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Retraction

Retracted: Construction of Data Resource Sharing Platform in College Students' Ideological and Political Education Based on Deep Learning

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This article has been retracted by Hindawi following an investigation undertaken by the publisher [1].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

[1] Z. Qiu, P. Xiao, and O. Nguyen, "Construction of Data Resource Sharing Platform in College Students' Ideological and Political Education Based on Deep Learning," *Wireless Communications and Mobile Computing*, vol. 2022, Article ID 2905887, 10 pages, 2022.

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Research Article

Construction of Data Resource Sharing Platform in College Students' Ideological and Political Education Based on Deep Learning

Zehang Qiu,[1] Peng Xiao ,[1] and Oanh Nguyen [2]

[1]*Mudanjiang Medical College, Mudanjiang, Heilongjiang 157000, China*
[2]*Department of Computer Science, Saigon University, Ho Chi Minh 700000, Vietnam*

Correspondence should be addressed to Peng Xiao; xiaopeng@mdjmu.edu.cn and Oanh Nguyen; nguyenoanh@sg.edu.vn

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At present, the irrational allocation of IPE (ideological and political education) resources in universities reflects the dilemma of university's control of university students' IPE system. In order to make educational big data really useful to us and really promote the sharing of educational resources and improve the utilization rate of resources, this paper discusses the construction of data resource sharing platform for college students in IPE field based on DL (Deep learning) based on the characteristics and existing problems of educational big data. Based on DL, the collected data are parameterized, the matching algorithm parameters are determined, the dynamic data sample subset is incrementally reduced, the discernibility matrix and logical analytic formula are established, the conjunctive normal form is obtained through calculation, and the kernel attribute is introduced into each conjunctions to realize incremental mining of dynamic data. The results show that the model in this paper achieves the best classification effect on six samples, with an average classification accuracy of 88.81%. The results show that the comprehensive shared data matching algorithm based on DL can realize the matching in a short time, and the matching process has high stability.

1. Introduction

Information technology has injected new vigor and vitality into education, not only providing innovative technical means and solutions, expanding the coverage of high-quality resources, but also injecting new ideas and power into the sustainable development of education, promoting the reform of teaching and learning methods, and promoting the double improvement of education quality and efficiency. In recent years, big data has been deeply applied in various fields. By collecting, integrating, and analyzing data in related fields, it can improve work efficiency, improve working environment and quality of life, and forecast the future development trend. With the coming of internet plus times, ideological education has been challenged unprecedentedly. Due to the limitation of technology and conditions, the resources of IPE (ideological and political education) in universities are scattered. In order to improve the utilization rate of resources, realize the sharing of resources, and ensure the effective and continuous use of IPE resources, it is necessary.

University IPE is a subsystem of university personnel training. It relies on a number of educational main teams, such as the team of students and workers and the team of IPE courses, and plays its educational role in IPE courses, situation and policy courses, students' daily education and other educational channels. Bai and Li have built a national public service platform for educational resources, which mainly serves teachers and students in primary and secondary schools across the country. By opening teachers' personal homepages and setting up online classes, the overall goal of networking resources is achieved [1]. Zhang built an educational resource network, the platform based on attracting commercial resources, and built a bridge between teachers and resource service units to match supply and demand [2]. Capogna provided courses of all grades and disciplines in primary and secondary schools to primary and secondary school students in the form of online videos, which further enriched the supply of high-quality educational resources and made a new exploration and leap forward in improving the service mode of public education [3]. Cai et al. think that with the advent of data-intensive era, data sharing becomes very important, which provides a theoretical basis for researchers to reanalyze, reduces their repetitive work, and thus accelerates scientific research innovation [4]. The IPE data resource sharing platform for college students is an intelligent platform that collects and shares educational big data. Through this platform, users can search and obtain the educational resources they need, so as to achieve the purpose of online learning and online communication, query and share high-quality educational resources anytime and anywhere, and improve the scientific decision-making [5, 6].

IPE resources of college students are the sum total of all factors that educators choose to carry and transmit educational content and information in the process of practice and achieve educational purposes, such as educational elements and educational intermediary, and carry the IPE content and information of college students, etc. In order to better collect and share educational big data, we can set up a data resource sharing platform for college students in the IPE field, concentrate the collection and sharing of educational big data on one platform based on DL (Deep learning) technology, and form personalized resources by processing and combining all kinds of resources to meet the needs of daily education and teaching. Under this background, the relevance and quality of the resources themselves play a decisive role. This research is always guided by how teachers can use efficient and convenient ways to move the appropriate digital resources, and it is analyzed, designed, and practiced.

2. Related Work

2.1. Research on Sharing Educational Data Resources. Data sharing refers to the individual researchers sharing their original (or preprocessed) data with others in formal or informal ways. Sharing educational big data can not only promote the transmission and utilization of educational resources but also reduce the repetitive work in the teaching process, thus improving the teaching efficiency.

Zhao et al. focused on the overall design, database design, and function design of the digital educational resource sharing platform, which provided an important basis for the realization of the system [7]; Yu actively explores university students' IPE resources, deals with the problems existing in the process of resource sharing in time, actively builds a platform for sharing university students' IPE resources, gives full play to advantages, and changes unfavorable factors [8]. Calders believes that both the student work team and the IPE teaching team have accumulated a large number of IPE resources in their long-term work [9]. Among them, some of them are dominant resources, waiting for us to allocate and share them reasonably, and the other is hidden resources, which need to be developed scientifically and effectively.

Gao believes that the evaluation feedback mechanism and incentive recognition mechanism constitute the internal mechanism for digital educational resources, while the system planning mechanism, funding guarantee mechanism, incentive sharing mechanism, and management service mechanism constitute the external mechanism of digital educational resources [10]. Only when the internal mechanism and the external mechanism cooperate can we continuously promote the coconstruction and sharing of digital resources in basic education. Samydurai et al. integrated "blockchain" technology with the construction of data resource sharing platform in IPE field for college students and promoted the application of blockchain technology in the field of educational big data [11]; Tsai et al. discussed how to share valuable basic statistical data and social survey data in college students' IPE field and make it public to the whole society by building a data resource sharing platform [12], so as to improve the utilization rate of data on the one hand, and support comparative research topics in related fields on the other hand through statistical analysis among survey data.

2.2. DL Technology. In the era of big data, the sources of data are more and more extensive, and the types of data are more and more diverse. DL is the general name of deep neural network, which is developed from shallow neural network. Therefore, the deep neural network can learn more effective feature representation in the data. Compared with the shallow layer network, the deep neural network can better represent the complex objective function, has better generalization performance, and can extract the multilayer features of data through multiple hidden layers to obtain more information.

Li et al. divided the existing data fusion methods based on DL into three categories: data fusion methods based on DL input, data fusion methods based on DL output, and data fusion methods based on DL two-stage [13]. Huang et al. in the data fusion method based on DL feature extraction, DL mainly participates in the feature extraction stage of data fusion, and the fusion stage is completed by other methods [14]; Zhen et al. proposed a recognition method based on DL fusion, which fused the synthetic aperture radar image data to improve the accuracy of target recognition [15]. Wei et al. proposed an adaptive data fusion method based on CNN (convective neural network) to solve the problem of data fusion difficulty in multisource data fusion fault diagnosis. This method designed an adaptive data fusion layer based on CNN's adaptive convolution kernel and then proposed a one-dimensional CNN based on void convolution to extract the features of fused data [16]. This method effectively reduces the difficulty of multisource data fusion.

If the data is successfully used, it needs to search, classify, summarize, sort out and process the data, and provide corresponding rights and interest protection for the holders of shared data. Morshed et al. used RBM (restricted Boltzmann machine) to decode the brain state and trained RBM by generating training and discriminating training, respectively. The advantages and disadvantages of the two methods were compared under different conditions, and the data were used for verification [17]. Tang et al. stacked SAE (sparse autoencoders) into a deep network, which was used to decode the brain state, and achieved good classification results [18]. Tsai et al. used the dynamic time warping method based on time weighting to identify crop types, which improved the accuracy of classification [19]. Although the traditional statistical learning method is simple and easy, it depends heavily on the stability of data. Once the data is unstable or full of randomness, these simple time series analysis methods, which depend on data distribution, will have poor performance. Kim et al. put forward an iterative process that can monotonically improve the strategy, and by approximating the theoretical formula, gave a workable learning algorithm. After analysis, the standard strategy gradient and the strategy gradient of neural network were unified [20].

3. Research Method

3.1. Design of Shared Data Matching Algorithm

3.1.1. Shared Data Matching Algorithm Flow. The development of internet plus urgently requires college students IPE to innovate their resource construction theory. Internet plus enriches the content of IPE for college students but also brings new opportunities and challenges to these educators. Therefore, as an integral part of university IPE, it is obligatory to participate in the construction of IPE education and teaching resource platform. Based on this concept, universities urgently need to integrate these channels and resources with the concept of system development, forming a situation of "systematic design, scientific allocation, overall arrangement and rational utilization."

As the key to the development of educational informatization in China, digital educational resources have been significantly improved in quantity and quality with the acceleration of educational informatization construction in China in recent years. At the same time, there are some problems, such as large differences between urban and rural areas and regions, low-level redundant construction, and isolated information island. The DL model is used in feature extraction stage and data fusion stage based on the DL whole process data fusion method. In this kind of model, feature extraction and data fusion can use either the same type of DL model or different types of DL models.

Matching algorithms can be divided into point matching, surface matching, and comprehensive matching. Each matching algorithm needs different parameters; so, it is necessary to match and identify the parameters of shared data. To run the matching algorithm, it is necessary to first determine the parameter set, determine the operation range of the matching algorithm, and determine the position of the parameters according to formula (1):

$$\delta(P_1, P_2) = 1 - \frac{\sqrt{(x_1, x_2) + (y_1, y_2)}}{V}. \quad (1)$$

Let us assume that $P_1 = (x_1, y_1)$, $P_2 = (x_2, y_2)$ is the plane parameter point in the parameter database, and V is the maximum distance between two parameters in the parameter database.

In this paper, the personalized personality is regarded as personal background information. When the reply contains consistent background information, the user can feel the personalized features of chat robot. This paper integrates the relevance scores obtained by searching attention network with the scores of all words obtained by Decoder layer.

Therefore, it is necessary to extend the m-dimensional correlation score matrix l_t to the $|V| + m$-dimensional matrix o_t by filling zero.

$$\text{score}(s_i, d_k) = u^T \tanh\left(W_\beta[s_i, d_k]\right), \quad (2)$$

$$l_t = [\text{score}(s_i, d_1), \cdots, \text{score}(s_i, d_k) \cdots], k \in [1, 2, \cdots, m], \quad (3)$$

Where the number of keys is in the personal information database.

3.1.2. Shared Data Classification. The sharing and exchange mode of digital educational resources needs to be designed and analyzed in detail according to the current situation of resource construction, the core business direction, and the expected purpose. In view of the reality that all districts and schools have resource platforms, in order to achieve the purpose of intensive application, municipal resource access service is provided, and the access mode is provided in the form of service interface, which supports platforms at all levels to obtain municipal catalogues, metadata, and supporting resources through interface calls. Therefore, strengthening the management of data is the foundation and key point of building a platform for sharing university students' data resources in the IPE field. The management of data mainly includes two aspects, one is the management of data, and the other is the management of data managers.

CNN is mostly used to deal with image problems. With the development of research, CNN is divided into different dimensions according to the input data, namely, one-dimensional CNN, two-dimensional CNN, and three-dimensional CNN, among which one-dimensional CNN is used to deal with one-dimensional data sequence or two-dimensional array data. It is generally believed that the deeper the network structure, the more parameters, the more complex the model, and the stronger the expression ability. However, after the experiment shows that after CNN reaches a certain depth, simply increasing the number of layers will not bring further performance improvement but will lead to slower network convergence and worse accuracy.

CNN initialization parameter construction mainly constructs RBM training samples from the total samples, and the parameter matrix W of RBM is obtained through training. W is reconstructed and normalized as the initialization parameter of convolution kernel, and the specific process is shown in Figure 1.

After the establishment of the neural network, the quality of parameters will be continuously improved, and the precise explanation of dynamic data function relationship by DL will be completed. The purpose of network training is to minimize the deviation between real output value and

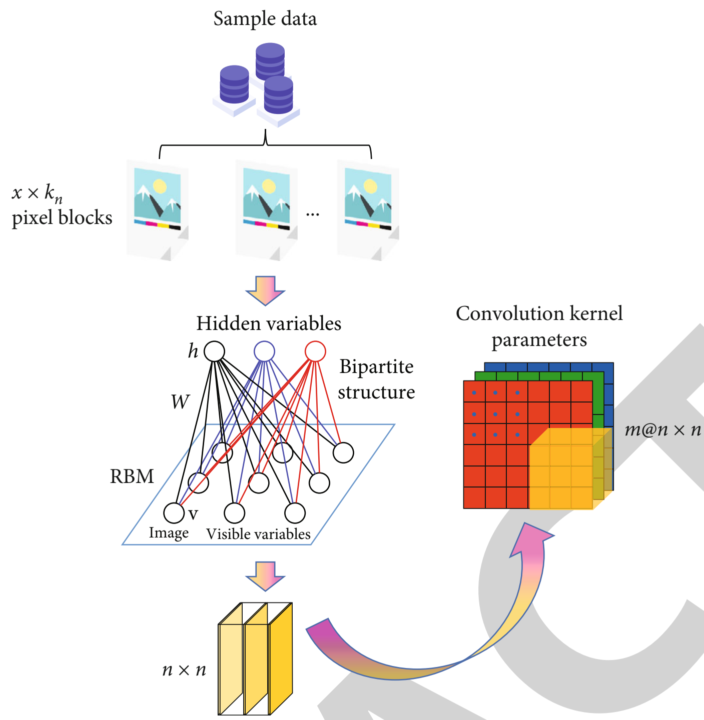

Figure 1: Initialize CNN parameter construction process.

label output value and get

$$J = \min L\left(y', y\right). \quad (4)$$

In the above formula, J is the said training object, and L represents the loss function.

The encoder can encode and decode the input dynamic data, complete the compression and reconstruction of dynamic data, improve the compression performance by minimizing the reconstruction deviation, and is not attached to the data label; so, it has certain advantages in feature extraction of dynamic data.

k_n voxel blocks of $n \times n$ size shall be randomly sampled from each channel of sample data and expanded into one-dimensional vector as the input of RBM. $k_n = 6$ is taken in this paper. The sampling of each channel is as follows:

$$i = \mathrm{Rand}(0, y - n + 1), \quad (5)$$

$$j = \mathrm{Rand}(0, z - n + 1), \quad (6)$$

$$\mathrm{Voxel} = \mathrm{Pic}[i : i + n - 1, j : j + n - 1,]. \quad (7)$$

Among them, Rand() is the random sampling function, i, j is the horizontal and vertical coordinates of the upper left corner of the sampling matrix, Pic is the voxel matrix of each channel before sampling, and Voxel is the final sampling result. After the above sampling steps, each sample data can get $x \times k_n$ subdata of $n \times n$ length for training RBM.

If the distribution of input cannot be kept stable, the training will be difficult to converge. The slow convergence of neural network is due to the fact that the distribution of input gradually approaches to both ends of nonlinear function. Calculate the mean and variance of the input with batch size of m, then standardize all x_i in the input to obtain x, and finally perform linear transformation to obtain the output y_i:

$$\mu = \frac{1}{m}\sum_{i=1}^{m} x_i, \quad (8)$$

$$\sigma^2 = \frac{1}{m}\sum_{i=1}^{m} (x_i - \mu)^2, \quad (9)$$

$$\widehat{x}_i = \frac{x_i - u}{\sqrt{\sigma^2 + e}}, \quad (10)$$

where e is a decimal added to prevent the instability of numerical calculation caused by the variance of 0.

ReLU will make the output of some neurons zero, which will cause the sparseness of the network, reduce the interdependence of parameters, and alleviate the overfitting problem. Adjusting the distribution of network output data of each layer to enter the active area of ReLU activation function can accelerate convergence, reduce iteration times, reduce gradient dispersion, and achieve higher accuracy.

3.2. Implementation of Data Resource Sharing Platform in IPE Field for College Students. An efficient platform of IPE shared education and teaching resources should integrate multidisciplinary, multicategory, and multiuser education and teaching resources, so that many educational subjects including IPE teachers and student staff can upload and share education and teaching resources with equal authority. At the same time, the platform should be expandable, convenient, and timely to enrich and update the contents and

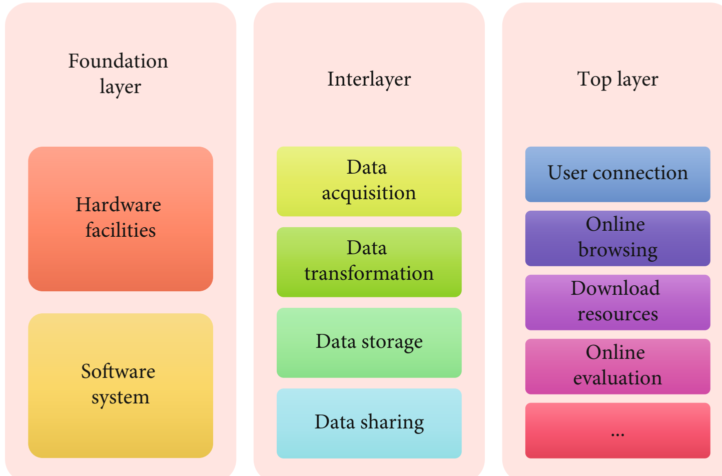

Figure 2: Overall framework of data sharing platform.

materials that can reflect the changes of the spirit of the times and the social development, which is also the vitality of IPE shared education and teaching resources platform.

Based on the principles of authentic data sources, excellent platform technical support, and customer service-oriented, this paper constructs the data resource sharing platform for college students' IPE. The specific platform framework is divided into three levels, namely, the basic layer, the middle layer, and the top layer. The layers are closely related but different from each other, and these three layers contain their own platform contents to support the safe and orderly operation of the entire data resource sharing platform for college students' IPE. The overall framework of the data sharing platform is shown in Figure 2 above.

The foundation layer is the "base" of the data resource sharing platform for college students in IPE field, and it is the foundation of the platform, which determines the running speed, running mode, and user experience of the whole sharing platform. The foundation layer includes the hardware facilities and software systems of the entire shared platform. According to the requirements of the construction of university students' IPE data resource sharing platform, it provides storage services supporting various data forms and computing services to the middle layer and the top layer, so as to better serve the government, schools, and users.

The data collected by the IPE data resource sharing platform for college students has a wide range of sources and various forms. Therefore, strong technical support is needed from the data collection to the final presentation and sharing. Collect some dynamic behavior data of students and teachers in the whole process of educational activities, such as classroom performance, interaction, and excellent course videos, and extend it to related university precision instruments and equipment resources, government resources, social hotspot information, network hotspots, etc. Through data mining and analysis technology, we can infer users' behaviors, habits, age levels, and other related information, so as to provide users with better, smarter, and more suitable recommendations and related search links on the platform.

The top layer of university students' IPE data resource sharing platform is mainly to connect with users, let them use it, search, and download the information they need from the platform or conduct online learning and other education-related activities. This layer can also be called "user service layer." Open educational big data resources to the whole society, and users can browse and query educational big data resources online through registration and real-name authentication, and provide the service of downloading resources at the same time. The exhibition of educational achievements, online evaluation of educational quality, and data analysis and prediction services provide services for schools and government agencies to formulate regular systems and policies.

The platform should optimize and integrate these resources, deploy all kinds of resources, and strengthen IPE awareness. Strengthen cooperation, exchange experience, support distance learning, and establish information contact platform. Strengthen the communication between home, school and society, constantly optimize the environment, create a good atmosphere, and realize the benign interaction among them. With the help of new Internet technology, educators can innovate communication channels, change educational methods, realize the benign interaction between teachers and students, and improve the effectiveness of IPE work for college students. The database architecture of the data sharing platform is shown in Figure 3 below.

The platform data resources are supported by each node as the data source, and the resource metadata for shared services is extracted from the resource data layer of each platform, which is exchanged to the municipal platform according to the unified metadata exchange standard. The municipal platform carries out the basic management of multisource metadata and forms a classified extended metadata database according to each kind of resources. On this basis, the unified service is published, which constitutes the metadata content for unified integrated services.

High-quality digital education resources enter the standardized sharing platform after passing the safety

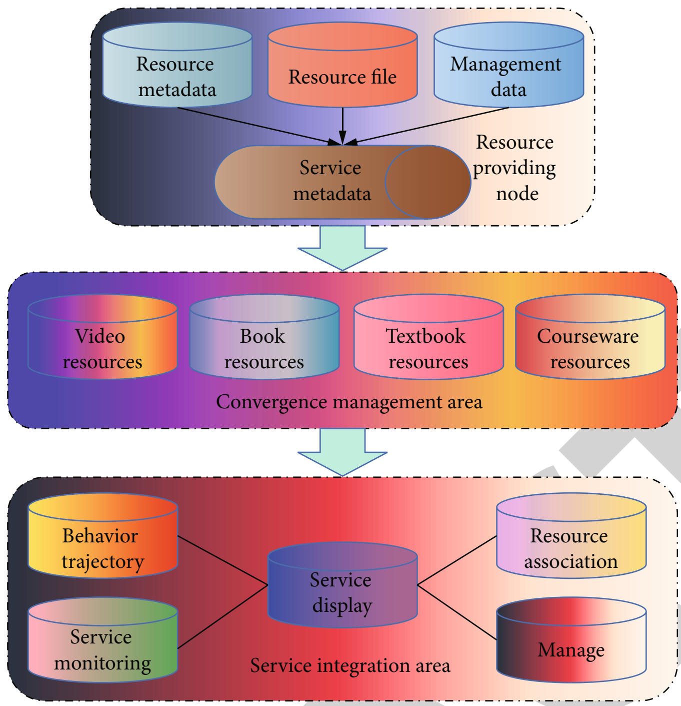

Figure 3: Database architecture.

Table 1: Experimental results on the data.

Model	F1 (%)	Accuracy (%)
Ref. [15]	89.36	91.42
Ref. [17]	93.24	92.28
Ref. [20]	95.57	96.68
Our	98.96	97.14

monitoring mechanism and quality audit mechanism. On this platform, all digital education resources are described and classified according to a unified standard, which not only helps users to search, obtain, and apply but also provides support for data sharing and interoperability among different resource management systems. In addition, it is also possible to adjust the allocation ratio of funds according to the actual situation between and within various regions, appropriately increase the investment in weak schools and remote areas, and encourage schools and regions with advantages to actively broaden funding channels.

Constructing a multilevel three-dimensional information resource system of university students' IPE data resource sharing platform can fully integrate all information resources to form scale effect and aggregation effect and enhance the attraction and influence of the platform. After data collection, processing, archiving, distribution, and exploration, the research conclusion is finally drawn through analysis. In addition, the transformation of the original data may support the research of new topics and generate new values.

4. Result Analysis

In order to improve the comparability of data and the value of mutual multiple use, it is necessary to standardize the background information data of interviewees in the data resource sharing platform of university students' IPE field. Although there is no condition for the comparison group experiment, the correlation between several variables can be studied through investigation. If the correlation between the two variables is high, it indicates that there is some correlation between the two variables. The correlation between variables can be reflected in a survey, or variables can be selected in different research projects for comparative research. In order to facilitate comparative research among different surveys, it is necessary to standardize the background information data of respondents.

In this paper, two published data are used as experimental data for model comparison. This paper compares the model proposed in this paper with some joint models and independent models. The proposed model uses 128 units of CNN to form encoder and decoder. The dimension of the vector is 128, and it is initialized randomly. At the same time, dropout layer is added to the model to help regularize the network, and its loss rate is set to 0.1.

The experimental results on the data set are shown in Table 1 and Figure 4. Through the test: t-test, the proposed model is statistically improved compared with the baseline model (10 evaluations, the significance level is 0.05).

It can be seen that the proposed model can achieve good results in both intention recognition and slot value extraction tasks. At the same time, the proposed model achieves the best results in the task of slot value extraction, and its performance is improved by 1.24% compared with the

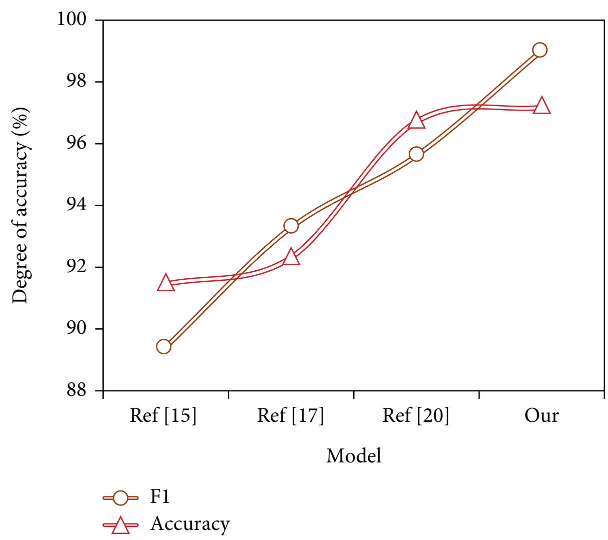

Figure 4: F1 and accuracy curve.

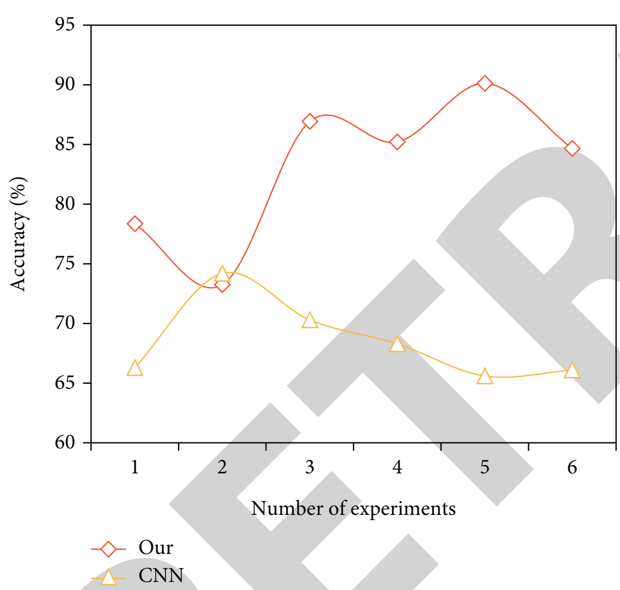

Figure 5: Accuracy of two methods.

baseline model, which proves that intention information can improve the precision of slot value prediction. Among all the experimental models, the model with variable length proposed in this paper has achieved the first and third results in slot filling and intention recognition tasks, respectively.

In order to verify the rationality of this model, the classification performance of CNN and using this model on data sets is compared from two aspects: accuracy and convergence speed. The changes of accuracy and iteration times of the two methods are shown in Figures 5 and 6, respectively.

As can be seen from Figure 5, the model in this paper using the initialization strategy has achieved good classification results on samples, and the accuracy rate is obviously better than that of CNN when the convolution kernel is randomly

Figure 6: Iteration times of two methods.

initialized. Each sample is independently trained for 6 times. From the results, it can be seen that the training results of each time are not much different, the trend tends to be stable, and the average results are good. The training results of CNN are quite different each time, and the accuracy is sometimes high and sometimes low. When the accuracy is high, it approaches the results of this model, and when the accuracy is low, the error even reaches more than 10%.

From the change of iteration times in Figure 6, we can get similar results to Figure 5. The model in this paper can converge quickly when the iteration times are small, and the results of many experiments are stable. CNN needs more iterations to converge, and the results of many experiments are quite different; so, it has high instability. However, because this model takes a certain time to train RBM, there is little difference between the actual training time of the two models, and this model is superior to CNN only in the stability of convergence results.

Experiments show that using RBM to initialize CNN's convolution kernel can effectively improve the classification accuracy and stability of shared data. To prove the advantages and disadvantages of this model and other classical models, different models are selected for experimental comparison. Table 2 and Figure 7 list the classification accuracy of four methods on six samples of data set.

It can be seen that this model achieves the best classification effect on six samples, with an average classification accuracy of 88.81%. This model is obviously superior to the comparison model, because voxels in the local area of shared data have strong correlation, and there are certain connections in nonadjacent areas. Compared with CNN, the other three models cannot better mine this local characteristic in shared data.

The above results show that this model not only has a strong ability to process data with high dimensions and complex features but also has a stronger ability to extract local features, thus effectively improving the classification accuracy of shared data.

Table 2: Classification accuracy.

Sample	Our	CNN	SAE	RBM
S_1	92.33%	87.21%	83.65%	80.24%
S_2	77.14%	70.26%	66.28%	82.32%
S_3	95.62%	93.32%	94.24%	90.21%
S_4	79.83%	80.21%	73.69%	74.12%
S_5	96.68%	91.22%	88.93%	91.33%
S_6	91.24%	84.63%	78.25%	80.24%
Average	88.81%	84.48%	80.84%	83.08%

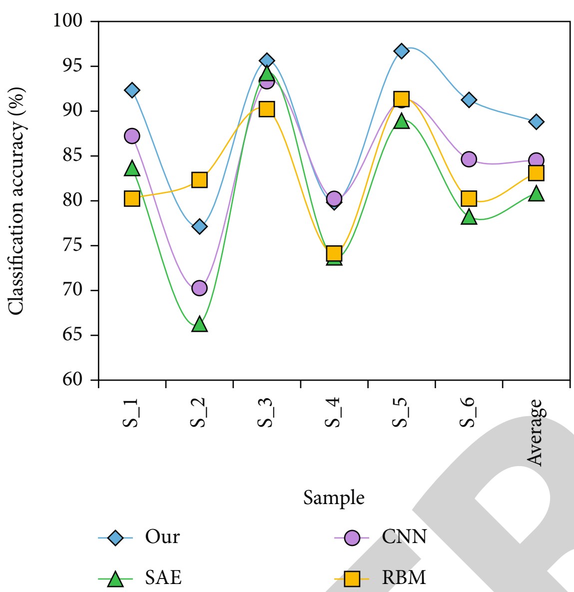

Figure 7: Classification accuracy curves of four methods.

The data generation is formed by the holder of shared data publishing in the data sharing center. The holder first sets the data sequence according to the location of the data sharing center and then determines the real-time location. If the real-time location is larger than the reserved data location, the algorithm data publishing is generated, and if the real-time location is smaller than the reserved data location, the algorithm data publishing is generated. It is necessary to monitor the importance of comprehensive shared data and use the comprehensive data importance algorithm to prevent the matching error of important data from causing the matching algorithm to fail to run normally. Compare the accuracy of dynamic incremental data mining, and the results are shown in Figure 8.

As can be seen from Figure 6, the data mining accuracy of the CNN method is lower than that of this method and RBM. At the beginning of the experiment, the difference between this method and SAE method is small, but with the increase of iteration times, the mining accuracy advantage of the proposed method is gradually obvious, and its stability is strong. According to the stability comparison results in the figure, the stability of the traditional algorithm becomes more and more unstable with the extension of the operation time, and the fluctuation value of the operation is large; so, the stability of the algorithm in this paper keeps a stable low value.

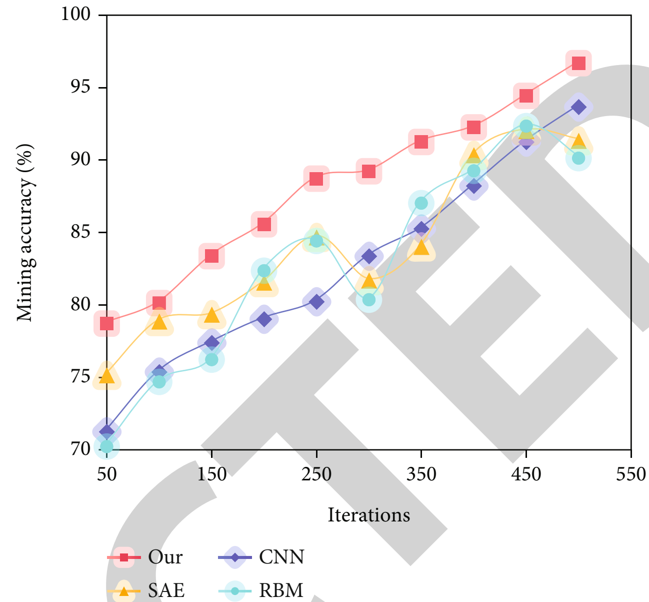

Figure 8: Accuracy comparison of incremental mining.

Traditional data fusion methods are usually used to extract features from data by experts or manual annotation; so, they are suitable for processing small-scale data sets. The data fusion method based on DL has self-learning ability and nonlinear characteristics and can automatically mine the relevant characteristics of data; so, it has advantages in fusing massive data. However, the data fusion method based on DL is complicated, and the training model is time-consuming and requires high computing power of computing equipment.

The basic exchange system development project aims to realize the basic service bus management and data exchange management of the platform. The main construction contents include the following: an enterprise service bus that meets a series of features and functions such as service registration, service routing, service scheduling, priority control, and data transmission; unstructured data exchange; and service interface exchange and completes the data integration of heterogeneous application systems across various resource platforms. Convert heterogeneous metadata of different platforms into a unified xml format and exchange it to the shared service platform. Considering the long-term effectiveness and periodicity of data exchange, as well as the consideration of data magnitude, the configured conversion process can be divided into full amount and incremental amount. When the data scale is large or initially synchronized, the full amount synchronization is adopted, and when the data increment changes, the incremental process is adopted to obtain it.

On the resource sharing platform, various resource demand subjects, such as students, teachers, scientific research institutions, and the government, can provide their own corresponding new resources to the resource sharing platform. The main body of resource sharing actively participates, and many parties coordinate and integrate. A centralized resource management system for mass information processing integrates information digitization, information distributed storage, information management, knowledge management, data mining and analysis, and information crossmedia dissemination. At the same time, because of its unique encryption technology and traceability, it guarantees the data owner's ownership of the data, and the owner can decide who can share his data. In the process of the construction and development of university students' IPE data resource sharing platform, they can promote the construction of a new sharing platform, promote the wide sharing and dissemination of educational resources in the society, ensure the nonloss of educational resources, and improve the utilization rate of resources.

5. Conclusion

The arrival of the information age has brought a large number of digital resources and also opened a new situation for the construction of university IPE teaching resource platform. Based on the understanding and practice of core technologies such as DL, and referring to the relevant design ideas and theoretical practices of a large number of literatures at home and abroad, this paper completes the construction of data resource sharing platform for college students in IPE field. Through the introduction of the platform's functional application, the operation mechanism, and optimization strategy, the platform can run better, and the resource sharing rate and utilization rate can be improved. DL technology is integrated with the construction of university students' IPE data resource sharing platform, which promotes the application of DL technology in the field of educational big data. The DL method can effectively analyze the potential laws of dynamic data, improve the accuracy of mining, and use rough set theory to make this method have higher mining efficiency when the database changes. Through the experimental comparison, it can be clearly seen that the matching algorithm in this paper has a better calculation effect on comprehensive shared data.

Data Availability

The figures and tables used to support the findings of this study are included in the article.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

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