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Retraction

Retracted: Image Model and Algorithm of Human Resource Optimal Configuration Based on FPGA and Microsystem Analysis

Wireless Communications and Mobile Computing

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This article has been retracted by Hindawi, as publisher, following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of systematic manipulation of the publication and peer-review process. We cannot, therefore, vouch for the reliability or integrity of this article.

Please note that this notice is intended solely to alert readers that the peer-review process of this article has been compromised.

Wiley and Hindawi regret 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 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] J. Gu, "Image Model and Algorithm of Human Resource Optimal Configuration Based on FPGA and Microsystem Analysis," *Wireless Communications and Mobile Computing*, vol. 2022, Article ID 7911419, 12 pages, 2022.

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Research Article

Image Model and Algorithm of Human Resource Optimal Configuration Based on FPGA and Microsystem Analysis

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Human resources are the most dynamic factor among all productivity factors. The goal of human resource management is to achieve effective and optimal allocation of resources, while the goal of optimal allocation is to promote the realization of corporate goals. At present, the overall domestic human resource management is relatively backward, and most of it is nonstandardized management, and the level of informatization and technology is not high. Therefore, this paper proposes the image model and algorithm research of human resource optimization configuration based on FPGA and microsystem analysis. First, through the data analysis method, in-depth study of traditional resource allocation algorithms: genetic algorithm and particle swarm optimization algorithm, combined with machine learning algorithms, established a human resource optimization configuration model based on FPGA and microsystem analysis, and then optimized the configuration of human resources for the impact The standard deviation and variance measurement of 18 factors of the company, as well as the analysis of the matching degree between employees and positions, and required capabilities. Finally, it is concluded that the sample average is higher and the top three are employees' positive spirit A12, employees' executive ability A15, and the relationship between salary and performance A11. The sample averages are 4.615, 4.522, and 4.479, respectively; standard deviation of the three factors with the smallest values are good values A8, strong employee cooperation ability A17, and perfect reward and punishment system A16. This shows that the above considerations should be considered in the optimization of enterprise human resources. Moreover, the algorithm in this paper is easier to obtain the optimal solution, and it is easier to obtain the optimal allocation result of human resources.

1. Introduction

Any organization is a system. When assigning personnel to positions, they cannot be randomly assigned, and the best personnel in other positions cannot be assigned to positions that are not suitable for the staff. Therefore, they have certain methods and skills in the management of human resource allocation, especially since it is to meet the optimal characteristics of the system as a whole. In the process of two-way matching between employees and positions, it is necessary to screen and select and consider the required skills, knowledge, and experience. It is often difficult to achieve such a state in the daily human resource management process and lack of scientific and effective methods. Therefore, this article proposes the image model and algorithm research of human resource optimization configuration based on FPGA and microsystem analysis to better solve the human resource configuration. The above problems meet the needs of actual daily work.

FPGA is the same potential gateway. It is a kind of computer chip. The advantage is that you can adjust it permanently and it takes some time. When implementing this material, it is important to redistribute resources, such as new systems concepts, to promote innovation and improve human resource management systems. On this basis, in combination with a small-scale system analysis, the power analysis is performed simultaneously with the quantitative analysis, to promote the final optimization of human resources. This paper analyzes the image model and algorithm of human resource optimization configuration based on

FPGA and the microsystem and realizes the optimal model configuration of FPGA and the microsystem by comparing the original basic human resource management system.

The Jaafar MA Human Resource Information System (HRIS) is a joint product. Due to its importance, Lebanese industrial groups, especially hospitals, banks, and universities, have recently implemented this program. The purpose of our study is that this is Lebanon's first attempt to address the current state of Lebanon's human information system, to examine human resource management across all sectors, and to explore the use of universities as an example [1]. Wright et al. combines the knowledge and results of low-level behavior management/human resource management with an overview of the company's macroresources [2]. The Zhang J Field Programmable Gate Array (FPGA) has become well-known for designing and designing advanced technology properties due to its design, low design cost, and high capacity. Current IP security solutions are often limited to FPGA configuration protection and require permanent FPGA key storage. In addition, they can not provide pay-per-view solutions for a reliable device. In this regard, he proposed a new IP security device to restrict IP functionality to specific FPGA devices, thus effectively protecting IP from cloning, copying, or using unauthorized integration. The human resource information system has played a great role in solving the problem of resource allocation and is suitable for major resources, optimizing the management of the group company [3].

The innovations of this article are as follows: (1) analyze complete research data by combining power analysis with quantitative analysis and (2) integrating scientific research with homicide research and integrating human resource-based sample analysis into systematic analysis. The relationship between weight ratio, management requirements, and manual work difficulty and time is proposed, and it is combined with quantitative research, blog system, and practical research. On the genetic algorithm, most solutions to the general redundancy assignment problem assume that the redundancy strategy of each subsystem is predetermined and fixed; however, in practice, both active redundancy and cold standby redundancy can be used in the system design, and the choice of redundant strategy becomes an additional decision variable. But genetic algorithm can solve this kind of problem very well. In order to improve the convergence and diversity of Pareto optimal sets in the multiobjective optimization algorithm, a multiobjective particle swarm optimization algorithm (d MOPSO-DE) based on decomposition and differential evolution is proposed, in which the direction angle is used to generate a set of A direction vector that keeps the population uniformly distributed. Particle memory repreliminary results show that compared with nondominated sorting genetic algorithm-II (NSGA-II), multiobjective particle swarm optimizer (MOPSO), multiobjective particle swarm optimizer based on decomposition (d MOPSO), and based on decomposition and difference, evolutionary multiobjective evolutionary algorithm (MOEA/D-DE), the proposed algorithm has good performance in terms of convergence and diversity.

2. Image Model and Algorithm Research Method of Human Resource Optimization Configuration Based on FPGA and Microsystem Analysis

2.1. Genetic Algorithm. Genetic algorithms are based on the laws of biological evolution, that is, the survival of the fittest and the survival of the fittest. The programming and implementation of the genetic algorithm is relatively complex. First, the problem needs to be encoded, and after the optimal solution is found, the problem needs to be decoded. It was first proposed in 1975 by Professor J. Holland. Its main function is to handle construction objects directly. There is no fixed limit on output and operation. It has an innate competition for innate competition and better globalization [4]. Using the optimization method, the algorithm can succeed in finding the best target in an unusual situation without precise rules. Is its application for artificial intelligence machine learning? It is very broad; like signal processing and other fields, it has been revised in the text, as follows, genetic algorithms are often used in artificial intelligence and machine learning and are widely used, such as signal processing in other fields [5].

2.1.1. The Steps and Significance of Genetic Algorithm

(1) First select the group. Alternatively, select the characters or groups of $i = 1, 2, \cdots n$. The first group solves many problems. Generally, $\eta = 30\text{-}160$. It is often a random group or symbol $i = 1, 2, \cdots n$. The best solution to this problem is to develop these key issues [6]

(2) Select individuals based on the principle of their optimal survival. Here, define the function f. How do you represent each person? f (as) is called the suitability of the individual

$$P\{\text{choose}b_i\} = \frac{f(b_i)}{\sum_{j=1}^{n} f(b_i)} \cdot n \tag{1}$$

2.1.2. Features of Genetic Algorithm

(1) The biggest difference between genetic algorithms and traditional algorithms lies in their different starting points [7, 8]. General algorithms calculate from a single initial value to obtain a local optimal solution, but genetic algorithms can calculate from the overall situation to find the overall optimal solution. Excellent solution, the coverage of this solution is still relatively large [9]

(2) The genetic algorithm hardly uses the information of a specific problem and can simply constitute a general algorithm program. Genetic algorithms use matching value information for retrieval, so there is no need for information directly related to the function of the problem [10]

(3) By selecting, crossing, and modifying, you can quickly delete completely different fibers in the best solution. Therefore, genetic algorithms have high resistance to inhibitors [11]

(4) The selection, crossing, and modification of the genetic algorithm are all random tasks and not specific rules. This shows the genetic algorithm for finding the best solution and selecting the best solution using a random method, where the intersection represents the vision of the best solution and the contrast indicates the range of the solution, the best in the world [12]

2.2. Particle Swarm Optimization Algorithm. This combination is a group-based evolutionary algorithm, which simulates the actions of a flock of birds flying in pursuit of food, and achieves the best combination through collective cooperation between the flocks. PSO has the advantages of algorithm simplicity, simple implementation, fast convergence, and no need to adjust multiple parameters [13, 14]. According to the characteristics of the mathematical model of optimal manpower allocation, the independence of genetic algorithm is adopted in the particle swarm optimization algorithm [15]. The particle swarm optimization algorithm is used in neural network training, classifier design, cluster analysis, and network community discovery, and a detailed code design is given.

In a large area, the birds did not know where there is food. How did they find the food they need in the shortest time? This requires solving the distance optimization problem. First, PSO names the position of each bird in the sky as a particle, and there is a common function between them, which is an optimization function. According to this optimization function, each bird has a certain flight direction and distance and speed. Then, all the particles will be searched according to the best particles around them until the optimal solution is found through repeated iterations. This solution is called each extremum p best. All independent particles update their position and velocity according to the following formula [16]:

$$v_{\mathrm{id}}^{k+1} = wv_{\mathrm{id}}^{k} + c_1 \,\mathrm{rand}\,()\left(p_{\mathrm{id}} - x_{\mathrm{id}}^{k}\right) + c_2 \,\mathrm{rand}\,()\left(p_{\mathrm{gd}} - x_{\mathrm{id}}^{k}\right), \tag{2}$$

$$x_{\mathrm{id}}^{k+1} = x_{\mathrm{id}}^{k} + v_{\mathrm{id}}^{k+1}. \tag{3}$$

The iteration termination condition usually selects the maximum number of repetitions or the minimum standard error of the particle combination according to the specific problem. The initial position and velocity of the particle swarm are randomly generated, and a satisfactory solution is repeatedly found according to formulas (3) and (4).

In order to optimize the allocation of human resources, the improved particle swarm optimization algorithm has found the best solution through personal collaboration. Its essence is to use each limit value information and all extreme value information to derive the next iteration of the particle [17]. Figure 1 is a sequence diagram of the particle optimization algorithm.

Both the particle swarm optimization algorithm and genetic algorithm belong to optimization algorithms. They both simulate the adaptability of individual populations on the basis of natural characteristics and use certain transformation rules to solve them through space search.

2.3. Machine Learning Algorithm. Engineering (ML) is a topic among many educational systems, including probability process, statistics, approximate process, Barkey analysis, and complex algorithm process [18]. To learn new technologies and technology, prioritize the process of computer education and human learning, reorganize the existing knowledge system, and continually improve your own career. The basis of artificial intelligence, the basic process of smart computers, applies to all areas of artificial intelligence [19–21].

It can be classified according to many classification methods. For example, according to empirical induction learning classification, it can be divided into the genetic algorithm and reinforced learning; according to analysis, learning can be divided into explanatory learning and deductive learning; according to the classification of learning strategies, it can be divided into example learning and analogy learning, etc. and classified into artificial neural networks according to connection learning [22, 23].

2.3.1. Input Layer. The input layer expression of the convolutional neural network is

$$x_{ij}^{l} = \sum_{a=0}^{m-1}\sum_{b=0}^{m-1} \omega_{ab} y_{(i+a)(j+b)}^{l-1}. \tag{4}$$

2.3.2. Convolutional Layer. The function of the composite layer is to extract parts from the input data. It has many convergence nuclei.

$$\begin{aligned} Z^{l+1}(i,j) &= \left[Z^{l} \otimes \omega^{l+1}\right](i,j) + b \\ &= \sum_{k=1}^{K_l}\sum_{x=1}^{f}\sum_{y=1}^{f}\left[Z_k^{l}(s_0 j + x, s_0 j + y)\omega_k^{l+1}(x,y)\right] + b, \end{aligned} \tag{5}$$

$$(i,j) \in \{0,1,\cdots,L_{l+1}\} L_{l+1} = \frac{L_l + 2p - f}{s_0} + 1. \tag{6}$$

The connection level of the convergent level is the same as the multiplication table and the corresponding level fully connects the network:

$$Z^{l+1} = \sum_{k=1}^{K_l}\sum_{i=1}^{L}\sum_{j=1}^{L}\left(Z_{i,j,k}^{l}\omega_k^{l+1}\right) + b = \omega_{l+1}^{T} Z_{l+1} + b, L^{l+1} = L. \tag{7}$$

Variable level parameters include built-in unit size, step size, and overlay level. These are the composite layer production map and the hyperparameter parameters of the converging neural network. The average kernel size can be set to any value smaller than the size of the input image.

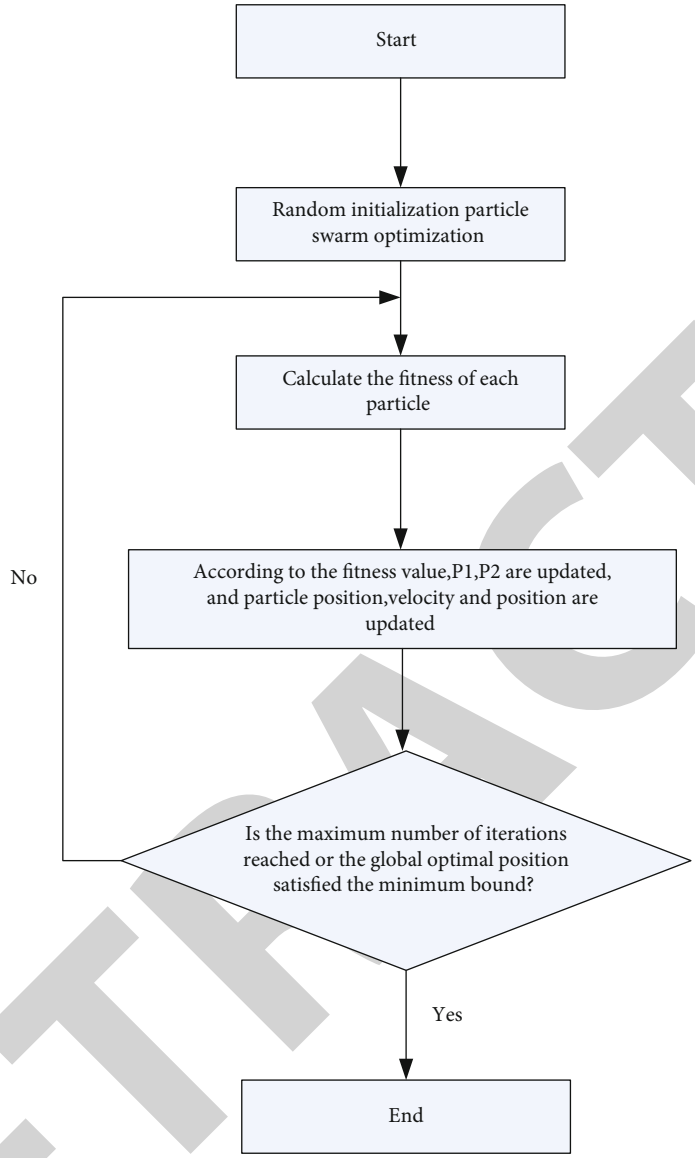

Figure 1: Flow chart of particle optimization algorithm.

The larger the connected kernel, the more you can export.

$$A_{i,j,k}^{l} = f\left(Z_{i,j,k}^{l}\right). \tag{8}$$

After exporting the convergent-level editions to the collection stage, the output library map will be moved to the destination level by selecting the attributes and filter information. The default base is the default refresh modes.

The formula is as follows:

$$A_{k}^{l}(i,j) = \left[\sum_{x=1}^{f}\sum_{y=1}^{f} A_{k}^{l}(s_0 i + x, s_0 j + y)^{p}\right]^{1/p}. \tag{9}$$

The mix of teamwork and casual work is a continuation of the LP idea. The random collection selects random values between the pool areas according to the specific odds distribution. Therefore, accurate nondynamic signaling should be transferred to the next stage of construction. The tank concentration can be described as a synergy between the mean concentration and the maximum concentration.

$$A_{k}^{l} = \lambda L_1\left(A_{k}^{l}\right) + L_{\infty}\left(A_{k}^{l}\right), \lambda \in [0,1]. \tag{10}$$

Research has shown that mixing condensate and random concentration compared to mean and maximum concentration is a normal function that helps prevent excessive neural network formation.

2.3.3. Output Layer. The output layer expression of the convolutional neural network is

$$y_{ij}^{l} = \sigma\left(x_{ij}^{l}\right). \tag{11}$$

If the input is expressed$x_1, x_2, \cdots x_n$, the detailed calculation process of the convolutional neural network is:

$$\left\{\begin{array}{c} o_i^{(l)} = x_i, l = 1 \\ O_i^{(C)} = \left(\omega_{ij}^{(l)}\right) * o_i^{(l-1)} + \left(b_i^{(l)}\right) \\ O_i^l = \sigma\left(o_i^l\right), 2 \le l \le n \end{array}\right\} \tag{12}$$

Backpropagation is a cross-correlation coefficient similar to forward propagation:

$$\left(\frac{\partial E}{\partial A}\right)_{i,j}^{l} = \sum_{k=1}^{K_t}\sum_{x=1}^{f}\sum_{y=1}^{f}\left[w_k^{l+1}(x,y)\left(\frac{\partial E}{\partial A}\right)_{s_0 i+x, s_0 j+y, k}^{l+1}\right] f'\left(A_{i,j}^l\right). \tag{13}$$

$$w^l = w^{l+1} - \alpha\left(\frac{\partial E}{\partial w}\right)_k = w^{l+1} - \alpha\left[A^{l+1}\left(\frac{\partial E}{\partial A}\right)_k^{l+1}\right]. \tag{14}$$

E is the cost function, the function of this function f', and α the calculation error of the learning rate. Use interactive computing interaction. The general options include loss function, hinge loss function, and triple loss function.

Including the human resources industry, it can recognize images, judge, and analyze the behavioral cognition of the human body or the human body and can perform feature learning, which is beneficial to this article, research on image models and algorithms for optimal deployment of human resources.

3. Image Model and Algorithm Research Experiment of Human Resource Optimization Configuration Based on FPGA and Microsystem Analysis

In fact, the optimal configuration of human resources needs to be selected and configured according to the specific situation of the organizational structure and the job requirements of staff capabilities.

(1) Establish a quality evaluation matrix for employees. In order to ensure the scientificity and fairness of the evaluation, it is generally necessary to consider various scoring elements, such as an excellent evaluation (or evaluation group) and the weighted value of the evaluation. In general, the upper-level evaluation (or evaluation group evaluation) accounts for a relatively large weighted value, and other evaluations account for a relatively small weighted value. Here, priority is given to the four aspects of the level of excellence (or evaluation team), the level of the candidate, the level of colleagues, and the level of subordinates. According to the zoning system, each candidate is quantitatively evaluated, and the scores of employees for each ability element are obtained. The evaluation team is $(a_{ij})n \times 1$, $(b_{ij})n \times 1$, $(c_{ij})n \times 1$, and $(d_{ij})n \times 1$, where a_{ij}, b_{ij}, c_{ij}, and d_{ij} are bosses, candidates, colleagues, and employees

(2) Establish a weight matrix of job elements. Each position corresponds to different abilities, so it is necessary to select the weight according to the needs of each position, determine the weight coefficient, and carry out a reasonable weight distribution ratio. Then, use the analytic hierarchy process to calculate the weight vector j

(3) Establish a matching matrix between personnel and positions and multiply the previous steps (1) and (2) to obtain a new matching matrix:

$$\left(s_{ij}\right)_{n\times m} = \left(p_1\left(a_{ij}\right)_{n\times l} + p_2\left(b_{ij}\right)_{n\times l} + p_3\left(c_{ij}\right)_{n\times l} + p_4\left(d_{ij}\right)_{n\times l}\right)\left(v_{ij}\right)_{l\times m} \tag{15}$$

Among them, s_{ij} indicates that the comprehensive score of the personnel M_i after W_j, the weight value of p_1, p_2, p_3, and p_4 of the outstanding points (or evaluation group), the self-evaluation of the candidates, the scores of colleagues, and the evaluation of personnel quality are the subordinate employee fraction. The values of p_1, p_2, p_3, and p_4 must be determined according to the specific situation of the organizational structure and the quality of the person in charge of the evaluation.

Establish a model for optimized personnel allocation. Set $X_{ij} = 1$, when assigning personnel M_i to post W_j to 0, and when not assigning personnel M_i to post W_j, the mathematical model for the optimal configuration of personnel is constructed according to the staffing matrix as follows:

$$\max Z = \sum_{i=1}^{n}\sum_{j=1}^{m} s_{ij}X_{ij}, \tag{16}$$

$$\sum_{i=1}^{n} X_{ij} = 1, j = 1, 2, \cdots, m, \tag{17}$$

$$\sum_{j=1}^{m} X_{ij} \le 1, i = 1, 2, \cdots, n, \tag{18}$$

$$X_{ij} = 0\text{or}1, i = 1, 2, \cdots, n\,; j = 1, 2, \cdots, m. \tag{19}$$

This problem can be solved by the Hungarian method when there are fewer relevant personnel and positions. However, if there are many people and responsibilities involved, the problem will become more complicated. An improved particle thermal optimization algorithm is designed to solve this problem. This is to better solve the problem of personnel optimization and improve the efficiency of personnel allocation when there are many personnel and places. Figure 2 is a management diagram of human resource management activities.

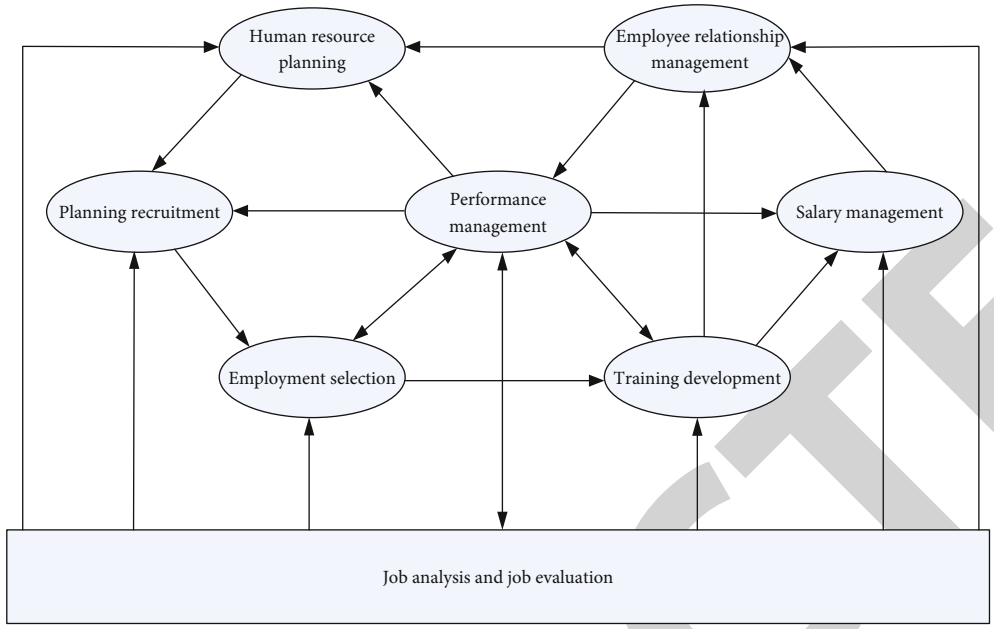

Figure 2: Human resource management activity management chart.

Table 1: Descriptive statistical analysis table of key elements measurement dimensions of enterprise human resource optimal allocation.

Measurement dimension and code	Sample mean	Standard deviation	Measurement dimension and code	Sample mean	Standard deviation
Improve the personnel system of enterprises A1	4.062	2.085	Staff training needs and costs A10	4.334	2.046
Year on year wage level A2	4.020	2.046	The relationship between salary and performance A11	4.479	2.077
Enterprise welfare measures are complete A3	3.956	2.012	Positive spirit of employees A12	4.615	2.068
Complete corporate governance structure A4	3.779	2.049	Staff recruitment cost A13	4.278	2.064
The basic quality of managers is high A5	3.323	2.023	Employees' sense of achievement A14	3.193	2.023
Good team atmosphere A6	3.723	2.018	Strong executive ability of employees A15	4.522	2.158
Enterprise information communication is smooth A7	3.914	1.999	Perfect the reward and punishment system A16	4.415	1.919
Have good values A8	4.001	1.915	Strong cooperation ability of employees A17	4.087	1.918
Competitiveness of enterprises A9	4.062	2.085	Scientific nature of decision making and management A18	3.556	2.005

4. Image Model and Algorithm for Human Resource Optimization Configuration Based on FPGA and Microsystem Analysis

Human resources have three attributes: importance, availability, and restriction. The amount of labor creation is the calculation formula of the value of human resources ($v + m$) = operating profit-production cost, depreciation of fixed assets, and period expenses of intangible assets. Through FPGA and the microsystem, the measurement dimension, personnel management, relative weight of work elements, correlation coefficient of the number of people, and resource allocation in human resource optimization are optimized and compared with the traditional human resource system.

This paper conducts research on the image model and algorithm of human resource optimization configuration based on FPGA-based microsystem analysis. It mainly selects 18 key elements in the impact of human resource optimization configuration for statistical analysis of measurement dimensions, and analyzes the sample mean and standard deviation, and specific statistics. The data is shown in the table below.

From the data in Table 1 and Figure 3, it can be seen that the sample average value is higher and the top three are employees' positive spirit A12, employees' executive ability

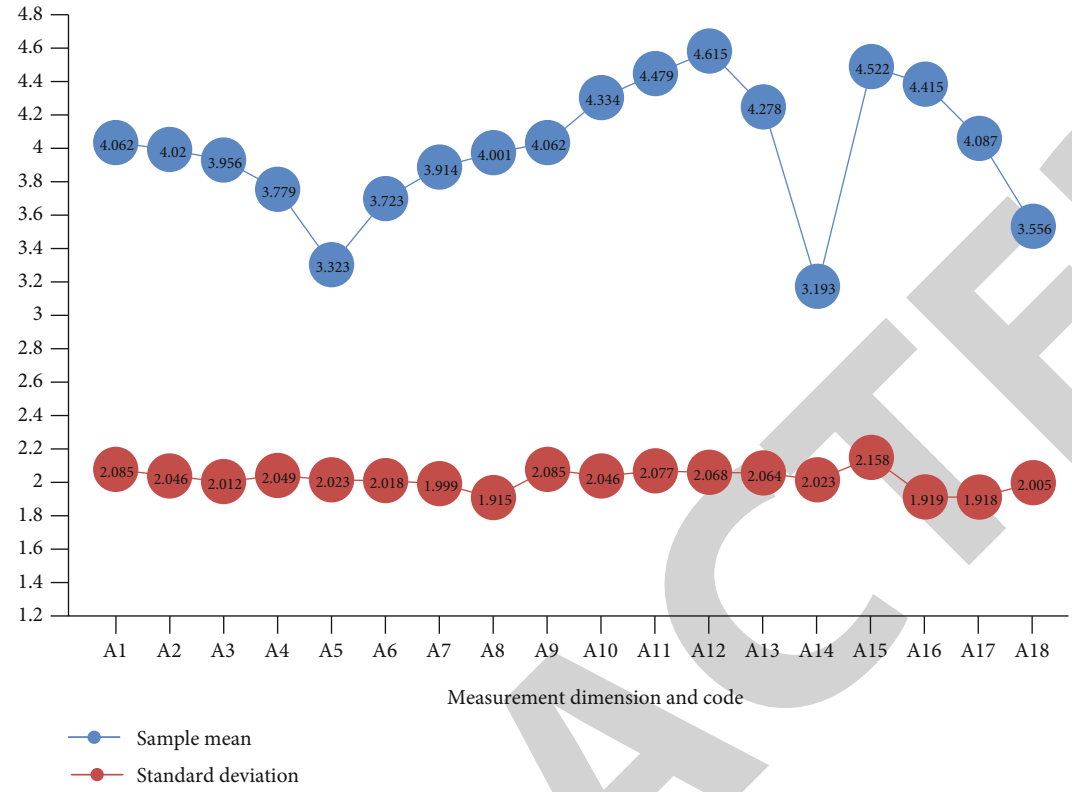

Figure 3: Descriptive statistical analysis table of key elements measurement dimensions of enterprise human resource optimal allocation.

A15, and the relationship between salary and performance A11. The sample averages are, respectively, 4.615, 4.522, and 4.479, which means that to optimize personnel allocation processing; we must first start with these aspects. From the standard deviation point of view, the three factors with the smallest standard deviation value are good values A8, strong employee cooperation ability A17, and perfect reward and punishment system A16. The standard deviations are 1.915, 1.918, and 1.919, respectively. The smaller the standard deviation, the better the stability of this factor.

It can be seen from Table 2 and Figure 4 that human resource management information system is still very old and can only meet some of the most basic requirements and required functions. From the current data, the most important functional requirement is personnel management, accounting for 72%, which is far more than half of the level. This shows that human resource management is valued by most companies.

$W1$-$W8$ represents 8 jobs. The above table represents the relative weight of the job elements. After weighting, the applicant's comprehensive score on the ability elements can be obtained, as shown in the following table. It can be seen from Table 3 and Figure 5 that the ability elements valued by each position are different, so the weight ratio is also different. The most valued ability in $W3$ position is $F3$ ability, which accounts for 0.32; the most important ability in $W7$ position is also $F3$ position, which has reached 0.38, and the less needed ability is $F1$, and the weight coefficient is only 0.07.

Table 2: The current use of human resource management information system functions.

System function	Proportion
Personnel management	72
Wages	68.3
Report form	63.2
Check work attendance	59.9
Application	56
Welfare	53.9

In the above table, $M1$-$M10$ represents 10 different applicants, and $F1$-$F6$ represents the six ability requirements of the positions applied for. Table 4 shows the staff quality evaluation scores. From Figure 6, it can be seen that the comprehensive scores of each candidate in each position are high and low because of the existence of the best match. For example, $M1$ scored only 62 points in $F1$, but the highest score in $F5$ was 95 points. Of course, there are candidates with higher comprehensive qualities that can meet the various requirements of the company's required positions, so the overall score is relatively high, such as $M2$ scored 89 points on $F1$, $F2$ scored 94 points, $F3$ scored 98 points, $F4$ scored 92 points, $F5$ scored 78 points, and $F6$ scored 67 points.

The correlation coefficient of the number of employees in Table 5 and Figure 7 is as high as 0.795, which has a certain relationship with work intensity. The number of people and the difficulty of work have little to do with the

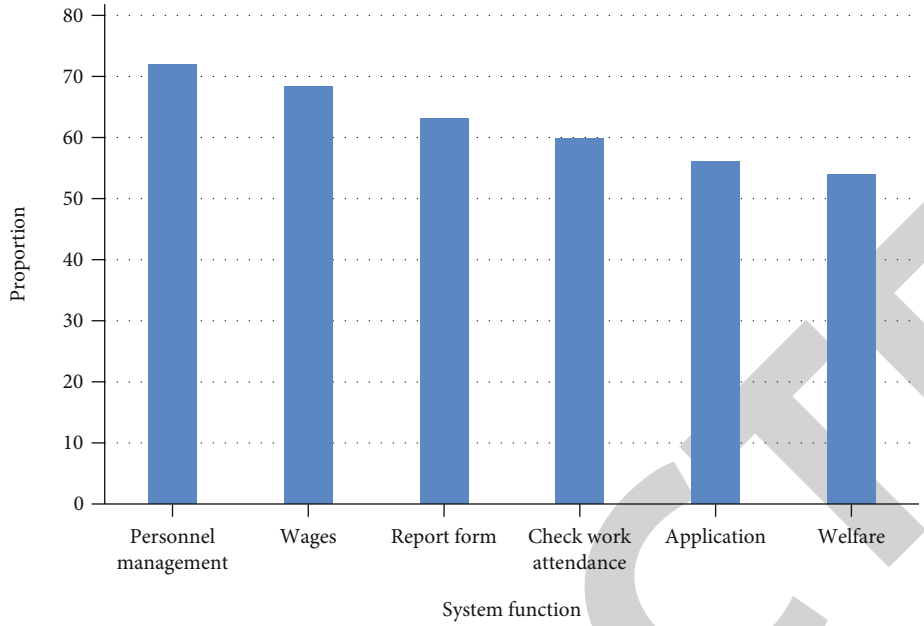

Figure 4: The current use of human resource management information system functions.

Table 3: Relative weight of post elements.

	*F*1	*F*2	*F*3	*F*4	*F*5	*F*6
*W*1	0.17	0.09	0.31	0.06	0.27	0.16
*W*2	0.23	0.23	0.18	0.05	0.29	0.08
*W*3	0.21	0.09	0.32	0.08	0.13	0.23
*W*4	0.29	0.11	0.07	0.36	0.22	0.09
*W*5	0.03	0.29	0.25	0.27	0.18	0.04
*W*6	0.19	0.32	0.08	0.12	0.26	0.09
*W*7	0.07	0.19	0.38	0.12	0.13	0.15
*W*8	0.18	0.22	0.04	0.35	0.25	0.11

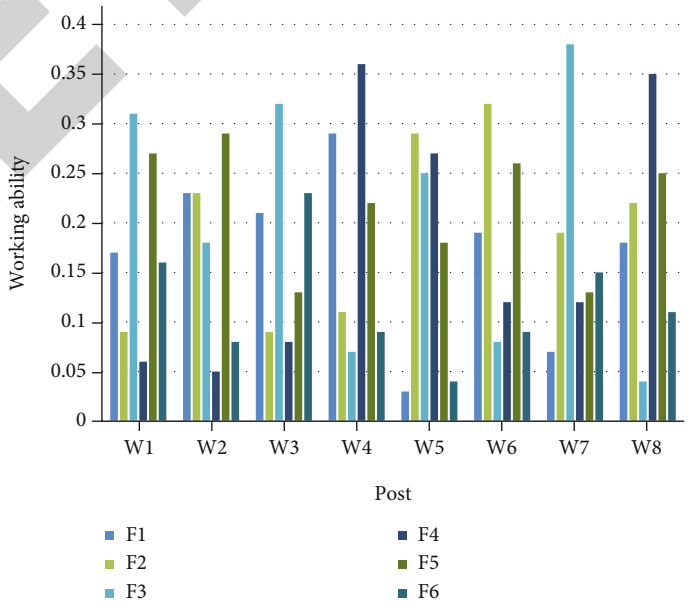

Figure 5: Relative weight of post elements.

Table 4: Personnel quality evaluation score.

	F1	F2	F3	F4	F5	F6
M1	62	79	83	74	94	92
M2	89	94	98	92	78	67
M3	68	85	55	66	79	88
M4	64	69	65	82	63	94
M5	72	73	87	88	74	63
M6	69	85	59	89	74	66
M7	56	81	65	74	59	81
M8	91	97	69	76	57	69
M9	72	87	88	73	64	52
M10	98	67	90	63	57	71

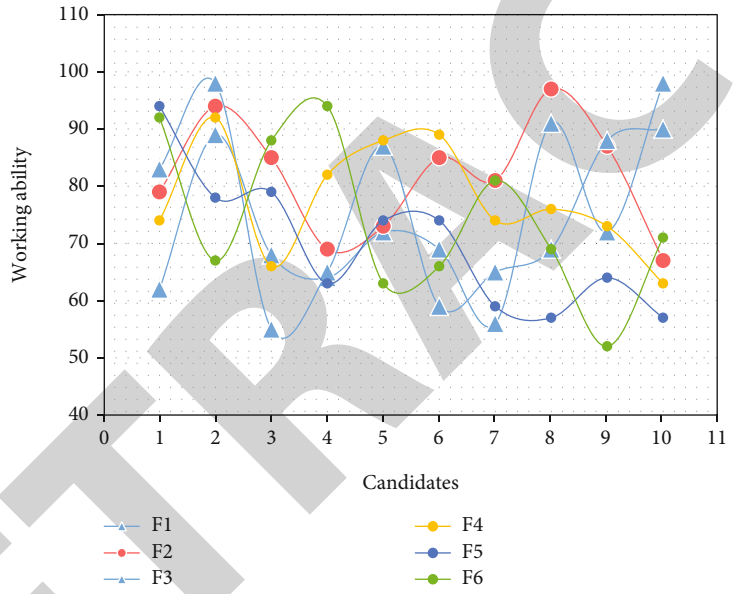

Figure 6: Personnel quality evaluation score.

Table 5: Correlation coefficient table of the number of personnel and working environment.

Correlation coefficient	Number of personnel	Work intensity	Work difficulty	Work environment
Number of personnel	1	0.795	0.104	0.058
Work intensity	0.795	1	0.000	0.000
Work difficulty	0.104	0.000	1	0.000
Work environment	0.067	0.000	0.000	1

main reason for the work environment. The correlation values are 0.14 and 0.058, which are very small.

The black line in Figure 8 represents the existing resource allocation algorithm, and the red line represents the improved resource allocation algorithm. The improved algorithm uses the roulette selection method in the selection task, adds the positive feedback function in the mutation process, clarifies the direction of mutation optimization, and selects the appropriate individual function is stronger than the existing algorithm. The speed of convergence is greatly accelerated, the diversity of the population is guaranteed, and the calculation process is gradually optimized. At the same time, the crossover rate of the improved algorithm is affected by the number of iterations and the adaptability value. In the second half of work, adaptive adjustments can be made to protect individuals.

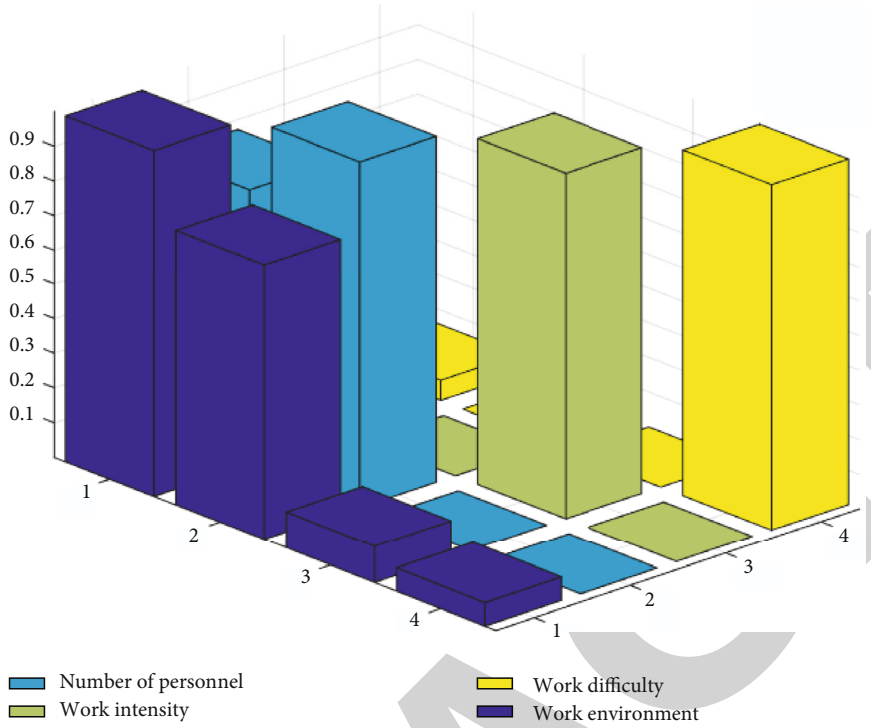

Figure 7: Correlation coefficient table of the number of personnel and working environment.

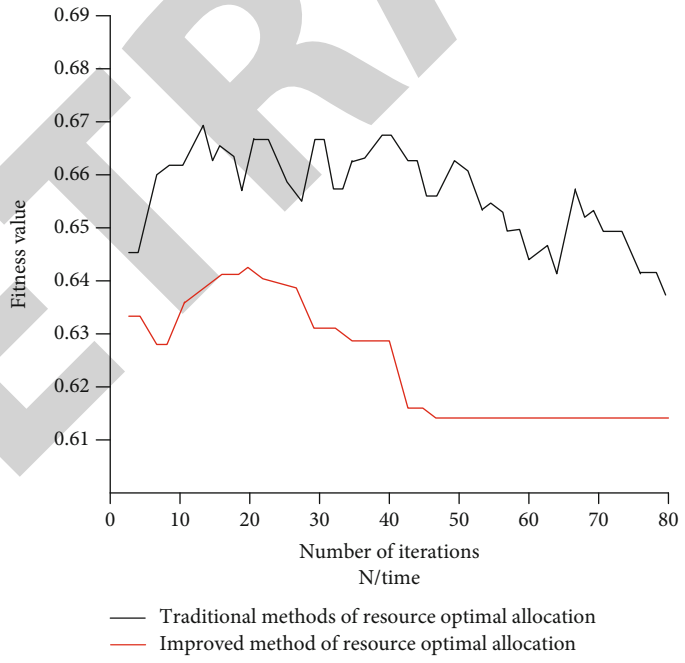

Figure 8: Experimental results of optimal allocation of human resources.

5. Conclusion

This article focuses on the research of the optical model and algorithms of human resource optimization structure based on FPGA and microsystem analysis. In this article, we will focus on fine-tuning the particles in the traditional algorithm, in order to highlight the shortcomings of the traditional algorithm and to highlight the innovations of this algorithm. The research results show that the innovative algorithm in this article can really achieve a better distribution of human resources, which can enhance mobility and protect exceptional individuals. And to improve the

importance of human resources, the most important functional requirement is personnel management, accounting for 72%. The ability elements evaluated by each position are different, so the weight ratio is also different, the weight coefficient value is relatively small, and the convergence speed is also obtained, a great improvement, which also shows that the number of people and the difficulty of the work have nothing to do with the main reasons for the working environment.

The new substance of this article is a solid study combined with quantitative research to fully analyze research data first. Second, theoretical and practical research is based on a combination of blog system analysis and practical studies combined with the real human condition.

Human resource management has always been the focus of major companies, and the importance of research on the optimal allocation of human resources is obvious. The models and algorithms proposed in this paper for the optimal configuration of human resources still have defects to a certain extent. For example, many companies do not have the conditions to use FPGA and microsystem analysis algorithms; in addition, all the achievable functions of FPGA algorithms rely on it is realized by hardware, and there is a big gap in design flexibility compared with general purpose processors. However, the innovative perspective of this article can provide some constructive reference opinions to a certain extent to help enterprises better realize the optimal allocation of human resources.

Data Availability

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

Conflicts of Interest

The author states that this article has no conflict of interest.

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