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Retraction

Retracted: Resource Sharing Algorithm of Ideological and Political Course Based on Random Forest

Mathematical Problems in Engineering

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This article has been retracted by Hindawi following an investigation undertaken by the publisher [1].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] X. Lei, "Resource Sharing Algorithm of Ideological and Political Course Based on Random Forest," *Mathematical Problems in Engineering*, vol. 2022, Article ID 8765166, 8 pages, 2022.

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Research Article

Resource Sharing Algorithm of Ideological and Political Course Based on Random Forest

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Three aspects of the system's online resource distribution and application are built around subject, object, and intermediary resources. The invention relates to a method for allocating resources based on the random forest algorithm. The resource allocation process entails the following steps: constructing a mathematical model of the resource allocation process, defining a mathematical model of the resource allocation process for the target object, and designing the cost function. The training data set for random forest is constructed using the classification concept. It is based on the mathematical model of resource allocation and cost function. Generation of random forests and prediction of target objects are based on historical data. Resource allocation steps are based on predictive structure. The invention provides a resource allocation method that satisfies task completion degree constraints and includes a resource allocation algorithm based on random forest with a high probability of finding an optimal solution. It also addresses the issue that intelligent optimization algorithms such as genetic algorithms are prone to fall into local optimum.

1. Introduction

The current campus network construction continues to develop, and teaching online resources are gradually promoted, thanks to the development and improvement of computer network technology in the current field of education. The importance of online resources in colleges and universities has been recognized by school leaders. The application of stand-alone courseware to the application of online teaching resources, realizing the network, has evolved the education and development of ideological and political courses.

The optical fiber network, which often has the advantages of big brands and high performance, is now the backbone of the campus network in colleges and universities, supporting the operation of the entire network. The network's speed can be extremely high, and the amount of space available for storing online resources can be enormous. At the same time, high-speed data transmission is possible thanks to interconnections with telecom, Unicom, and other networks. There are no bottlenecks in the data transmission process, which is a key feature of the campus network. The highly centralized management mode in the campus network allows for real-time network operation, making the entire campus network manageable and changeable, ensuring a smooth and extensible campus network in colleges and universities.

Simultaneously, the campus network building in colleges and universities focuses on teaching online resources and multimedia, network computer optimization, and other factors, resulting in the creation of an ideological and political network online resource exchange and sharing platform. However, many colleges and universities do not pay enough attention to the planning and construction of online campus network resources, and the application of online ideological and political education resources is not sufficiently scientific and meticulous, resulting in completely personalized online ideological and political teaching resources, and will not be able to share in a region, the ideological and political construction update in a timely manner. The usefulness of online teaching tools for ideological and political courses resides in the reality of sharing and recognizing its own worth, and ultimately in the realization of students' collective delight in and out of school. The development of online teaching tools for ideological and political courses, on the other hand, is in a precarious position. On one hand, those who create online teaching resources lack a thorough grasp of the content of ideological and political courses at colleges and universities. On the other hand, instructors continue to have misconceptions about the sharing of their own online teaching resources. How may ideological and political educators' zeal be boosted? How can the copyright of teaching Internet resources be protected? How to solve the practical problems of colleges and universities? This is an issue that practitioners of ideological and political classroom programs need to consider.

For colleges and universities teaching between insufficient emphasis and online resources, many colleges tend to be a separate individual, lack effective cooperation and communication between each other, and are not able to realize the teaching online resources as well as the direction of development; emphatically in the colleges and universities online resources data transmission and normative aspects of major defects exist. Due to the regionalism, the online resources in the school are disordered and the teaching quality is uneven and lack of coordination. A bad idea of using online teaching resources widely exists in universities, which is the idea of "online teaching resources monopoly." This kind of comparison makes the sharing of teaching online resources encounter great obstacles. There is no scientific and effective mechanism for online resource sharing to ensure the efficiency of the use of ideological and political network online resources, but it also makes the problems of repeated construction and low output widely exist in universities.

On the other hand, the construction of online resources is inseparable from the development of computing technology, and the construction of online resources in ideological and political courses is inseparable from the development of computer technology. However, many colleges and universities in the classroom network teaching construction are relatively lacking, the production means are relatively backward, and the use of content is just textbooks directly transferred to the network sharing platform. In the daily work, ideological and political classroom educators deal with the heavy teaching tasks to make the corresponding online resource construction. So, it also has a better teaching quality, but sometimes it is difficult to build ideological and political classroom online resources in the case of the lack of technical level and university personnel.

The construction of online resource construction must realize the coordination of subjective and objective, rich content, and sharing platform. Among them, the construction of online teaching resource base is mainly based on the online resource of subject, object, and intermediary. These three kinds of online resources depend on and promote each other and together constitute the online resource base.

As far as online human resource itself is concerned, online human resource is one of the important online resources that need to be deployed. The builder of the online resource library is the online resource of human resources, which includes the online resources of students and teachers. First of all, teachers of online resources are the main driving force of online resources. Online resources for teachers mainly contain knowledge reserve, experience, consciousness and self-concept of education, teaching and practice, and teachers' connections. Such online resources play an important role in cultivating students' learning ability and knowledge level. Secondly, a mechanism in line with teachers' online resource allocation should be established to enhance teachers' enthusiasm and initiative.

The construction of online resources needs to practice virtual content system. The practice subject object is an online resource system. Actual performance is mainly a variety of online resource systems. It contains the ideological and political classroom teaching and practice objectives of colleges and universities, practicing the practical social acquisition of network space and reality. Through the joint work of teachers and outstanding students in the school, the creation, combination, editing, and practice of online teaching resources constitute a relaxed online network resources.

Explicit online resources come first. Through the network space and open social atmosphere, online ideological and political resources are screened, scaled, and integrated, and the form is integrated into sound, image, and text. Explicit online resources are the main components of online resources. Secondly, hidden online resources, network online resources, and hidden online resources mainly include the online resources of the network itself and the value impact of the network.

In the process of evaluating and summarizing experience, online resources must be developed. The following are the components of an effective evaluation feedback system: (1) an explicit evaluation feedback system: public mailboxes, 163e-mail, and the QQ public network system are just few examples. The use of this timely evaluation and feedback system allows the most important online resources to summarize experience and supplement online resources in real time. (2) Feedback system for implicit evaluation: to achieve anonymity and practicality in evaluation and feedback, organizations such as the BBC, Weibo, and other real-time feedback network groups have used methods such as the BBC, Weibo, and other real-time feedback network groups. There is no psychological confrontation or pressure in the communication between teachers and students, and students have no constraints, so the opinions expressed by students can better reflect their true feelings.

Currently, the majority of academics are paying increasing attention to the equitable distribution of online resources in multipath networks, with the goal of maximizing utility by controlling network traffic and then controlling the flow of online resources. And, at the most basic level, it is focused on solving the online resource allocation model of the optimal solution of the relevant personnel and should be from the perspective of the Internet system, multipath network utility maximization model, and the relationship between the layers, exploring the online resource distribution around the service to the user as the center, to achieve assigned targets and realize economic sense.

2. Related Work

In the field of science and technology resource sharing in China, experts and scholars have made beneficial explorations in the sharing model, index system, service model, sharing platform, sharing mechanism, sharing laws and regulations, and so on. In terms of technical resources sharing model, qi paper [1] puts forward the technical resources sharing game model, discusses the enterprises and institutions of higher learning and scientific research institutes of science and technology resources sharing of equilibrium condition, and analyzes each shared interests among the subjects, to promote the sharing technology resource sharing between subjects put forward the corresponding countermeasures and suggestions. Qi et al. [2] constructed the "reputation game" model of science and technology resource sharing in Beijing-Tianjin-Hebei region by using the game model of homogeneous and heterogeneous innovative governments, and put forward countermeasures and suggestions for promoting science and technology resource sharing in the region from the perspectives of collaborative sharing mechanism, concept, and environment. Rakhra et al. [3] constructed a game model of government science and technology resource sharing in the Pearl River Delta based on the wisdom pig game theory in combination with the current situation of science and technology resource sharing in the Pearl River Delta.

Regarding resource sharing index system of science and technology, in Li et al. [4], based on the regional resources sharing platform of science and technology development and management of the actual need, formation mechanism and influence factors of the platform service performance, carding and analysis from the resources integration, operation management, and service effect three dimensions to build the evaluation index system give the connotation of performance evaluation index of platform services. It provides theoretical support for evaluating the performance of regional science and technology resource sharing platform service. Ding et al. [5] proposed an evaluation index system of S&T resource sharing service based on the contribution rate of science and technology, evaluated, measured, analyzed the effect of sharing service of agricultural science data sharing center, and put forward suggestions for improving S&T resource sharing service.

In terms of science and technology resource sharing service and sharing mode, Rong [6] studied and demonstrated that the quasi-public goods nature of science and technology resources made socialized public service mode an endogenous need of sharing, analyzed the status quo of domestic service mode, and designed relevant legal framework. Rong [7] constructed the basic framework of the public service system of scientific and technological resource sharing, including the supply content, mode, main body of supply and demand, and service operation mechanism, and put forward countermeasures and suggestions for the construction of public service system from the aspects of strategic guidance of sharing, organizational guarantee, platform construction, information service network, and so on. In terms of science and technology resource sharing platform, Cui [8] put forward the connotation of integration service of sharing platform and designed relevant process of integration service of sharing platform, providing method guidance and decision-making basis for strengthening scientific and standardized management of the platform and improving operation efficiency and service level of the platform.

In terms of sharing system and mechanism, Rui [9] analyzed and sorted out some problems existing in China's current science and technology resource management system and put forward suggestions on the reform of the sharing system and mechanism from aspects of macro-control, scientific research environment, and performance evaluation. Wang [10] explored the sharing mechanism of scientific and technological resources from the perspective of property rights reform and designed the sharing mechanism from the three dimensions of benefit distribution mechanism, using pricing mechanism and incentive mechanism, in terms of laws and regulations on the sharing of scientific and technological resources.

In other aspects, some researchers summarized the various stages of the development, combined with the problems existing in various provinces and cities, carried out feasibility analysis on the market-oriented operation, and proposed methods to promote the market-oriented operation of scientific and technological resources. Some researchers constructed a cloud architecture model sharing based on the characteristics of cloud computing and discussed the implementation path and strategies of the model. Some researchers summarized and analyzed the development of scientific and technological resource sharing [11–13].

Business process analysis is based on the current management mode, using the business flow chart as a tool, according to the actual processing steps of specific business, through the way of graphical expression of business processing logic. Business process model can be configured to meet the diverse needs of users' 5-business-process model, which is an important work of needs analysis. It is not only a tool for communication with users, but also it is the basis for system design and ideological and political education resources personalized accurate recommendation system including students, teachers, and administrators to three types of users. The three types of users interact with the system, respectively. This paper only presents the business process model of the interaction between student users and administrator users and the system, as shown in Figure 1. The business process of teacher user interaction with the system can be shown in Figure 1.

The following is a brief description of the system business process model shown in Figure 1: Students select resources into the navigation page, select the corresponding function after, and navigate to the corresponding page that shows recommended resources. Users can browse, learn resources, and also query or upload resources and resources

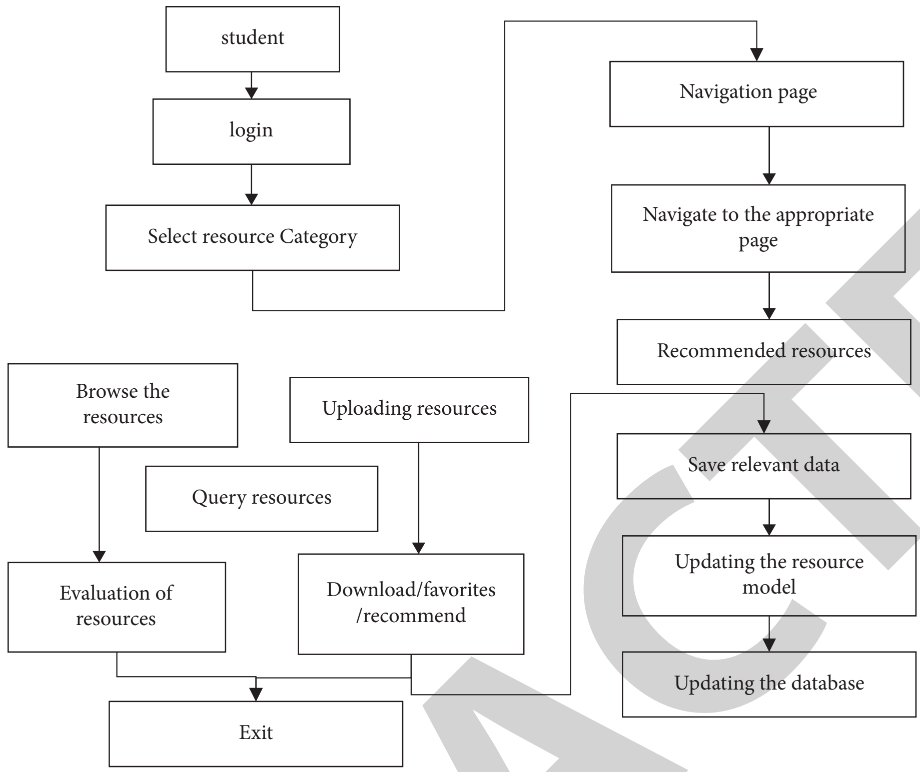

Figure 1: System business process model.

evaluation. After browsing, resources can be downloaded, the collection or recommended resources. System saves the related data and updates the database. Administrators log in to the system and perform management tasks such as updating the model library, knowledge base, and resource library, in addition to editing and modifying resources and querying resource usage [14].

3. Random Forest Decision Tree Construction

The decision tree group is based on the above ideas, but each tree's algorithm is weak. So, it can be thought of as a weak learning method. The power of random forest, on the other hand, lies in the fact that its results are derived from the common outcomes of all decision trees. The power of combinatorial algorithms lies in their ability to achieve strong learning effects through the fusion of such algorithms. Some researchers use a vivid metaphor to describe the random forest algorithm's ideas: we build a decision tree that is completely divided according to different characteristics, and then, each tree, in fact, is proficient in selecting narrow domain experts. Now that we have a large number of experts in the field of proficient in bad, the algorithm will greatly improve the model's accuracy [15]. A new problem, such as new input data, can be viewed from a variety of angles, with the end result being voted on by a panel of experts. The number of trees in a random forest is a parameter that needs to be artificially controlled. Cross-experimenting with a large value and then gradually reduction to a stable prediction accuracy are generally recommended. The random forest model is obtained using the above ideas, followed by the prediction process, which is the decision-making process of each expert. The random forest prediction process works on the following principle:

(1) According to the min value of the current node, compare its size with the threshold value. Those smaller than the threshold value enter the left node, and those larger than the corresponding value enter the right node.
(2) Enter the data into each tree, repeat (1) and get all the predicted values. If it is a regression problem, the output is the average of the outputs of all trees. For the discrete variable problem, which divides a sample into a certain category, the Gini value is generally used as the evaluation criterion in the decision tree of random forest. It is defined as

$$\text{Gini} = 1 - \sum P(i)^2, \tag{1}$$

where $P(i)$ is obtained according to the proportion of sample classification, that is, the proportion of I classification in the total sample. The optimal index is found through the following evaluation criteria:

$$B = \text{argmax}\left(\text{Gini} - \text{Gini}_{\text{left}} - \text{Gini}_{\text{right}}\right). \tag{2}$$

That is, in order to reflect the best features and thresholds, we only need to calculate the Gini index in each node and subtract the Gini index of the child nodes respectively to get the characteristics of the maximum value. For the optimal feature and threshold of regression problem, variance is directly used, which can be expressed as follows:

$$B = \operatorname{argmax}\left(\mathrm{Var} - \mathrm{Var}_{\mathrm{left}} - \mathrm{Var}_{\mathrm{right}}\right). \tag{3}$$

That is, the variance of the current node training set minus the variance of the left child node and the variance of the right child node is the maximum [16].

The above can be expressed by the following formula:

$$F(x\colon P) = F\left(x\colon \{\beta_m, \alpha_m\}_1^M\right) = \sum_{m=1}^{M} \beta_m h(x\colon \alpha_m). \tag{4}$$

Assuming that the current m-1 model has been obtained, when we want to obtain the MTH model, we first calculate the gradient of the previous M-1 model. So if you get the fastest descending direction, then the bottom definition is the fastest descending direction:

$$g_m = \{g_{jm}\} = \left\{\left[\frac{\partial\phi(P)}{\partial p_j}\right]_{p=p_m-1}\right\}. \tag{5}$$

It is the distance down in the gradient direction, where $P_M = p_m - g_m$, and the optimal mathematical expression of P is finally obtained through optimization:

$$p_m = \operatorname{argmin}\phi\left(P_{m-1} - \beta_m g_m\right). \tag{6}$$

By introducing the additivity of parameter P above, the gradient descent method of the likelihood function of parameter P is obtained. So, what we are going to prove is that by extending the additivity of the parameter P to the function space, we can get the following function:

$$F_{m-1}(X) = \sum_{i=0}^{m-1} f_i(x), \tag{7}$$

where $f_i(x)$ represents the error value of the function, and the following is the gradient descent direction $g(X)$ of the function $F(X)$:

$$g_m = E_y\left\{\left[\frac{\partial L(y, F(x))}{F(x)}|X\right]_{F(x)=F_{m-1}(x)}\right\}. \tag{8}$$

Finally, the definition expression of our MTH model is as follows:

$$\{\beta_m, \alpha_m\}_1^M = \operatorname{argmin}\sum_{i=1}^{M} L\left(y_i, \sum_{m=1}^{M}\beta_m h(x\colon \alpha_m)\right). \tag{9}$$

The optimal parameter $\{a,b\}$ is $\{a,b\}$ that minimizes the loss function. If $(B_M, a_m)M$ is used to represent the two m-dimension parameters, then

$$\beta_m, \alpha_m = \operatorname{argmin}\sum_{i=1}^{N} L\left(y_i, F_{m-1}(x_i), \beta_m h(x\colon \alpha_m)\right). \tag{10}$$

The gradient descent mode can be expressed as follows, that is, the parameter $\{b_m, A_M\}$ of model $F_M(x)$ we will get, which can make the direction of F_M the fastest decreasing direction of the loss function of model $F_{M-1}(x)$ obtained previously:

$$\alpha_m = \operatorname{argmin}\sum_{i=1}^{N}\left(-g_m(x_i) - \beta h(x\colon \alpha)\right)^2. \tag{11}$$

For each data point X_i, $ag_m(X_i)$ can be obtained, and finally the complete gradient descent direction can be obtained:

$$\beta_m = \operatorname{argmin}\sum_{i=1}^{N} L\left(y_i, F_{m-1}(x_i), \beta h(x\colon \alpha_m)\right). \tag{12}$$

Finally, the above results are expressed in the model, and what reflects is that the result value obtained in the M model is the additive result of the loss in the $M-1$ model:

$$F_m(x) = F_{m-1}(x) + \beta h(x_i\colon \alpha_m). \tag{13}$$

4. Experimental Results and Analysis

Test the random forest model and evaluate its accuracy. For the input test samples, each decision tree outputs a predictive label, and then the random forest outputs the predictive label by voting. In order to assess the performance of random forest algorithm, it has 30 kinds of unmanned aerial vehicle system resources and 10 types of unmanned aerial vehicle flight using frequencies, using the KNN classification algorithm and decision tree algorithm for solving the mathematical model for optimization, and it compares them with random forests in algorithm performance. The training samples are 1000 and 200 when comparing the results as shown in Table 1. It can be seen that the random forest algorithm has the highest accuracy and has more obvious advantages in small data sets.

Random Forest Generation. The training set is randomly sampled for times with back, and sample sets containing B samples are obtained for B times. A decision tree model is obtained by training the sample set obtained by each sampling, and all decision trees constitute random forest together. The final learning curve of the random forest model is shown in Figure 2.

The learning curve of the resource allocation method based on random forest proposed in this paper is shown in Figure 2. Each decision tree generates a prediction label for the input test samples, which is generated by random forest voting. There are 30 different kinds of system resources and ten different kinds of frequency bands. The figure depicts the relationship between the number of training samples and the accuracy of the algorithm's generation and allocation scheme.

The 4 columns in Table 2 are resource number, request probability, expected optimized sharing probability, and actual sharing probability, respectively. The result is the result of randomly selecting any node. In Table 2 X_i and the expected probability P can be seen. It is directly proportional, which is consistent with the conclusion of Table 2 and it also indicates that the supply and demand of resources are directly proportional. In most suitable conditions after 30-time units, it will converge at a stable equilibrium point.

Table 1: Comparison results.

		KNN	The decision tree	Random forests
Data1	ACC (%)	93.57	97.62	98.65
	Time (s)	0.002	0.004	0.178
Data2	ACC (%)	71.39	83.61	87.44
	Time (s)	0.001	0.002	0.176

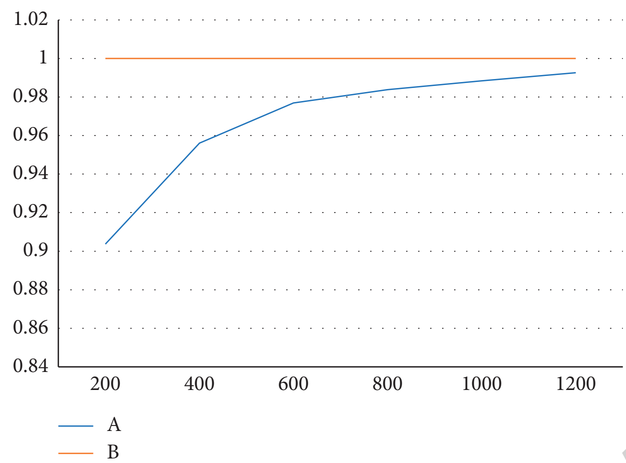

Figure 2: Random forest learning curve.

In order to analyze the actual performance of the resource allocation algorithm designed in this paper, an experimental test environment is constructed, and random computing tasks are generated through software simulation. Random tasks generated in the testing process are assumed to have no data in correlation with each other, and each task can be fully loaded by resources in the FPGA. That is, there is no unloadable task. The arrival time of all tasks is also randomly set. The FPGA resource allocation algorithm designed in this paper is tested by simulating the process of task generation with software. Test of FPGA resource utilization and task in the process of waiting delay two indicators to be measured, to test the overall performance of the resource allocation algorithm designed in this paper. In order to be able to test the overall performance of the designed algorithms a comparative analysis is performed. This article selects the traditional FF algorithm comparing test and analysis. Test results are as shown in Figures 3 and 4.

Figure 3 depicts the resource utilization test results. As can be seen from the diagram, the resource allocation algorithm is designed in this paper for the software simulation randomly generated task, and it can ensure the FPGA resource utilization between 40% and 50%, which is a relatively ideal resource utilization ratio, and is conducive to the FPGA each functional module of the performance, most of the time. The resource utilization of the FPGA algorithm is slightly higher than that of the traditional FF algorithm.

Figure 4 shows the software simulation of the randomly generated task waiting queue delay test results, showing that, in the process of resource allocation from the point of test results, the randomly generated task most waiting delay is within 0.3 ms, indicating that the software simulation of the

Table 2: Information sharing in a heterogeneous Argus environment.

i	q_i	p_t	x_i	i	q_i	p_i	xi
1	0.01	0.034	0.174	6	0.1	0.112	0.556
2	0.02	0.048	0.244	7	0.1	0.111	0.555
3	0.02	0.048	0.244	8	0.2	0.157	0.785
4	0.05	0.079	0.391	9	0.2	0.157	0.785
5	0.05	0.079	0.391	10	0.25	0.175	0.875

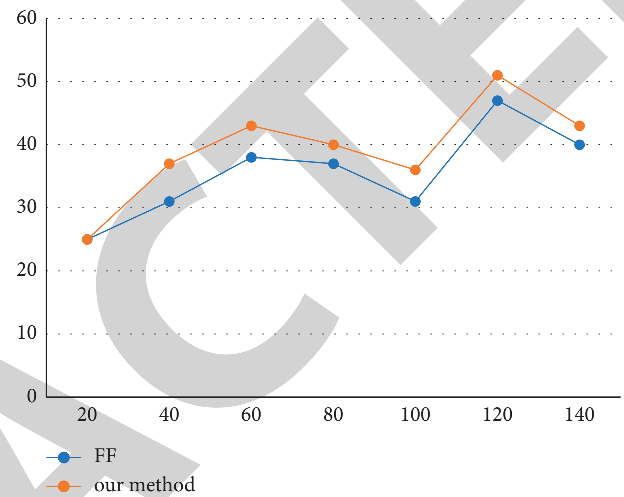

Figure 3: Test resource utilization in FPGA at different times.

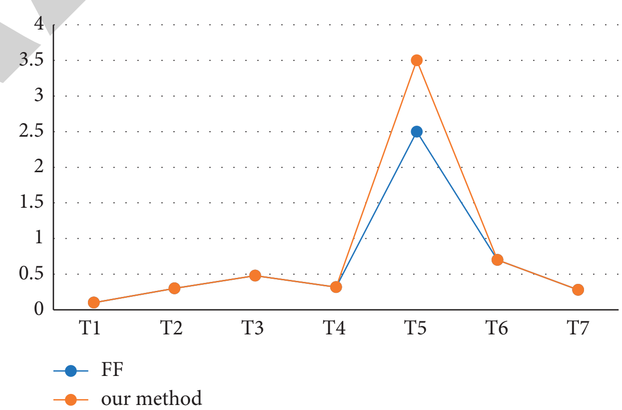

Figure 4: Testing the waiting time of different tasks in FPGA.

randomly generated task is able to get the resource allocation in time most of the time, and task does not have extra time. However, the waiting delay of a task at one time reaches 2.6 ms, indicating that the resource allocation algorithm is unable to allocate the task in time at this time, and the task must wait until other tasks that are currently running release the resources. Furthermore, the resource space available for the current task is finally obtained by combining the resources of the tasks currently running in the FPGA, resulting in a lengthy wait time. The average waiting time of the resource allocation algorithm designed in this paper is calculated to be 0.287 ms using simulation software to generate 1000 random tasks, while the average waiting time of the comparison test using the FF algorithm is 0.312 ms.

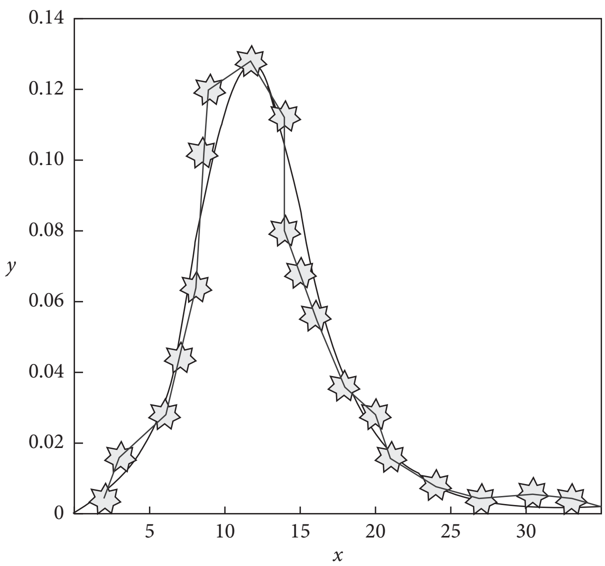

Figure 5: Poisson and normal distribution curves of $\lambda = 10$.

Using the same 1000 random tasks, the FF algorithm's average waiting delay is 0.292 ms, which is 6.5 percent less than the FF algorithm's average waiting delay. It also demonstrates that the resource allocation strategy proposed in this paper performs better in terms of reducing the average task wait time.

Based on the simulation test results of resource utilization and task waiting delay, the FPGA reconfigurable design resource allocation algorithm designed in this paper has high implementation and can also exert the resource utilization in FPGA to a large extent, and its overall performance is better than the traditional FF algorithm. In particular, the average task waiting time of the algorithm is 8% less than that of FF algorithm, so the algorithm is more suitable for reconfigurable design applications that require more real-time performance.

When λ is equal to 10, the Poisson distribution curve is close to the normal distribution curve, as shown in Figure 5.

5. Conclusion

The ability to measure learning resource sharing ability is still in its early stages. This paper establishes an initial index system for measuring enterprises' ability to share science and technology resources through a questionnaire survey and literature review, as well as actual projects, and implements the index system's optimization screen using a random forest algorithm. Based on a system of indexes, the measurement model of enterprise science and technology resource sharing ability is built using FOA and GRNN. Finally, some recommendations are made for promoting enterprise science and technology resource sharing. Based on the basic condition from the shared sharing, sharing process, mechanism, and policy factors, there are four dimensions of preliminary ability to design the enterprise technical resources sharing system, the experimental data obtained through questionnaire investigation, and the index system of random forest algorithm optimization, contacting the actual project. Finally, the enterprise science and technology resource sharing ability measurement index system is created. Learning resource sharing measurement is a difficult and ever-changing task.

Data Availability

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

Conflicts of Interest

The author declares that he has no conflicts of interest.

Acknowledgments

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References

[1] C. D. Wang, Z. H. Deng, J. H. Lai, and P. S. Yu, "Serendipitous recommendation in e-commerce using innovator-based collaborative filtering[J]," *IEEE Transactions on Cybernetics*, vol. 49, no. 7, pp. 2678–2692, 2018.

[2] F. Qi, Y. Chang, K. Ramesh, and P. Hemalatha, "Online and offline teaching connection system of college ideological and political education based on deep learning[J]," *Progress in Artificial Intelligence*, vol. 5, pp. 1–12, 2021.

[3] M. Rakhra, P. Soniya, D. Tanwar, and N. Verma, "Crop price prediction using random forest and decision tree regression:- A review[J]," *Materials Today Proceedings*, vol. 2, 2021.

[4] X. Li, J. Liu, D. Liu et al., "Measurement and analysis of regional agricultural water and soil resource composite system harmony with an improved random forest model based on a dragonfly algorithm," *Journal of Cleaner Production*, vol. 305, Article ID 127217, 2021.

[5] J. Ding, G. Zhao, J. Lu, and J. You, "Intelligent algorithm-based online aided learning system for ideological and political education in computer major courses," in *Proceedings of the 2021 3rd International Conference on Artificial Intelligence and Advanced Manufacture*, pp. 2690–2696, Manchester UK, October 2021.

[6] L. Rong, "Design of ideological and political multimedia network teaching resources integration system based on wireless network," *Scientific Programming*, vol. 2021, Article ID 4293771, 15 pages, 2021.

[7] J. Rong, "Application of smart ideological course resource sharing system based on knowledge management and data pattern mining," in *Proceedings of the 2021 2nd International Conference on Electronics and Sustainable Communication Systems*, pp. 1983–1986, Coimbatore, India, August 2021.
[8] L. Cui, "Research on the application of social network service in resource sharing of ideological and political education in colleges," in *Proceedings of the 2020 International Conference on Robots & Intelligent System*, pp. 210–213, Sanya, China, November 2020.
[9] J. Rui, "A model of resource scheduling of ideological and political education in colleges and universities based on cloud computing[C]," in *Proceedings of the International Conference on Big Data and Security*, pp. 452–460, Shenzhen, China, December 2021.
[10] W. X. A. Wang, "Classification method of network ideological and political resources using improved SVM algorithm," *Security and Communication Networks*, vol. 2021, Article ID 2133042, 10 pages, 2021.
[11] Y. Zhan and L. Chen, "Mobile cloud teaching system for ideological and political network courses based on P2P technology[C]," in *Proceedings of the International Conference on Advanced Hybrid Information Processing*, pp. 480–490, Yantai, China, October 2021.
[12] S. Wang, "Construction of mobile teaching platform for the ideological and political education course based on the multimedia technology[J]," *International Journal of Emerging Technologies in Learning*, vol. 12, no. 9, 2017.
[13] S. Nkomo and J. M. Hoobler, "A historical perspective on diversity ideologies in the United States: reflections on human resource management research and practice," *Human Resource Management Review*, vol. 24, no. 3, pp. 245–257, 2014.
[14] S. YiFei, "Design of network-assisted teaching of ideological and political courses for college students based on android system[J]," *Wireless Communications and Mobile Computing*, vol. 2022, Article ID 8701947, 10 pages, 2022.
[15] J. Wang and S. Hu, "Research on the construction of intelligent media ideological and political learning platform based on artificial intelligence technology[J]," *Journal of Mathematics*, vol. 2022, Article ID 6511962, 11 pages, 2022.
[16] R. Wan, "Network interactive platform ideological and political education based on internet technology," in *Proceedings of the 2016 International Conference on Economy, Management and Education Technology*, pp. 49–54, Chongqing, China, August 2016.