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Research Article

Construction of Mental Health Education Model for College Students Based on Fine-Grained Parallel Computing Programming

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Psychological education is beneficial in maintaining the psychological health of college students, resolving psychological issues, and creating a harmonious campus and society. Mental health education for college students is a development-oriented basic education activity that contributes significantly to educational quality. To improve the accuracy of college students' mental health assessments, a model for mental health education for college students based on fine-grained parallel computing programming is proposed. This study uses a deep learning algorithm to subdivide the classification of an emotion dictionary, which can be classified by adding negative word lists, polarity conversion dictionaries, and online dictionaries, among other things, based on the theory of ecological instantaneous evaluation. It can be used for both multiclass and detailed emotion analysis. The model is more accurate in assessing the mental health of college students, according to the results of the study. The current emotional state of users can be identified, as well as signs of psychological risk, using emotional analysis of Weibo data, which will become a valuable resource for users seeking clinical psychological consultation in the future.

1. Introduction

From the relationship between college students' psychological quality and ideological and moral quality, good psychological quality is helpful to the formation and consolidation of good moral character. The psychological quality of college students is not perfect; their cognitive level is superficial and one-sided; their emotional will is defective; their personality development is clearly unbalanced; and their ideological and moral progress is hampered [1]. Paying attention to college students' mental health, creates and improves a relevant system for college students' psychological crisis intervention, tracks college students' mental health status in real time, and intervenes in college students who are experiencing a psychological crisis. College students, as social beings, must interact with others and rely on the support of their families, schools, and society [2, 3]. As a result, social support is crucial in college students' mental health education. Colleges and universities should prioritize assisting college students in developing a strong social support system as part of the process of strengthening and improving their mental health education.

At present, the traditional mental health assessment is mainly based on self-assessment questionnaires and structured interviews [4], and data and information are obtained from the assessed through interpersonal interaction, so as to assess the mental health status of the assessed. Although this traditional mental health evaluation method subjectively grasps the mental health status of the subjects from the scale point of view, there is a deviation of social expectation response in the implementation process and evaluation tasks [5, 6], and the evaluation is not good [7, 8]. Some researchers have begun to apply ecological transient assessment theory and social network data to mental health assessment tasks. Methods Data labels are marked by expert analysis or self-rating scale, data sets are formed, data features are extracted [9], and models are trained to realize the automatic assessment of mental health [10, 11]. The traditional mental

health education model is mainly based on teachers' "teaching". This model turns the training process into a simple "knowledge inheritance" process. Although students can master the system, they master solid psychological theories and concepts, but ignore this model. Let students learn independently. Even in some universities that use the Internet for mental health education, the form is too simple and the effect is not ideal.

With the advent of the "Internet plus" era, new technologies represented by artificial intelligence are gradually reshaping the education service system and opening the closed door of existing education [12, 13]. Interaction with network education is common, which opens up new possibilities for university mental health education development. Some universities are forming three- to four-level mental health education networks, such as school-based counseling centers for college students' mental health education, undergraduate and faculty mental health education workstations, and college student mutual aid associations. A model of mental health education for college students is proposed in this paper, which is based on fine-grained parallel computing programming and includes a concrete action plan and implementation scheme.

This paper studies and innovates the aforementioned problems from the following aspects:

(1) We propose an evaluation model of college students' mental health based on multimodal data fusion. Maximum rule is used to fuse and calculate multimodal data, and latent conditional random field algorithm is used to accurately evaluate the mental health level of individuals, taking into account the psychological changes of students in a specific period of time.

(2) Constructing psychological early warning model based on granular emotional dictionary. It uses the change of user's emotional state as the result display output, and makes early warning analysis of psychological crisis events by screening the signs of psychological crisis.

The paper is divided into five parts, and the organizational structure is as follows: Section 1 introduces the research background and current situation of college students' mental health education, and puts forward and summarizes the main tasks of this paper. Section 2 introduces the theoretical basis of college students' mental health education research. Section 3 introduces the realization of college students' mental health education model based on fine-grained parallel computing programming. Section 4 compares the performance of this model through experiments. Section 5 is the full-text summary.

2. Related Work

2.1. Research Status and Development Trend of College Students' Mental Health Education. Tao believes that mental health is a lasting psychological state in which a person can adapt well, have vitality and give full play to his physical and mental potential [14]. This is not only a relief from mental illness but also a condition for active prosperity. Eisenberg believes that mental health should include three aspects: normal mental state, harmonious interpersonal relationship, and complete social adaptation [15]. Wang et al. [16] proposed 10 standard levels of circadian rhythm consciousness, which represent psychological activity intensity, psychological activity tolerance, psychological rehabilitation ability, psychological self-control, self-confidence, and social interaction environment adaptability. This paper summarizes the contents of mental health education from many dimensions, such as emotion regulation and will exercise, in order to better carry out mental health education, promote mental health education, and lay a good foundation for the development of students' mental health from the perspective of comprehensiveness, balance, and development of college students' mental health education. By synthesizing the experience and lessons of predecessors, Mc and others summarized the contents such as holding lectures, strengthening public relations, conducting a health survey, improving the network education system, and actively advocating self-education. In the network age, the network education system and curriculum education methods are quite extensive [17]. Zhang examined the significance of mental health education for college students and discussed the specific working mechanism as a result [18]. According to Gong, mental health is the key connotation of life growth and plays a critical role in students' life growth, and the meaning of life also plays a significant role in maintaining and developing college students' mental health [19]. In the end, the meaning of life and mental health are complementary, which is critical for a thorough examination of college students' mental health education.

Many domestic researchers have conducted in-depth research on the effect of college students' mental health education, showing the characteristics of various methods and in-depth contents. Meng et al.'s research results show that 84% of college students like the teaching methods of mental health courses [20], while Yu et al.'s research results show that mental health education plays an important role in improving mental health, and college students and other educational methods have different effects [21]. The research results of Xin et al. show that mental health education is an effective way to improve the mental health of ethnic minority college students [22]. Li tracked the mental health of 449 students for 2 years and found that mental health education can significantly improve students' mental health. The most effective method of mental health education is psychological lecture [23].

The content, methods, and methods of personnel training, among which the specific methods of personnel training are the most prominent, will be the most important topics in future research on college students' mental health education. The following are the different types of mental health education training available in universities. We established a specialty devoted to cultivating college students' mental health education practitioners, improving the

systematization and standardization level of personnel training, and laying a solid foundation for the school's long-term development, starting with the school's own orientation and educational resources. Students should be given mental health education.

2.2. Research on Fine-Grained Parallel Computing Programming. Thread-level speculation technology on general-purpose processors can take advantage of granular parallelism, fine-grained operations correspond to threads on general-purpose processors, and task creation and allocation are managed by the runtime system as a thread pool. Xian has invested a lot of money in developing new general-purpose CPUs, which combine reconfigurable computing technology [24] with Intel X86 architecture and apply reconfigurable computing to information security chips and cryptographic chips.

Paji et al. put forward a new programming model, which allows programmers to declare applications as a group of tasks that can be executed in parallel, and describe the dependencies between tasks as Promise [25]. Then, the concurrent tasks are automatically mapped to reconfigurable computing resources in the airspace for execution. This technology effectively makes use of fine-grained pipeline-level parallelism in applications. Kashi et al. designed a pipeline processing unit and interconnection network architecture, which includes coarse-grained and fine-grained data paths, encapsulated these architectural features as an execution mechanism, and provided a compiler to allow programmers to write programs for reconfigurable processors. Use complex control flow and advanced programming tools to create high-performance applications [26]. Liu et al. designed a programmable register shared by several reconfigurable arrays and provided it to programmers as a programming method. When programmers write programs for reconfigurable processors, they can choose the stream processing mode or the private mode of the register according to the characteristics of the application.

3. Methodology

3.1. Construction of the Theoretical Model of Influencing Factors of College Students' Mental Health. Mental health education for college students is a systematic project of cooperation among schools, families, and society [9]. College students' mental health education aims to help educators to cultivate students' good psychological quality and improve their psychological quality using the theories and technologies of psychology, pedagogy, and even psychiatry according to the characteristics of college students' physiological and psychological development. Psychological function can bring students' full potential into play, and promote the overall improvement of students' comprehensive quality and individual harmonious development of students' education.

Human ideology is not static; it evolves in response to changes in social practice. The shift in ideological activities is particularly noticeable during periods of active social change. The ebb and flow of ideological activities among today's college students is also consistent with the era's characteristics. Young college students are under a lot of psychological and emotional pressure as a result of the transitional period's social and economic development, and they are prone to strong emotions like loneliness and anxiety. Preventive education is required in psychological education in order to improve college students' self-defense awareness and survival skills, improve their psychological quality, guard against potential risk factors, and improve the quality of education in order to provide scientific and effective psychological intervention for students with problems.

Various functional elements in the individual psychological adaptation system, including defense mechanism, are constantly influenced by the ecological and cultural background and family upbringing in the process of individual development and gradually form the psychological characteristic structure with specific cultural background and cultural value and the formation of culture-oriented laws and regulations.

Families also pass on the physiological characteristics formed in the process of biological adaptation to the next generation through genetic methods, forming specific physiological and functional characteristics of specific countries. In the process of psychological adaptation to environmental input and output, the defense mechanism system in turn affects the entropy state of the psychological adaptation system, and then affects the mental health state. Their specific relationship is shown in Figure 1.

Many studies have shown that the use of negative psychological defense mechanism will decrease with the increase of individual interpersonal emotion, interpersonal atmosphere, and positive sense of life goal value. The psychological living space of college students includes not only the past and present frame of reference, but also the future trend reference. Correspondingly, adaptation always occurs under different psychological space-time standards, and there are differences in the sources of psychological space-time, so information processing and behavior supervision can have different time schedules.

College students' mental health education is not limited to solving a few students' psychological problems, but also to comprehensively improve students' psychological quality and promote their healthy growth and success. Healthy personality and good personality will enable students to fully tap their psychological potential, continuously improve their competitiveness and strive to realize their self-worth.

3.2. Mental Health Assessment. Mental health is a harmonious state of individual psychological function balance, and the most common abnormal state of mental health is anxiety and depression [1]. College students are in the transition period between campus and society, under the pressure from all sides, and are prone to expose various psychological problems, among which depression is particularly prominent [20].

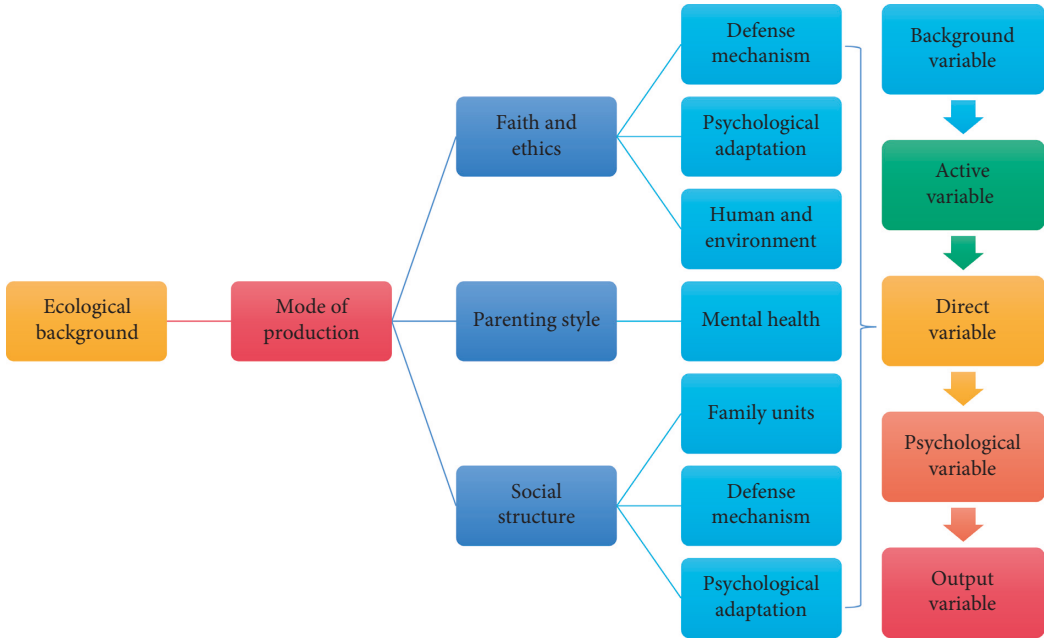

Figure 1: Formation mechanism of mental health status.

People require a sense of belonging, but a lack of belonging frequently leads to mental illness, and positive interpersonal relationships are critical in preventing psychological issues. Counselors and teachers make up the majority of the school administration. Their job is to look after every student, especially introverted students, by anticipating their needs, communicating care and love to them, and preventing emotional and relational support. Mastering all scientific and cultural knowledge requires a strong psychological foundation. Slow thinking, a lack of interest and motivation to learn, and a lack of understanding of basic learning methods, all of which contribute to low psychological quality, make it difficult to survive in society, let alone for college students involved in complex scientific creation or knowledge innovation activities.

Design the evaluation model of college students' mental health based on big data, in order to obtain ideal diagnosis results of college students' mental health. The cumulative value S_{ikj} of the comparison result between the characteristic word w_{ij} of text T_i and all characteristic words of text T_k is as follows:

$$S_{ikj} = \sum_{r=1}^{r=n_k} S_{ikjr}. \tag{1}$$

There are great differences among the feature words in the same text. There is at most one feature word identical to w_{ij} in the text T_k, so the value of S_{ikj} can only be 0 or 1. It can be obtained that there are the same number of feature words in the text T_i and the text T_k. The formula of S_{ik} is as follows:

$$S_{ik} = \sum_{j=1}^{j=n_i} S_{ikj}. \tag{2}$$

Text similarity is the ratio between the same number of feature words and the smaller T_i, T_k total number of feature words in different texts, and the similarity P_{ik} between text can be obtained as follows:

$$P_{ik} = \frac{S_{ik}}{\min(n_i, n_k)}. \tag{3}$$

The clustering index scales adaptively, sets a fixed threshold, classifies the texts whose similarity is higher than the threshold into one category, and uses the obtained clustering results as the evaluation index.

Traditional computing systems use an I/O bus to connect functional devices. It is easy to use and powerful, but data transmission between functional units must go through the slow I/O bus. With the increased communication frequency between general-purpose processors and various DSA in the era of DSA (domain-specific architecture), most computing chips turn to SoC to integrate general-purpose processor and DSA. When switching multiple sets of configuration information, the configuration controller and data path must satisfy the control dependency between infinite periods. As a result, the runtime data path frequently waits for the configuration controller to query the status before manually loading the configuration word, reducing the data path's utilization rate.

In order to solve the problem that the complex control flow, especially the variable-length loop, is difficult to be efficiently executed on the reconfigurable data path with limited computing resources, this chapter adds the active loading mechanism of data flow execution based on the dynamic scheduling of the classic dynamic reconfigurable processor. The active load execution mechanism simplifies the design of the compiler and effectively handles the complex control flow shown in Figure 2.

The compiler must determine the execution order of operators for dynamic scheduling and manual loading of reconfigurable processors, so the hardware architecture is represented by the compiler as a two-dimensional table, and

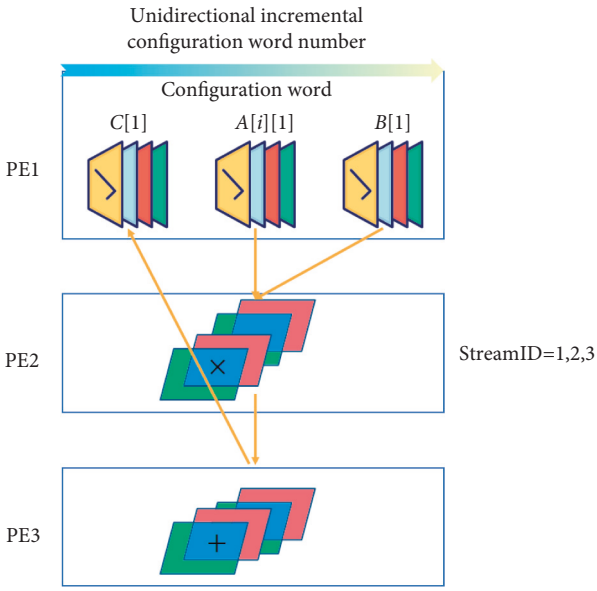

Figure 2: Models of hardware architecture considered by compilers under different execution mechanisms.

the compiler must determine the relative relationship of each operator. The compiler only needs to decide which processing element PE (Processing Element) to execute the operator on in reconfigurable processors with dynamic scheduling and dynamic loading. The processor's hardware architecture is spatially separated, so the compiler does not need to consider the operator. In today's technologically advanced society, college students frequently publish text, images, expressions, and other modal data on social media platforms at the same time to express their thoughts and feelings. Different types of modal data can be combined to provide more descriptive information. A more comprehensive and systematic analysis and evaluation of students' mental health can be achieved by integrating and understanding multimodal data.

The effective fusion of multimodal information is the key problem in multimodal emotion calculation [27]. It uses the maximum rule to calculate the emotional tendency values of text and images, and accurately judges the students' psychological state by fully considering emotional factors. When the specific calculation process is expressed by

$$P'_j = \max_i \left(P_{ij}(n)\right) \quad i = 1, 2,\ j = 1, 2,$$
$$P_j(n) = \frac{P'_j(n)}{\sum_j P'_j(n)}. \tag{4}$$

Among them, i and j are the number of classifiers and categories and $P_j(n)$ is the probability value of the j-type emotion category.

LSTM (long short-term memory) is mainly controlled by three gates that enter and exit the information flow in memory: input gate, forgetting gate, and output gate. The values of these gates can mainly help the network avoid erroneous gradient update.

In LSTM network, the forgetting gate f_t is mainly responsible for what information the network will discard, that is, the forgetting gate will determine how many cell states C_{t-1} of the last moment can be retained in the current cell state C_t, and the gate will read h_{t-1}, x_t and output a value between [0,1] to each C_{t-1}, where 1 means "completely retained" and 0 means "completely discarded".

The formula of the forgetting gate is as follows:

$$f_t = \sigma\left(W_f \cdot [h_{t-1}, x_t] + b_f\right). \tag{5}$$

Here, h_{t-1} represents the output of the LSTM network at the last moment, x_t represents the input of the LSTM network at the current moment, W_f represents the weight matrix of the forgetting gate, b_f represents the bias of the forgetting gate, and qw represents the connection operation.

Feature extraction is performed as convolution operation, and convolution operation in image domain can be regarded as a weighted summation process. Each element of convolution kernel is multiplied by each pixel in this region of the image, and the calculated sum of products is activated by the value of this position in the next feature map.

There is a relationship between the size of convolution kernel and the step size of sliding convolution kernel, and the specific relationship is expressed by formula 1.

$$O_{fmN} = \frac{I_{fmN} - K_{\text{size}}}{K_{\text{stride}}} + 1, \tag{6}$$

where O_{fmN} represents the size of the output feature map, I_{fmN} represents the size of the input feature map, K_{size} represents the size of the convolution kernel, and K_{stride} represents the step size of the convolution kernel sliding.

In this paper, a time-series analysis model based on implicit conditional random field algorithm is proposed, which can dig out the internal development rules of various mental health levels in a period of time and find out the relationship between emotional changes and mental health. The process of mental health assessment model is shown in Figure 3.

3.3. Early Warning Model of College Students' Mental Health. Owing to the complexity of emotion and the imperfection of research rules, the definition of emotion is not clear up to now. Owing to the universality and complexity of emotions, it is difficult for the computational model represented by hidden Markov model to simulate the change of emotional state. In this paper, emotional modeling is carried out from the perspective of text emotional analysis. Words expressing emotional state are digitized by polarity and intensity, and human virtual emotions are modeled and formalized by mathematical methods, which is convenient for emotional research and analysis.

Owing to the rapid evolution of network words, new network words that do not exist in the emotion dictionary may appear in the process of emotion analysis. Use so-PMI (sentiment orientation-point wise mutual information) method to calculate the semantic similarity between words, and then obtain the weight of new words from the network.

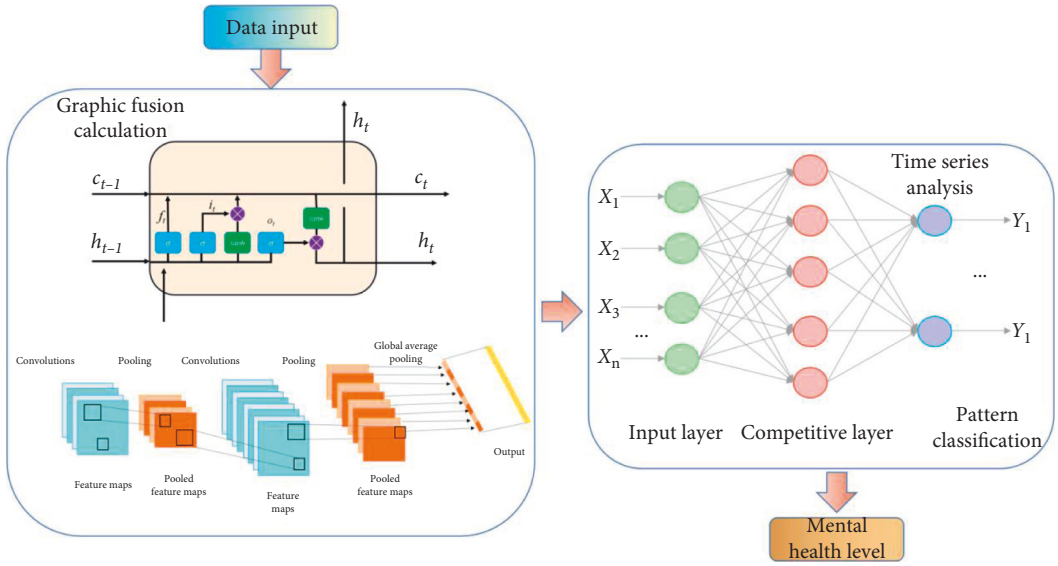

Figure 3: Process of the mental health assessment model.

In order to avoid emotional deviation caused by simple addition, the number of evaluation words and the proportion of evaluation words are comprehensively considered, and a more suitable range is obtained through intermediary coefficient. We have

$$W_i(\text{word}) = \sum_j \gamma^{\text{PMI}(\text{word},w_{ij})}, \text{SO}(\text{word}) = \max_i (W_i). \quad (7)$$

w_{ij} is the j benchmark word in the i-type emotion category and γ is the mediation coefficient.

Through the aforementioned analysis, this paper proposes an emotion analysis algorithm based on weighting factors, combining the calculation methods of emotional vocabulary weight and modification weight:

$$\text{SO}(S) = \max \sum \alpha^{C_i w_{ij}}. \quad (8)$$

Among them, $\text{SO}(S)$ is the emotional tendency value of the sentence S, w_{ij} refers to the emotional value of the ith emotional word w belonging to the emotional category j, C_i refers to the weight factor that modifies the emotional word, α is the mediation coefficient, when $\alpha = 1$ is used, the text tends to be the category with the largest number of emotional words in the sentence, and when $\alpha = 1$ is used, the text tends to the category with the largest emotional intensity in the sentence.

According to the aforementioned analysis, the basic process of psychological early warning is obtained (Figure 4):

(1) Access the Weibo text data in the web page in real time and store it in the local database

(2) Add stop words list to get useful words for tags

(3) Emotional dictionary is used to extract emotional words to minimize the omission of emotional words caused by incomplete rules

(4) The final weight is calculated according to the improved SO-PMI algorithm

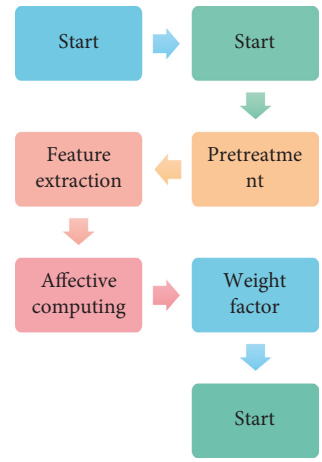

Figure 4: Basic process of psychological early warning.

(5) According to the weight-based sentiment analysis algorithm, the sentiment value of the text is calculated and displayed through the sentiment trend graph output

4. Experiment and Results

In order to verify the effectiveness of the proposed evaluation model of college students' mental health, college students were selected as the research object, and questionnaires were distributed to college students through the network. In this paper, the collected questionnaires are clustered to verify the model. Figure 5 shows the statistical results of data processing ability based on Big Data.

It can be seen from Figure 5 that using this model to evaluate college students' mental health can cluster Big Data well from a large number of data, and the model evaluation is accurate. It can be seen from Table 1 that the evaluation results of mental health consistency of college students using this model are all less than 0. It shows that the index system

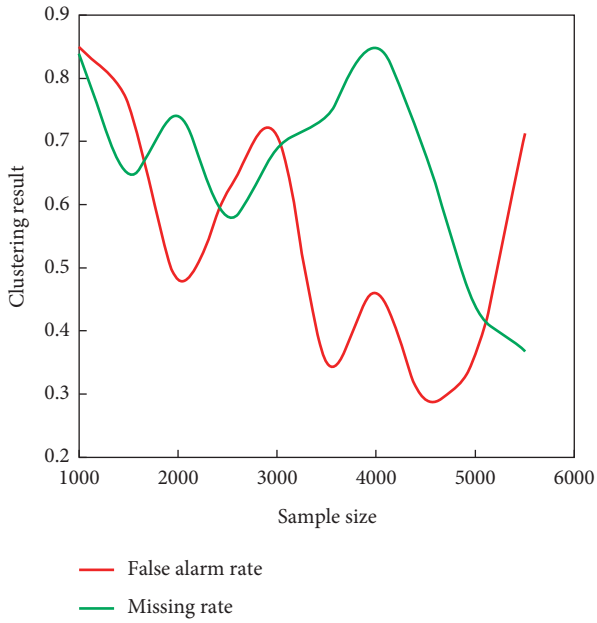

Figure 5: Data clustering result.

Table 1: Consistency judgment result.

Index	Judgment result
Emotion regulation	0.016
Learning influence	0.044
Life influence	0.032
Career influence	0.038

of college students' mental health constructed by this model can meet the judgment requirements and pass the consistency test.

The weight of the evaluation index system of college students' mental health is obtained using this model, and the evaluation results of the first-level index of college students' mental health are shown in Figure 6.

It can be seen that the model in this paper can effectively get the evaluation results of college students' mental health, and find that the overall mental health of college students is in good condition. From the evaluation results, it can be seen that the evaluation results of college students in improving ability, learning strategies, and self-development have low scores.

The accuracy is obtained by comparing the scale scores with the model evaluation results, and the experimental results are shown in Table 2.

Health and depression are at two extremes. In the longitudinal development, health students are mostly in a positive and positive state, while susceptible students continue to be depressed and have a negative attitude towards external stimuli. Therefore, the model can better capture the psychological characteristics of these two categories, and can effectively judge whether students are prone to depression.

Compared with previous studies, this study uses deep learning algorithm to process the network content data, which can obtain deep semantic knowledge and true emotional polarity of modal data such as text and image, and it takes more time to evaluate than traditional machines. The algorithm also has many advantages. By analyzing the content posted by students online in real time, it can quickly judge and continuously track the mental health status of students.

In order to evaluate the impact of active loading mechanism on the performance of specific applications, this study selects five applications with long and variable loops, and manually compiles configuration information from the two execution mechanisms. The evaluation results of the simulator show that after using the active loading execution mechanism, the performance of these five applications is improved by 1.33 times on average compared with passive loading. In order to analyze the reasons for the performance advantages, in this study, we analyzed the cycle-by-cycle execution state of eight PEs on the simulator and obtained Figures 7 and 8.

It can be seen that the time spent by actively loaded PE in configuration and blocking state is obviously less than that in passive state. Further analysis reveals two reasons: as the active loading mechanism does not have to wait for the configuration word sent by the configuration controller, the time of each PE in the blocking state is greatly reduced. The loaded configuration word can still be executed, which reduces the time spent by PE in configuration.

Negative emotions play an important role in psychological crisis intervention, and in psychological counseling, whether the counselor has negative emotions and the duration of negative emotions are important criteria for evaluating the psychological state. The research goal of this paper is to establish an early warning mechanism of psychological crisis and to identify negative emotions through experimental tests and case analysis.

The psychological early warning model of this paper evaluates and tests the negative thoughts of Weibo users. This paper analyzes the user's emotional dynamic tendency by constructing the user's emotional trend chart, which fully reflects the user's psychological reaction and has important reference significance (Figure 9).

The emotional trend chart shows that user 1's negative emotional state is always frequent, and multiple Weibo messages are frequently sent in a short period of time to express strong and concentrated emotions. Negative emotions make up 59% of Weibo texts, and the negative emotions of a single Weibo text can reach −18, drawing the attention of relevant staff. These crises can be avoided if timely and appropriate interventions are implemented. College students are the most active group of Internet users. With the rapid advancement of information technology, the Internet has become an indispensable part of college students' study and life, allowing them to keep up with current events, obtain information, express emotions, and have fun. As a result, establishing a good network position and providing good network mental health education has become a new requirement for the development of college mental health education.

Compared with the traditional mental health education, online mental health education has a unique advantage, that is, college students can receive psychological services at any time through the mental health education website without being limited by time and space. Focus on online tutoring,

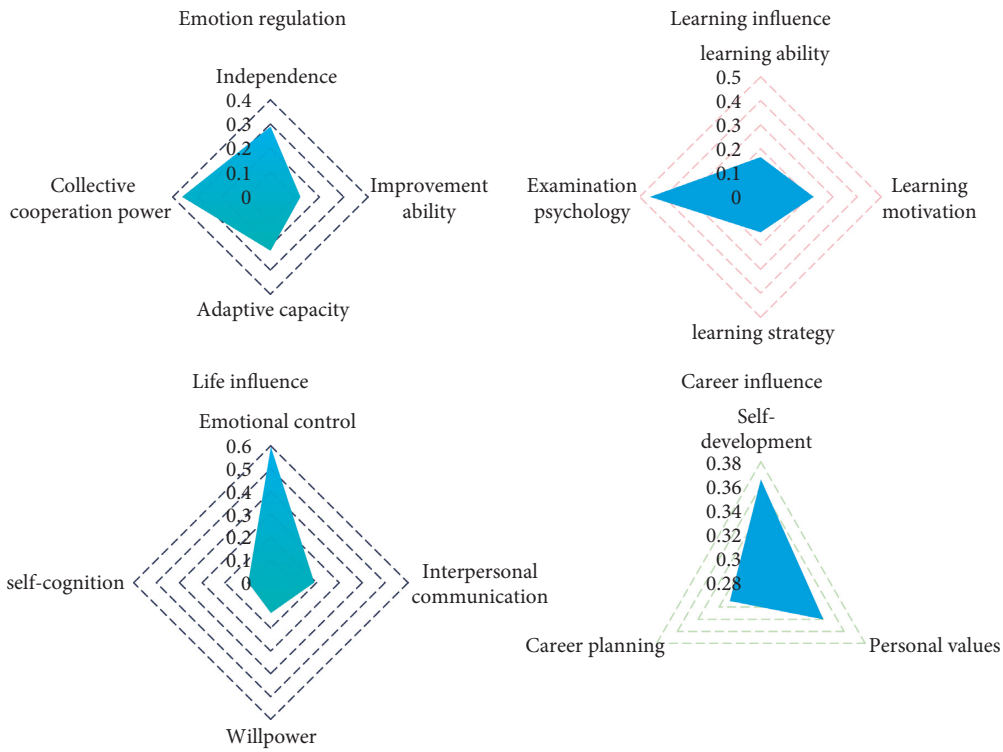

Figure 6: Evaluation results of secondary indicators.

Table 2: Mental health assessment results.

Project	Assessment result (%)
Health	92.14
There may be depression	78.96
Existence of depression	84.57
Average accuracy	84.86

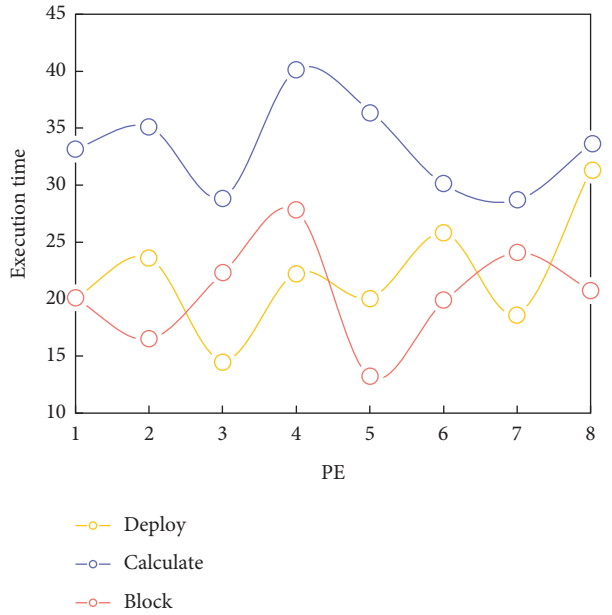

Figure 7: Running state distribution of eight PEs under the passive loading mechanism.

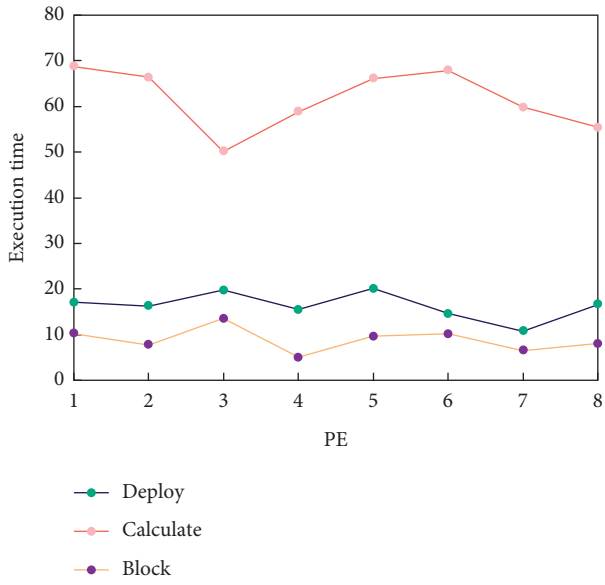

Figure 8: Running state distribution of 16 PEs under the active loading mechanism.

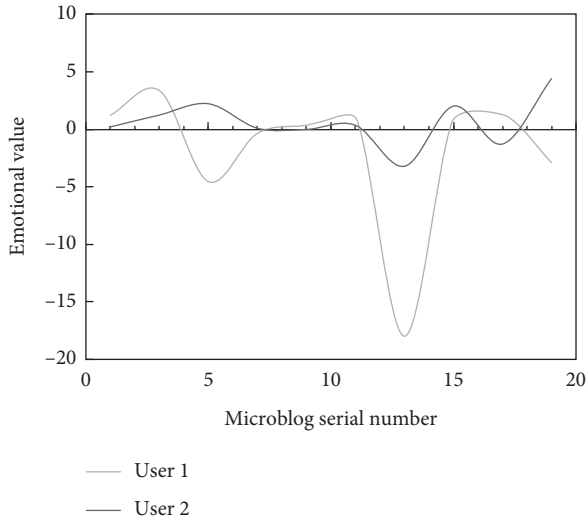

Figure 9: User emotion trend.

online communication and discussion, so that confused students can broaden their thinking in time and solve various problems and puzzles in their study and life in time and strengthen the network mental health education team. With the development of network technology, the school will soon cultivate a new type of mental health education team, which will network the psychological dynamics, psychological changes, and psychological needs of college students and provide services and services scientifically.

5. Conclusions

Mental health education for college students is a challenging foundational, systematic, and innovative project. In some ways, this is not only a problem that exam-oriented education has left us with in the past, but also a demand of today's rapidly evolving society. The highly volatile and efficient evaluation model driven by Big Data is useful for addressing college students' mental health issues. The average accuracy rate of a mental health education model created by college students using fine-grained parallel computing programming is 84.86%. The model can effectively reveal the changing trend of students' psychological characteristics if it can accurately understand their mental health status. The accuracy of Chinese emotional analysis can be improved by utilizing bilingual knowledge, including Chinese and English, and constructing a relatively complete and detailed dictionary of emotional norms of Chinese vocabulary. Experiments show that the method proposed in this paper can produce good results, but it still has flaws. In the next step, this paper will investigate the aforementioned aspects in order to develop a more appropriate method in the field of psychological early warning.

Data Availability

The data used to support the findings of this study are included within the article.

Conflicts of Interest

The author declares no conflicts of interest.

Acknowledgments

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References

[1] G Ying, "Methods of mental health education for Chinese college students in the new era. Research frontiers of education," *Chinese and English versions*, vol. 11, no. 2, 2021.

[2] J Li, "Instructional research on mental health education for college students from the perspective of positive psychology," *Psychology*, vol. 11, no. 1, pp. 49–53, 2020.

[3] X Wang, "Research on mental health education for college students," *International Journal of Social Science and Education Research*, vol. 3, no. 3, pp. 153–157, 2020.

[4] S Yuan, H. J Yu, X. H Yang et al., "The impact of a health education intervention on health behaviors and mental health among Chinese college students," *Journal of American College Health*, vol. 68, no. 5, pp. 1–6, 2019.

[5] S. J Sun, L Luo, and T. L Chen, "A comparative study on experiential teaching and lecturing teaching of the course of college students 'mental health education," *Science & Technology Vision*, vol. 36, no. 36, pp. 60-61, 2018.

[6] G Li, "Psychological health education of college students from the perspective of positive psychology," *Course Education Research*, vol. 31, p. 1, 2019.

[7] D. E. Wilfley, E. E. Fitzsimmons-Craft, D. M. Eichen et al., "Training models for implementing evidence-based psychological treatment for college mental health: a cluster randomized trial study protocol," *Contemporary Clinical Trials*, vol. 72, pp. 117–125, 2018.

[8] S Li, "Mental resilience analysis and health risk prediction of college students assisted by mental health education," *Work*, vol. 7, pp. 1–9, 2021.

[9] X. Jin, Z. Jiashuai, K. Jianlei, S. Tingli, and B. Yuting, "A reversible automatic selection normalization (RASN) deep network for predicting in the smart agriculture system," *Agronomy*, vol. 12, p. 591, 2022.

[10] X Han, "Research on the new mode of college students'mental health education under the network environment," *Contemporary educational research*, vol. 4, no. 8, 2020.

[11] M. T. Fontana, "Gamification of ChemDraw during the COVID-19 pandemic: investigating how a serious, educational-game tournament (molecule madness) impacts student wellness and organic chemistry skills while distance learning," *Journal of Chemical Education*, vol. 97, no. 9, pp. 3358–3368, 2020.

[12] C. R. Wilks, R. P. Auerbach, J. Alonso et al., "The importance of physical and mental health in explaining health-related academic role impairment among college students," *Journal of Psychiatric Research*, vol. 123, pp. 54–61, 2020.

[13] B. Laura, Itxaso Alayo, V. Gemma et al., "Mental disorders in Spanish university students: prevalence, age-of-onset, severe role impairment and mental health treatment. - ScienceDirect," *Journal of Affective Disorders*, vol. 273, pp. 604–613, 2020.

[14] Y. Tao, "An analysis of college students' mental health based on statistics—taking honghe college for example," *Advances in Applied Mathematics*, vol. 09, no. 9, pp. 1456–1462, 2020.

[15] D. Eisenberg, "Countering the troubling increase in mental health symptoms among U.S. College students," *Journal of Adolescent Health*, vol. 65, no. 5, pp. 573-574, 2019.

[16] M Wang, C Kou, W Bai et al., "Prevalence and correlates of suicidal ideation among college students: a mental health survey in Jilin Province, China," *Journal of Affective Disorders*, vol. 246, pp. 166–173, 2019.

[17] A Mc and J. B Suo, "Analysis and research on mental health of college students based on cognitive computing," *Cognitive Systems Research*, vol. 56, pp. 151–158, 2019.

[18] J. Zhang, "A study on mental health assessments of college students based on triangular fuzzy function and entropy weight method," *Mathematical Problems in Engineering*, vol. 2021, no. 10, pp. 1–8, 2021.

[19] K Gong, "Extensible strategies and their performance for mental health education in colleges," *International Journal of Emerging Technologies in Learning (iJET)*, vol. 15, no. 9, p. 205, 2020.

[20] X Meng and J Zhang, "Anxiety recognition of college students using a takagi-sugeno-kang fuzzy system modeling method and deep features," *IEEE Access*, vol. 99, p. 1, 2020.

[21] H Yu, G Zhang, J Liu, and K. Li, "Intelligent knowledge service system based on depression monitoring of college students," *International Journal of Emerging Technologies in Learning (iJET)*, vol. 14, no. 12, p. 71, 2019.

[22] H Xin, C Yijian, and A Jie, "Study on the construction of the mathematical model of the influence factor of lifelong physical education for college students," *International Journal for Engineering Modelling*, vol. 31, no. 1, pp. 111–117, 2018.

[23] Y Li, "Visual education of music course for college students based on human-computer interaction," *International Journal of Emerging Technologies in Learning (iJET)*, vol. 15, no. 2, p. 175, 2020.

[24] L. You, H. Jiang, J. Hu et al., "GPU-accelerated Faster Mean Shift with Euclidean Distance Metrics," 2021, https://arxiv.org/abs/2112.13891.

[25] V Ljubovic and E Paji, "Plagiarism detection in computer programming using feature extraction from ultra-fine-grained repositories," *IEEE Access*, vol. 8, no. 1, Article ID 96505, 2020.

[26] A Kashi and S Nadarajah, "An asynchronous incomplete block LU preconditioner for computational fluid dynamics on unstructured grids," *SIAM Journal on Scientific Computing*, vol. 43, no. 1, pp. C1–C30, 2021.

[27] W. Cai, Y. Song, and Z. Wei, "Multimodal Data Guided Spatial Feature Fusion and Grouping Strategy for E-Commerce Commodity Demand Forecasting," *Mobile Information Systems*, vol. 2021, 2021.