common problems of all countries, and realizing the common development goals of all countries in the world. With the development of economy and society and the vital interests of the majority of citizens, the choice of life in the context of human cultural diversity should be regulated.

Practical activities refer to people's basic social activities, and reality itself is a concrete reflection of human subjective initiative. Regularity and purpose are the common



FIGURE 5: Relative error curves of the prediction results of the four algorithms.



FIGURE 6: Consistency of the purpose and laws of practice and labor.

characteristics of people's activities, and the unity of the two is the essence of "real people." Because human practice is a purposeful and conscious activity, only through practice can we reveal the development process of the organic unity of purpose and meaning.

He also emphasizes, "How an individual can express his life (Figure 6), he is who he is. Therefore, what they have is the same as their product—both as they make and as how they make it consistent." He puts the concepts of history and social development into the corresponding concepts of productive forces and production relations, and verified them. What he means is that the form of production activities embodied by the labor force follows the basic purpose and principle of production, and its behavior itself reflects the personality and basic ability of human beings.

The full improvement of human nature and the advancement of social civilization are inseparable from the unremitting exploration and questioning of truth, goodness,



FIGURE 7: The application and development of emerging technologies such as data mining in the construction of national communities.

and beauty. As can be seen from Figure 7, seeking truth to understand objective things and to explore the law of changes in things is the spiritual activity of human beings to pursue science and adhere to truth. Seeking well can purify people's soul and ideological realm, which is the most fundamental spirit of human beings. To cultivate kindness is to cultivate virtue first. The yearning for beauty is the highest requirement for value based on "truth" and "goodness."

### 5. Conclusion

From the core level, the construction of the national community in the new era is the construction of the country's cultural soft power. It is a special spiritual force that brings together the inner strength, cohesion, and charisma of a nation. This paper presents the method of data preprocessing and analyzes its principle, which provides support for its application in the construction of multiethnic communities [19]. Thirdly, the performance of the current data mining is analyzed, and then, the genetic algorithm is used for analysis and improvement according to the defect that the initial weights and thresholds are not processed. Community-built applications provide support. In a word, in the process of building the Chinese nation community in China, by studying the development and integration experience of the French nation, it has brought useful reference and enlightenment to the Chinese people. Building a community of the Chinese nation is inseparable from the leadership of our country and the joint participation of people of all ethnic groups in the country. This is inseparable from improving the sense of identity of the Chinese nation, improving the sense of identity of the Chinese nation and society, and improving the spiritual home shared by the whole Chinese nation.

## **Data Availability**

The labeled data set used to support the findings of this study is available from the author upon request.

#### **Conflicts of Interest**

The author declares that there are no conflicts of interest.

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