

## Research Article

# The Performance Evaluation Model of Hotel Green Human Resources Based on Internet of Things and Fuzzy Theory

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The Internet of Things (IoT) is influencing national centers of excellence as well as businesses' approaches to development and how they generate and exploit opportunities in day-to-day hotel activities. The IoT is revolutionary and will transform how human resources are created and managed, necessitating a fresh and adaptable strategy for human resource development. The promise of the IoT is that each device will have a unique means of identifying itself and will be addressable, allowing any object to be connected. This will present a new difficulty to how green human resource development in hotels is conducted. Besides, environmental protection has emerged as the most pressing problem in world politics. Green problems are widely acknowledged as a fundamental source of development. Due to increased customer awareness, the hotel service sector has advanced in terms of quality of services as green marketing has evolved into a crucial instrument for sustainable business approaches. Green marketing strategies are being implemented by businesses to improve company success. In order to improve the adaptive performance assessment capacity of hotel green human resources, this research proposes a performance evaluation model of hotel green human resources based on the Internet of Things and fuzzy theory. It develops a large data analysis model of hotel green human resource performance by statistically quantitatively assessing the constraint parameters of hotel green human resource performance assessment. It extracts the entropy characteristic amount of hotel green human resource performance big data to make the best choice and assessment of hotel green human resource performance by green hotel maximum economic benefit evaluation and fuzzy decision technique. Furthermore, it builds an expert system analysis model for evaluating the hotel green human resource performance. Adaptive optimization of hotel green human resource performance evaluation is carried out by the fuzzy theory adaptive learning algorithm, and the optimization strategy of the hotel green human supply performance evaluation model is realized by similarity characteristic parameter estimation and fuzzy multidimensional parameter constraint. The simulation results show that the performance evaluation of hotel green human resources with this method has high accuracy and good confidence level, which improves the performance evaluation efficiency of hotel green human resources.

## 1. Introduction

The Internet had a rapid influence on our lives and work since its inception in the early 1990s. People are facing another generation of Internet services that will have a significant influence on how we work and live. This phenomenon, widely referred to as the Internet of Things, refers to an environment in which data creation is the rule of the day. Each human contact, either with living or nonliving objects, produces some sort of data, transforming the workplace into a data-driven environment. The changing

technological phase challenges forecasts of human interaction and also how work is done. The Internet of Things can fundamentally alter how we engage with our environment. The human resource management green hotel is in a unique position to train the staff for this modern style of working and to make use of the enormous data provided by the IoT. It can significantly alter our interactions with our environment.

At present, China's big environment is the continuous development of a socialist market economy and the deepening of system reform. These rapid changes have taken place in many aspects, such as the economy, politics, and

culture [1]. The rapid update of knowledge and the huge amount of online information data have brought many opportunities along with challenges to enterprises. In the daily operation of enterprises, it is necessary to have funds, personnel, equipment, and other elements. At present, more and more enterprises begin to attach importance to human resources and develop them into basic competitiveness. Under the current background, enterprises can do a good job in “selecting, hiring, educating, and retaining talents,” and the potential of employees is constantly stimulated [2]. Then, in the unpredictable market competition, enterprises will always maintain a sustained and stable advantage. The elements of contemporary human resource management have changed, and the labor force of enterprise employees is no longer one of them. Therefore, it can be said that it has become a precious resource in the overall development of enterprises. If enterprises gain the upper hand from human resources, they will gain a competitive advantage [3]. The most difficult problem for corporate managers these days is figuring out how to improve enterprise human resource management. As we all know, human resource management is very important to the growth of enterprises [4]. “People are the primary productive force.” How to stimulate people’s subjective initiative becomes the first thing, which is the foundation of enterprise strategic construction and cultural construction. How to achieve successful human resource management, which aims to raise employee productivity and skill levels, allows them to fully fulfill their responsibilities, allowing everyone to play to their full potential in a fitting position and, ultimately, achieves corporate goals. In the performance evaluation of hotel green human resources, it is necessary to build the performance evaluation model of hotel green human resources. In addition, it needs to be combined with the allocation of hotel green human resources and improves the performance management and dynamic allocation ability of hotel green human resources through potential development and comprehensive scheduling [5].

In general, hotel green human resource performance evaluation refers to the organic collocation and combination of ready-made (existing) hotel green human resources with other production components in a certain method, structure, and amount proportion based on specified economic objectives. The performance allocation of hotel green human resources is a key link in the overall chain of human resource management, and it is a subject that must be considered when entering the usage stage after human resource training and development [6]. The performance development of hotel green human resources is only the first development of human potential and sometimes focuses on individuals. The allocation of human resources is the second development of human potential, focusing on the development of overall potential, which is a higher level, more complex, and more important development. Modern scientific methodology inspires people; the structure is reasonable, and the function is positive. On the contrary, it has a negative effect. Therefore, even if every individual member has a high quality and if the allocation of human resources among green human resources groups in the hotel is unreasonable,

it will backfire and have the opposite effect. Therefore, managers should not only pay attention to how to effectively develop individual potential but also pay enough attention to the optimal allocation of group human resources. Only in this way can a good overall effect be achieved. At present, the evaluation methods of hotel green human resources performance management mainly include quantitative regression analysis, autocorrelation fusion analysis, and association rule analysis. The fuzzy association rule set of hotel green human resources performance management evaluation is constructed, and the evaluation and prediction model of hotel green human resources performance management is established by analyzing and forecasting the hotel green human resources performance data. However, the traditional methods are not intelligent and accurate [7].

In view of the above problems, this article puts forward a performance evaluation model of hotel green human resources based on the IoT and fuzzy theory and through quantitative management of hotel green human resources performance, it accelerates the transformation of hotel’s human resources management from pure functional management to information management.

*1.1. Key Innovations.* The key innovations of this article are as follows:

- (1) First, this research article established the big data enquiry model of hotel green human resource and analyzes the constraint parameters of hotel green human resource performance evaluation by the statistical quantitative analysis method by extracting the entropy characteristic quantity of hotel green human resource performance big data [8].
- (2) Second, it makes the optimal decision and evaluation of hotel green human resource performance evaluation by the methods of maximizing economic benefit evaluation and fuzzy decision. In addition, it establishes the expert system analysis model of hotel green human resource performance evaluation. Adaptive optimization of hotel green human resource performance evaluation is carried out by the fuzzy theory adaptive learning algorithm, and the optimization layout of hotel green human supply performance evaluation design is realized by similarity characteristic parameter estimation and fuzzy multidimensional parameter constraint.
- (3) Finally, it performs several simulation tests, which show the superior performance of this method in improving the reliability of hotel green human resources performance evaluation.

The test of the sections in this article is organized as follows: The selected material and methodology for the performance evaluation model of hotel green human resources based on fuzzy theory can be explained in Section 2. Section 3 will emphasize the recommended hotel green human resource performance model optimization. Section 4 of this work is based on the simulation and analytical results. Finally, in Section 5 of the document, this article is ended.

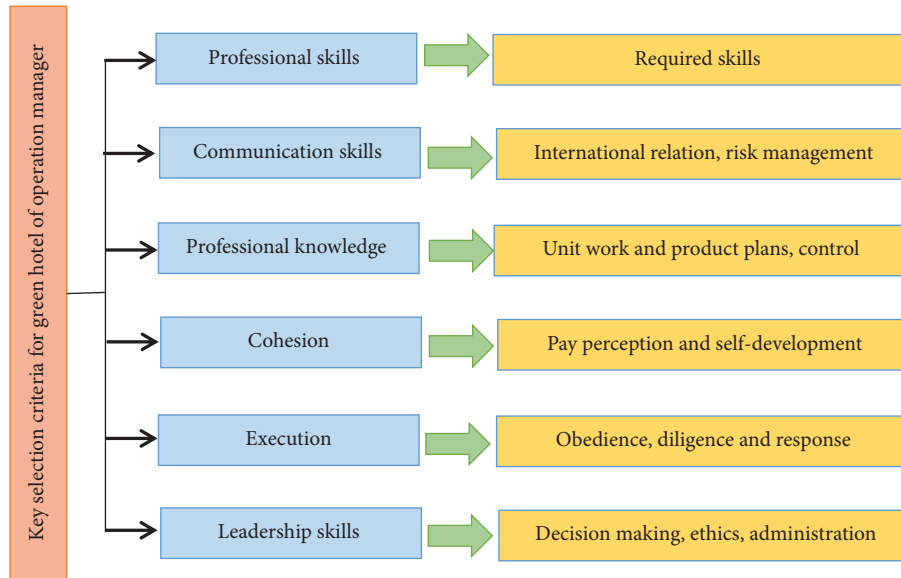


FIGURE 1: The key selection criteria for green hotel of operation managers.

## 2. Materials and Methodology

**2.1. The Internet of Things (IoT) and Hotel Green Human Resources Operation.** The Internet of Things (IoT) enables users to manage and improve internet-connected appliances and electronic devices. Sensors are employed in hotels to capture physical strength data from real-time settings and turn it into machine-readable representations that may be readily transmitted into other data formats. The Internet of Things is claimed to be a system for transforming an object into a light object that can be accessed and collected in real time. It might be seen as the capacity to regulate and monitor resource-related behavior. Hotel resources may be remotely controlled and regulated by implementing RF identification, smart sensors, smart wearable, scanners, barcodes, and so on. This situation is frequently employed in hotel lights and bedroom air conditioning units. Hotel staff is more satisfied once the Internet of Things (IoT) is deployed to or incorporated into hotel facilities. Smart tags have been widely employed in IoT-based services. Hotel personnel can gain hotel access or other varied security features by using smart tags. The indications used to measure the IoT are as follows: information technology employed by hotels in real time, tourism-related information technology is commonly accessible, IoT technology is customizable to hotel room temperature, and IoT technology is flexible to hotel lighting.

**2.1.1. Hotel Green Human Resources.** Nowadays, human resource innovation is usually recognized. As a critical indicator, it is regarded as the very first resource for the knowledge-based economy that may be employed to measure a global power. Green human resource management (GHRM) is a new area of practice in human resource management that stems from environmental thought, environmental situation, and resources and contributes significantly to sustainability [9]. Human resource management remains a reasonably

prominent issue in hotel environment protection. Furthermore, green human resources development and the requirement for operation managers in any business are so crucial that their orientation and performances must match the expectations and needs of the firm. In a word, the position of the operation manager is critical to every organization.

Human resources are the foundation of every successful business, and the GRHM ideas of green management motivations and creative asset protection have far-reaching implications for societal responsibility and organizational productivity [10]. Green “management models” fosters employee environmental understanding. If employees get a green concept, they would intentionally utilize sophisticated technology in their “working practices” of manufacturing and company activity to decrease wastage and use of materials and aim to limit the usage of electricity and water energy. To achieve the objective of sustainable resource use and social progress, GRHM emphasizes efficiency, waste reduction, enhancing workplace engagement behaviors, harmonizing work-life interactions, and boosting employee satisfaction and productivity [11]. Figure 1 shows the key selection criteria for green hotel of operation manager.

## 2.2. Quantitative Fusion Feature Clustering of Absolute Salary and Relative Salary of Hotel’s Human Resources Performance

**2.2.1. Hotel Green Human Resources Performance Statistics Analysis.** In order to realize the performance model of hotel green human resources based on fuzzy theory and speed up the transformation of hotel human resources management from pure function organization to data organization [12], this work uses the statistical investigation method of hotel green human resources performance to carry out information fusion and obtains the analysis model of big data of hotel green human resources performance statistics. The

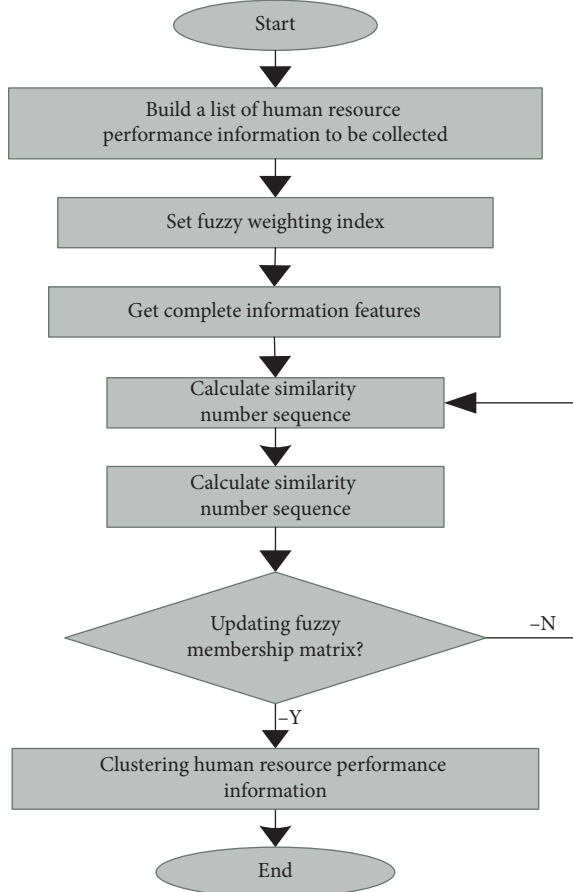


FIGURE 2: Fuzzy sampling process of hotel green human resources performance.

specific fuzzy information sampling process is shown in Figure 2.

This article assesses how well sampling techniques provide the relevant knowledge by using fuzzy means as the data-mining tool. The efficacy is demonstrated in terms of sampling information generalizability of the results as well as the correctness and mistakes of sampled data sets when applied to the fuzzy clustering method. Using the fuzzy information sampling method, the sample data of hotel green human resources performance are presented as follows:

$$\begin{aligned}
 & \min_{\{T_{r1}, T_{r2}\}} \text{Tr}\{T_{r1} T_{r1}^H + T_{r2} T_{r2}^H\}, \\
 & \hat{R}_{r1}(T_{r1}) + \hat{R}_{r2}(T_{r2}) \geq R^{mac}(\mathbf{W}_1^0, \mathbf{W}_2^0), \\
 & \text{s.t.} \quad \hat{R}_{rj}(T_{rj}) = \bar{R}_{ir}(\mathbf{W}_i^0).
 \end{aligned} \quad (1)$$

The optimum closed constancy analysis technique is utilized to examine the service performance features in the process of hotel's human resource management. The issue of hotel human resource management is an optimum closed stability analysis model, and the ideal feature capacity of hotel human resource management presentation is presented as  $T_{ij}$ . The fuzzy subspace fusion clustering method is used to obtain the decision function of hotel green human

resource performance. The optimal quantity of characteristic of hotel's human resource management presentation can be obtained using the following equation:

$$p_{rj}(k) = \left( \frac{1}{\mu_i} - \frac{\sigma_j(k)^2}{|\omega_{rj}(k)|^2} \right)^+, \quad k = 1, \dots, r_{rj}. \quad (2)$$

When  $i = 1$ ,  $\mu_i$  represents the recruitment parameter in terms of employee value appraisal, recruiting, training, and performance management, as determined by convex optimization combination analysis. Hotel green human resource performance prediction rules have been used to define the probability of the existence or lack of a circumstance and aid in evaluating hotel green resource performance. The forecast rule function of hotel green human supply presentation model is obtained by the following equation:

$$p_{ri}(k) = \left( \frac{1}{\mu_j'} - \frac{\sigma_i(k)^2}{|\omega_{ri}(k)|^2} \right)^+, \quad k = 1, \dots, r_{ri}. \quad (3)$$

From the age point of view, there are 21 hotel employees under 20 years, 178 employees aged 20–30 years, 79 employees aged 30–40 years, 40 employees aged 40–50 years, and 74 employees aged over 50 years. It can be seen from this that the age of hotel employees is concentrated in 20–30 years, and they are young on the whole. The similarity component can be calculated using the following equation:

$$\begin{aligned}
 & \sum_{k=1}^{r_{ri}} \log \left( 1 + \left( \frac{1}{\mu_j'} - \frac{|\omega_{ri}(k)|^2}{\sigma_i(k)^2} - 1 \right)^+ \right) + \bar{R}_{ir}(\mathbf{W}_i^0) \\
 & = R^{mac}(\mathbf{W}_1^0, \mathbf{W}_2^0).
 \end{aligned} \quad (4)$$

Based on information clustering and characteristic optimization sampling, the fuzzy membership characteristic solution  $1/\mu_i \leq 1/\mu_m < 1/\lambda_0 < 1/\mu_j$  of hotel green human resources performance management is obtained using (56), which satisfy  $\mu_j''$ .

$$\begin{aligned}
 & \sum_{k=1}^{r_{ri}} \log \left( 1 + \left( \frac{1}{\mu_j''} - \frac{|\omega_{ri}(k)|^2}{\sigma_i(k)^2} - 1 \right)^+ \right) \geq R^{mac}(\mathbf{W}_1^0, \mathbf{W}_2^0) \\
 & \quad - \bar{R}_{ir}(\mathbf{W}_i^0),
 \end{aligned} \quad (5)$$

$$\sum_{k=1}^{r_{ri}} \left( \frac{1}{\mu_j''} - \frac{\sigma_i(k)^2}{|\omega_{ri}(k)|^2} \right)^+ \leq P_r - \sum_{k=1}^{r_{rj}} \left( \frac{1}{\mu_i} - \frac{\sigma_j(k)^2}{|\omega_{rj}(k)|^2} \right)^+. \quad (6)$$

From the above equation, we get the optimal value of  $P_j(K)$ , which builds the identification of parameter and descriptive variable design of hotel green human resource performance management. It combines the fusion degree analysis technique of descriptive variables and regulator variables, making the analysis of regression of hotel green human resource performance management. Furthermore, it analyzes statistical data on hotel green human resource performance using phase space combination features [13]. The specific process is shown in Figure 3.

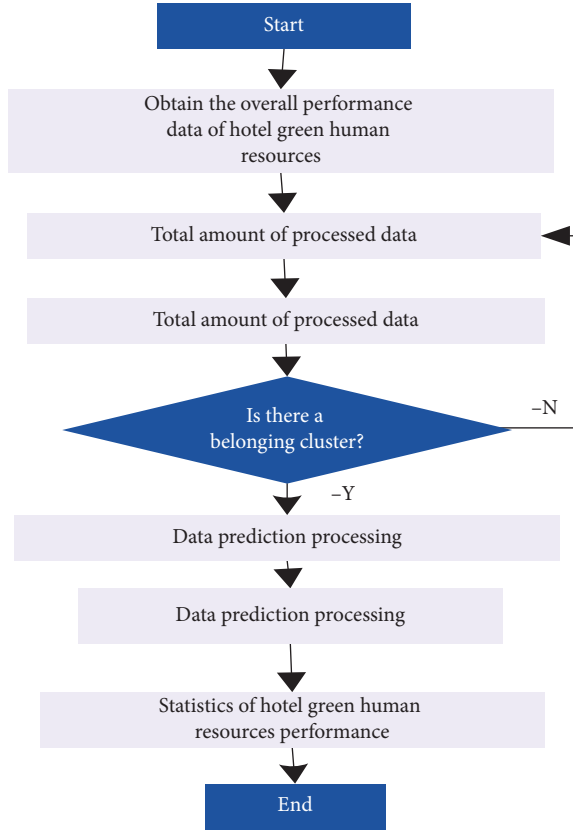


FIGURE 3: Analysis process of performance statistics of hotel green human resources.

**2.2.2. Information Fusion Clustering.** Information fusion clustering can divide a data set into different classes or clusters according to specific criteria so that the similarity of data objects in the same cluster is as great as possible. At the same time, the differences of data objects that are not in the same cluster are as large as possible, which is convenient to obtain the optimal strategy. We divide the data space into grid cells, map data object sets into grid cells, and calculate the density of each cell. According to the preset threshold, each grid unit is judged as a high-density unit, and grid units with sufficient density form clusters. Assume a model for each cluster and determine the best fit of the data to the specified model. The hotel's human resource organization and facility presentation tracking are carried out as part of the ideal plan. The function of cost-of-service performance organization is built. The statistical feature quantity of a hotel's human resource performance is derived by multi-dimensional feature iteration. Furthermore, the threshold distribution at which the cost function reaches the lower limit is calculated as  $V_{\beta, \mathbf{0}}^{\rightarrow k \tilde{\pi}}(x) - \lambda(1 - \mu)/1 - \beta$ .

The logistic model is a mathematical model that represents the probability of one event occurring by making the events logarithmic chances a linear model of one or more relationships between the independent variable. Regression examination is employed in regression analysis to estimate the parameters of a regression analysis. The logistic regression approach has been used to represent the functional connection among one or more explanatory factors and a

binary answer parameter. The corresponding weights of variables are determined using logistic regression, and the cost function is categorized by offset. Using the multidimensional feature parameter decomposition method [14], the information fusion parameter matching template function of the hotel's human resource management performance is derived, as shown in the following equation:

$$V_{\beta, \mathbf{0}}^{\rightarrow k \tilde{\pi}}(x+1) - V_{\beta, \mathbf{0}}^{\rightarrow k \tilde{\pi}}(x) \geq V_{\beta, \mathbf{0}}^{\rightarrow k \tilde{\pi}}(x+1) - V_{\beta, \mathbf{0}}^{\rightarrow k \tilde{\pi}}(x) - \frac{\lambda(1-\mu)}{1-\beta}. \quad (7)$$

The above equation can be defined as follows:

$$LB(x) = V_{\beta, \mathbf{0}}^{\rightarrow k \tilde{\pi}}(x+1) - V_{\beta, \mathbf{0}}^{\rightarrow k \tilde{\pi}}(x) - \frac{\lambda(1-\mu)}{1-\beta}. \quad (8)$$

Several industries employ clustering analysis, including market research, pattern identification, data processing, and image analysis. Clustering can also assist hotel green human resources and marketers in identifying unique groupings within their client base. They can also categorize their consumer groups depending on their purchase habits. The convergence requirement is satisfied as per (9) based on the clustering function of hotel human resource management performance fusion that was obtained above.

$$V_{\beta, \mathbf{0}}^{\rightarrow k \tilde{\pi}}(x+2) - V_{\beta, \mathbf{0}}^{\rightarrow k \tilde{\pi}}(x+1) \geq V_{\beta, \mathbf{0}}^{\rightarrow k \tilde{\pi}}(x+1) - V_{\beta, \mathbf{0}}^{\rightarrow k \tilde{\pi}}(x). \quad (9)$$

In the above equation, it can be seen that  $LB(x)$  is a nondecreasing function. The deep learning method is used to perform performance management and dynamic planning of green hotel human resources management services, and the planning equation is given as follows:

$$\begin{aligned} & \mu \left( V_{\beta, \mathbf{0}}^{\rightarrow k \tilde{\pi}}(x) - V_{\beta, \mathbf{0}}^{\rightarrow k \tilde{\pi}}(x-1) \right) \\ & + (1-\mu) \left( V_{\beta, \mathbf{0}}^{\rightarrow k \tilde{\pi}}(x+1) - V_{\beta, \mathbf{0}}^{\rightarrow k \tilde{\pi}}(x) \right) \\ & \geq \mu LB(x-1) + (1-\mu) LB(x). \end{aligned} \quad (10)$$

The fuzzy programming equation of dynamic characteristic analysis of performance evaluation of green hotel's human resource management is written as per the following equation:

$$\mu LB(x-1) + (1-\mu) LB(x) - \frac{1-\mu}{\beta}. \quad (11)$$

Because  $LB(x)$  is a nondecreasing function, the planning model of hotel human resource management service performance information fusion satisfies the following:

$$\lim_{x \rightarrow N} \left( \mu LB(x-1) + (1-\mu) LB(x) - \frac{1-\mu}{1-\beta} \right) > 0. \quad (12)$$

Then, there is a value  $x_{Th}$ , when  $x > x_{Th}$ , there is a sample condition of hotel green human resource performance decision, as calculated in the following equation:

$$\mu LB(x-1) + (1-\mu)LB(x) - \frac{1-\mu}{1-\beta} \Big|_{x>x_{Th}} > 0. \quad (13)$$

While  $x > \max(k, x_{Th})$ , by adopting the multidimensional grouping method, the statistical characteristic quantity of hotel's human resource management service performance decision is obtained as per the following equation:

$$0 < \Delta L < 1 + \frac{\lambda_2}{L}. \quad (14)$$

The statistical package for the social sciences (SPSS) is a software suite used for statistical data analysis. Even though the term SPSS refers to its original application in the social sciences, it has now moved into other data industries. The SPSS18.0 numerical examination technique is used, and the sample regression examination design of hotel green human resource performance management is established. The ambiguity of assistant decision-making of hotel green human resource performance management is obtained as per the following equation:

$$R^{bc}(\mathbf{T}_{r1}, \mathbf{T}_{r2}) = R_{r1}^{bc}(\mathbf{T}_{r1}) + R_{r2}^{bc}(\mathbf{T}_{r2}). \quad (15)$$

Whenever the value of regression analysis of hotel green human resource performance management satisfies  $\sum_{i=1}^m a_i$  and the quantitative regression characteristic distribution variable of hotel green human resource performance management is  $X_{ij} (i = 1, 2, \dots, m; j = 1, 2, \dots, n)$ , the learning rate of hotel's human resource management service performance information fusion can be written as per the following equation:

$$R^{tw} = \min \{R^{mac}(\mathbf{W}_1, \mathbf{W}_2), R^{bc}(\mathbf{T}_{r1}, \mathbf{T}_{r2})\}. \quad (16)$$

The fuzzy analysis model of salary data of hotel green human resources management is constructed, and the fair scheduling and adaptive equilibrium game of salary distribution in hotel green human resources management are carried out by using the quantitative fusion feature clustering method of absolute salary and relative salary [5].

### 3. Hotel Green Human Resource Performance Model Optimization

**3.1. IoT-Based Hotel Green Human Resources Performance Characteristics Extraction.** The IoT can offer an accurate image of hotel clients' difficulties linked to misunderstandings and inconsistencies encountered immediately at the hotel site. Hotel personnel comprehend this circumstance better since they have access to precise data that allows them to build dialogue and correctly grasp consumer requests. Hotels that follow environmental friendly procedures will increase client satisfaction and encourage them to

return. As a result, it urges hotel staff to commit to and act in environmentally friendly ways. Hotels may develop green staff behavior to manage green hotels. Hotels can be built when workers can use ecologically friendly information from their actions and behavior. Staff can reuse items, decrease product pollution, and recover materials as part of practical actions connected to green employee behavior indicators. They can effectively reduce usage by using fewer polluting items and switching to or using more ecologically friendly products. The process of converting garbage into new resources or goods is known as recycling.

Sigma Assessment Systems is a test development and administration company that creates and administers a wide range of exams. This test includes their suite of personality tests and additional tests used for preemployment personality assessment. Sigma personality assessments are prominent preemployment personality assessments that are frequently utilized and distributed. Sigma test criterion is to assume that a group of test data only contains random errors, calculate and process them to get the standard deviation, and determine an interval according to a certain probability. It is considered that any error beyond this interval is not the random error but the gross error, and the data containing this error should be rejected. The Sigma test criterion is used for quantitative evaluation and reliability analysis of hotel green human resource performance management, and the parameter analysis model of hotel green human resource performance management effect evaluation is obtained [15]. The feature quantity of the theme model of hotel green human resource information is extracted, and the fuzzy query and optimization control of hotel green human resource performance management is carried out by using an in-depth query method. The stable solution of the assistant decision equation of hotel green human resource performance management is obtained by sampling the value of hotel green human resource performance characteristics, which is given in the following equation:

$$E[\tilde{e}_{sk}] = 0 \forall s = 1, \dots, n, k = 1, \dots, p, \quad (17)$$

$$E[\tilde{e}_{s1k1}\tilde{e}_{s2k2}] = \begin{cases} \frac{m}{P}\sigma_s^2 \\ 0 \end{cases}. \quad (18)$$

In the above equation,  $\alpha, \beta, \gamma$ , and  $\rho$  represent the order of  $a, b, c$ , and  $d$  in the decision-making sequence of hotel green human resources performance management. The planning equations of hotel green human resource presentation organization will comprise  $2^k \times (N+1)$  equations, and the state space density technique will be adopted to make the result of hotel green human resource performance organization issues simpler. The multidimensional feature prediction method is adopted to obtain the decision-making optimization function, calculated using the following equation:

$$\begin{aligned}
V_{\beta, \vec{i}}^* (q(n-k)) &= V_{\beta, \vec{0}}^* (q(n-k) + o(\vec{i}^k)) \\
&= \left( P_{\vec{0}} B \right) (q(n-k) + o(\vec{i}^k)) \\
&\quad + \beta \left( \left( P_0 V_{\beta, \vec{0}}^* \right) (q(n-k) + o(\vec{i}^k)) \right) \\
&\quad + \beta \lambda \min \left\{ 0, \mu V_{\beta, \vec{0}}^* (q(n-k) + o(\vec{i}^k)) + (1-\mu) V_{\beta, \vec{0}}^* (q(n-k) + o(\vec{i}^k) + 1) \right. \\
&\quad \left. - \left( \mu V_{\beta, \vec{0}}^* (q(n-k) + o(\vec{i}^k) - 1) - (1-\mu) V_{\beta, \vec{0}}^* (q(n-k) + o(\vec{i}^k)) \right) - \frac{1-\mu}{\beta} \right\} \quad (19) \\
&= \left( P_{\vec{0}} B \right) (q(n-k) + o(\vec{i}^k)) \\
&\quad + \beta \left( \left( P_0 V_{\beta, \vec{0}}^* \right) (q(n-k) + o(\vec{i}^k)) \right) \\
&\quad + \beta \lambda \min \left\{ 0, \mu \left( V_{\beta, \vec{0}}^* (q(n-k) + o(\vec{i}^k)) - V_{\beta, \vec{0}}^* (q(n-k) + o(\vec{i}^k) - 1) \right) \right. \\
&\quad \left. + (1-\mu) \left( V_{\beta, \vec{0}}^* (q(n-k) + o(\vec{i}^k) + 1) - V_{\beta, \vec{0}}^* (q(n-k) + o(\vec{i}^k)) \right) - \frac{1-\mu}{\beta} \right\}.
\end{aligned}$$

The method of maximizing economic benefits and fuzzy decision-making of green hotels is adopted to optimize the decision-making and evaluation of hotel green human resources performance evaluation. The expert system analysis model of hotel green human resources performance evaluation is established [16]. The specific model is shown in Figure 4.

The adaptive optimization of hotel green human resources performance evaluation is carried out by using the fuzzy theory adaptive learning algorithm, so that  $x = q(n-k) + o(\vec{i}^k)$ , considering the situation  $q(n-k) \geq k$ . The equation of dynamic programming of hotel green human resources performance prediction can be written as follows:

$$\begin{aligned}
V_{\beta, \vec{0}}^* (x) &= \left( P_{\vec{0}} B \right) (x) + \beta \left( P_0 V_{\beta, \vec{0}}^* \right) (x) \\
&\quad + \beta \lambda \min \left\{ 0, \mu \left( V_{\beta, \vec{0}}^* (x) - V_{\beta, \vec{0}}^* (x-1) \right) + (1-\mu) \left( V_{\beta, \vec{0}}^* (x+1) - V_{\beta, \vec{0}}^* (x) \right) - \frac{1-\mu}{\beta} \right\}. \quad (20)
\end{aligned}$$

According to the above equation, under the state of  $q(n-k) \geq k$ , after feature breakdown, it is originated that there are  $N$  variables in the forecasting of performance of hotel green human resources. These are simple from  $2^k \times (N+1)$  measurement <sub>$k$</sub>  to  $x$  measurement such as  $x = q(n-k) \leq N + o(\vec{i}^k)$ .

As per aforementioned investigation, a feature removal design of hotel green human resources performance is proven by making data decisions and planning as per the feature extraction results. The benefit degree analysis model of hotel green human resources performance management effect is constructed. In addition, the statistical mathematical

analysis model of hotel green human resources performance management effect evaluation is obtained by combining the social and economic benefit evaluation [17].

**3.2. Performance Evaluation and Prediction of Green Human Resources in Hotels.** The deep inquiry method is adopted to carry out fuzzy inquiry and optimization control of hotel green human resources performance management. The QPS interface and user count are used to determine the best optimization strategy. The MySQL feature can be utilized for query optimization in systems with a low user base and a

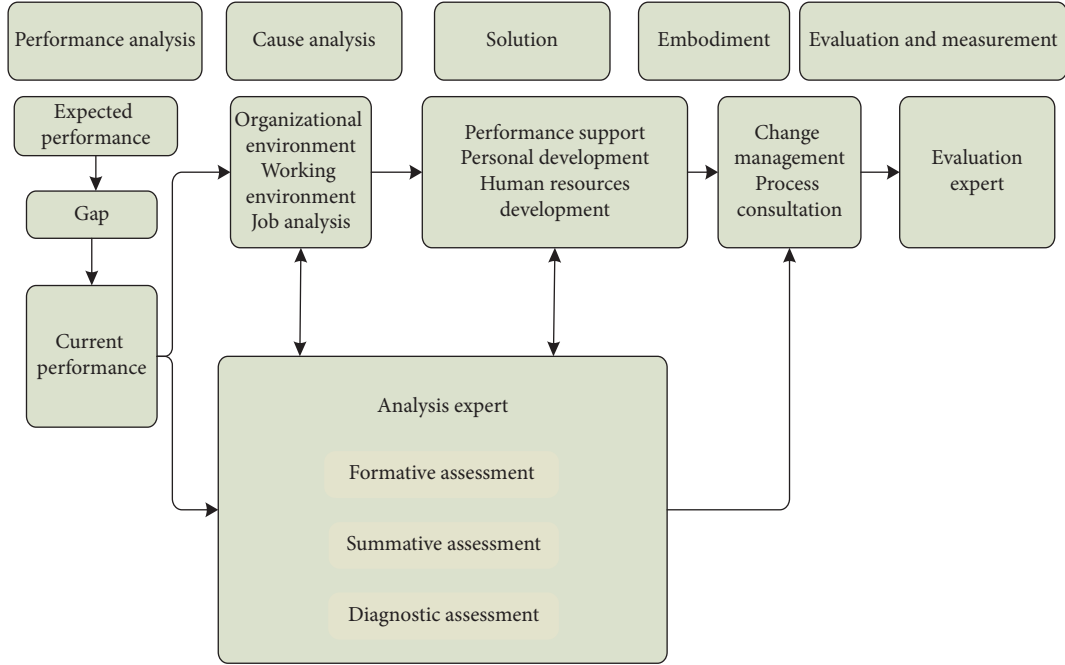


FIGURE 4: The expert system analysis model of hotel green human resource performance evaluation.

B-end focus. The performance data of hotel green human resources are searched according to the index, and the data information is filtered according to the fuzzy query criteria, using MySQL to improve fuzzy matching. The hotel green human resources performance filtering operation is placed in the storage engine layer, which filters out unnecessary data in advance and reduces the IO overhead caused by unnecessary data being scanned. When evaluating and forecasting the performance of hotel green human resources, it can reduce the reading of data from the storage engine layer by the service layer, thus providing the overall performance of the database and realizing optimal control. All characteristic solutions of satisfy  $R^{mac}(\mathbf{W}_1, \mathbf{W}_2) \geq R^{bc}(\mathbf{T}_{r1}^0, \mathbf{T}_{r2}^0)$ . The characteristic variables  $\mu_1, \mu_2$ , and  $\mu_m$  of hotel green human resource performance decision make the optimization problem of assistant decision-making of hotel green human resource performance management meet the results given in the following equations:

$$\begin{aligned} \sum_{k=1}^{r_2} \log \left( 1 + \left( \frac{1}{\mu_1} \frac{|\omega_{r2}(k)|^2}{\sigma_2(k)^2} - 1 \right)^+ \right) &= R_{1r}^-(\mathbf{W}_1^0), \\ \sum_{k=1}^{r_1} \log \left( 1 + \left( \frac{1}{\mu_2} \frac{|\omega_{r1}(k)|^2}{\sigma_1(k)^2} - 1 \right)^+ \right) &= R_{2r}^-(\mathbf{W}_2^0), \\ \sum_i \sum_{k=1}^{r_i} \log \left( 1 + \left( \frac{1}{\mu_m} \frac{|\omega_{ri}(k)|^2}{\sigma_i(k)^2} - 1 \right)^+ \right) &= R^{mac}(\mathbf{W}_1^0, \mathbf{W}_2^0). \end{aligned} \quad (21)$$

From the constraints of 2 controlling variables, the weight of adaptive  $W_e = (\omega_j^{(e)}, 0)$  of hotel green human

resources performance management is obtained, and the statistical index distribution set is established. The specific distribution content is shown in Figure 5.

In the statistical index distribution set, the index set  $E_k \in E (k = 1, 2, \dots, t)$  of hotel green human resources performance management is obtained. Information fusion is a technique that integrates and improves the gathering, display, and internal relationships of many forms of data. The hotel green human resources performance management is realized through multidimensional information fusion technology. In addition, the number, distribution, and structure of human resources are predicted. This prediction can be obtained using prediction function, which is represented by  $1/\mu_m < \max \{1/\mu_1, 1/\mu_2\}$ . The statistical test method between groups is adopted to analyze the auto-correlation of various variables of hotel green human resources performance management effect and to realize performance evaluation. The optimization algorithm implementation process is shown in Figure 6.

#### 4. Simulation and Result Analysis

In order to verify the application performance of this method in the service performance optimization management of hotel green human resources, the simulation test analysis is carried out. The number of nodes sampled for hotel green human resources information is  $N=6822$ , the number of statistical samples is 200, the test set of hotel green human resources performance information samples is 250, the data packet transmission rate is  $v_\alpha \in [0, 2](m)/s$ , and the related parameter settings are presented in Table 1.

According to the above parameter settings, the hotel green human resource performance management and



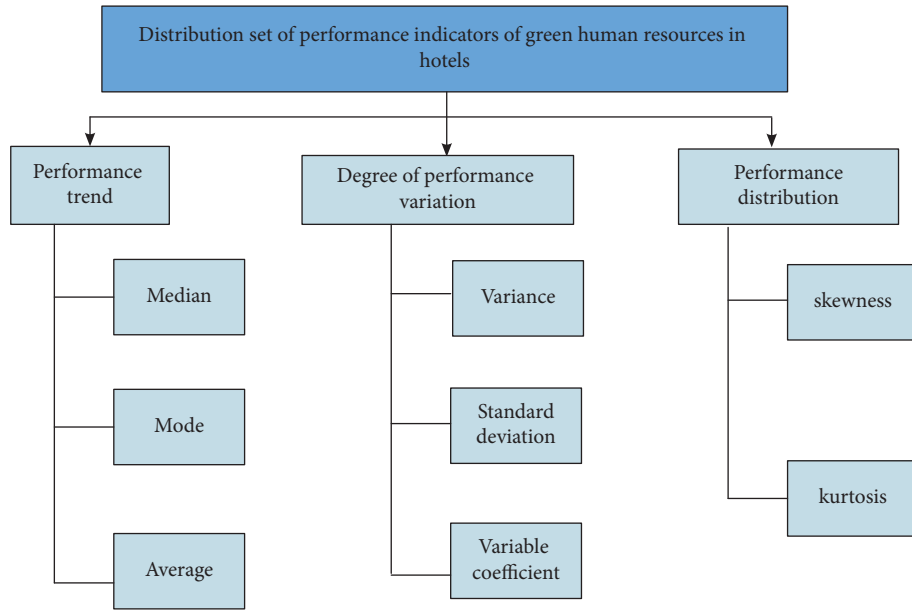


FIGURE 5: The distribution set of hotel green human resources performance management.

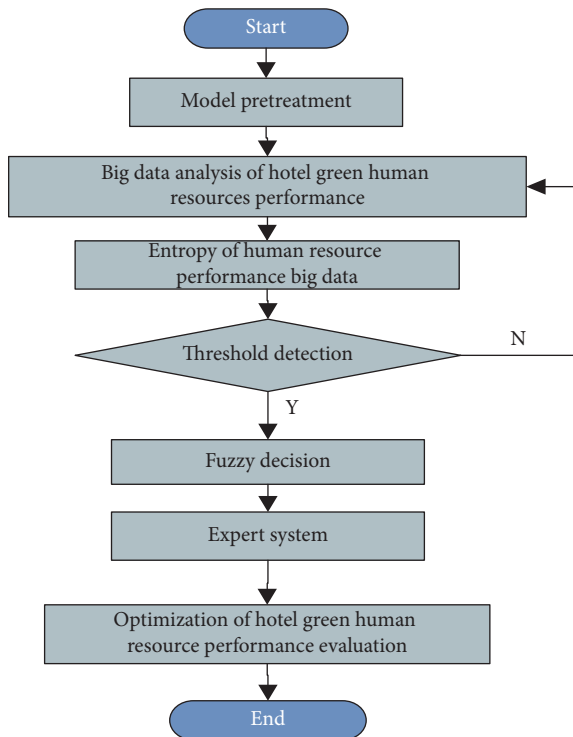


FIGURE 6: Algorithm implementation process.

decision-making are carried out. The distribution of big data in human resource management and service performance configuration is shown in Figure 7.

According to the data sample in the above figure, the fuzzy query and optimization control of hotel green human

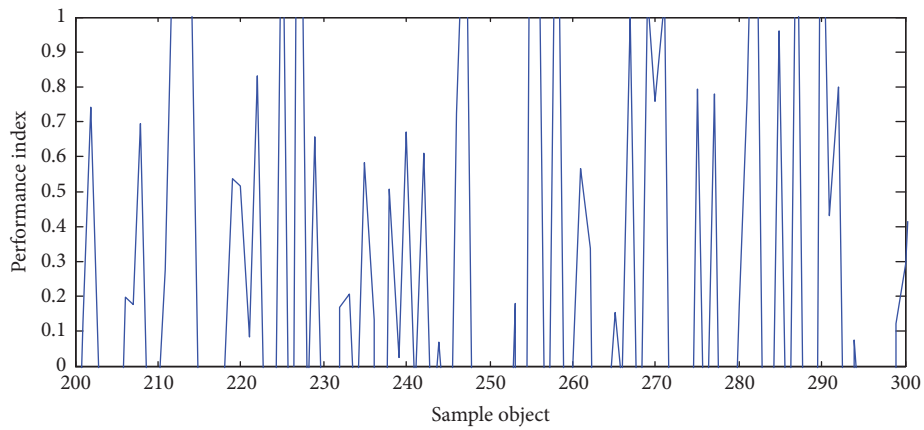
resources performance management are carried out by using the in-depth query method. The service performance sample data fusion is realized by multidimensional information fusion technology. The results are shown in Figure 8.

According to the examination of the preceding figure, this approach may successfully implement statistical analysis and performance prediction. Furthermore, to increase service performance integration and information identification data warehousing, online analytical processing and decision support technology may be utilized in human resource management. The accuracy of performance prediction is tested, and the comparison results are shown in Figure 8. This figure illustrates the suggested method's performance accuracy to other researchers. According to this figure, the accuracy of recommended, reference [3], reference [5], and reference [6] in 100 trials is 0.899, 0.823, 0.823, and 0.723, respectively. The accuracy of recommended, reference [3], reference [5], and reference [6] for 200 tests is 0.932, 0.885, 0.856, and 0.797, respectively. The accuracy of recommended, reference [3], reference [5], and reference [6] for 300 experiments is 0.999, 0.899, 0.889, and 0.803, respectively. In simple words, from the analysis of this figure, it can be seen that the method in this article has high accuracy and good statistical analysis ability for hotel green human resources performance prediction.

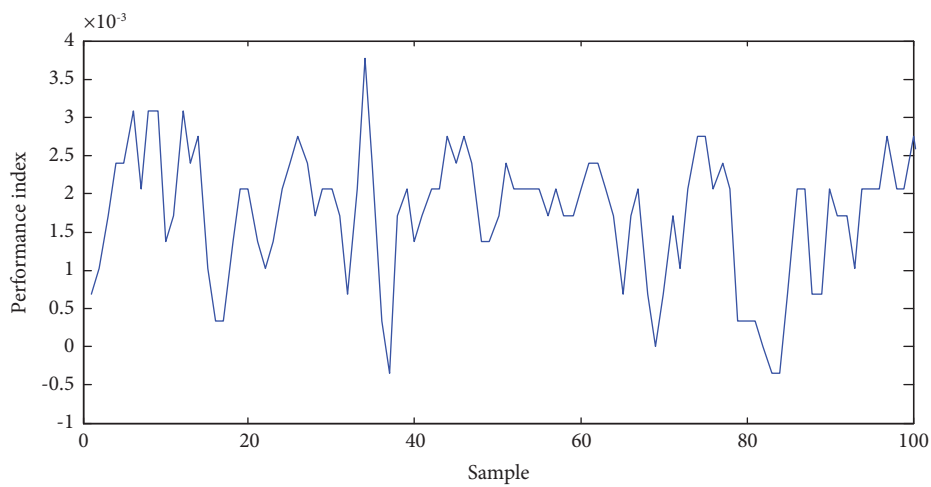
Figure 9 compares the performance parameters and principal components of characteristics. According to this figure, test object 15 has the greatest performance parameter of 0.404, while test object 9 has the lowest performance value of 0.404. Similarly, test object 10 has the greatest number of primary component characteristics, whereas test object 7 has the lowest. Comparison of the performance parameters and principal components of characteristics is shown in Figure 10.

TABLE 1: Performance configuration parameters of hotel green human resources.

Test object	Sample number	Salary grade	Performance parameters	Principal component characteristics
1	4137	2.443	0.355	0.434
2	4128	1.231	0.374	0.432
3	4201	1.361	0.350	0.450
4	4199	4.611	0.338	0.450
5	4143	1.742	0.377	0.436
6	4088	0.005	0.388	0.422
7	4066	2.379	0.389	0.417
8	4108	2.855	0.387	0.427
9	4146	3.812	0.332	0.436
10	4286	1.872	0.366	0.471
11	4148	2.605	0.340	0.437
12	4219	1.170	0.369	0.455
13	4096	2.480	0.351	0.424
14	4087	4.320	0.359	0.422
15	4213	2.138	0.404	0.453



(a)



(b)

FIGURE 7: Results of statistical analysis of data. (a) Test samples. (b) Training samples.

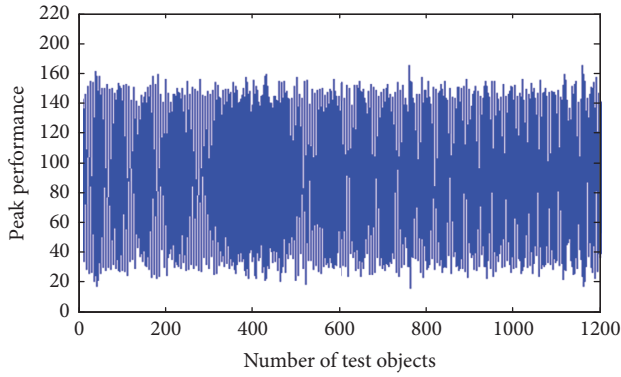


FIGURE 8: Data fusion decision results.

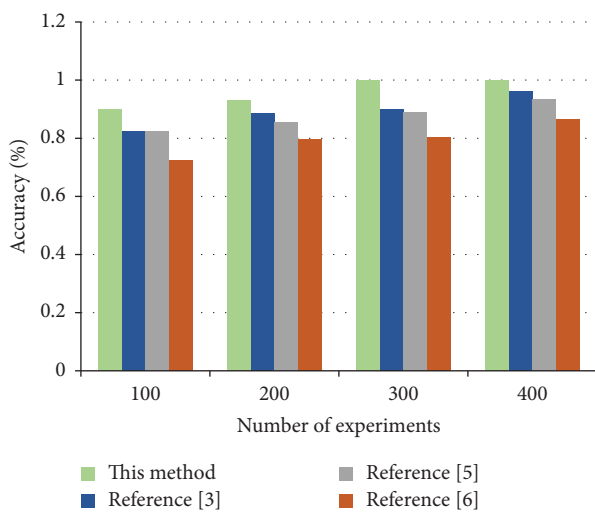


FIGURE 9: Comparison of performance prediction accuracy of hotel green human resources.

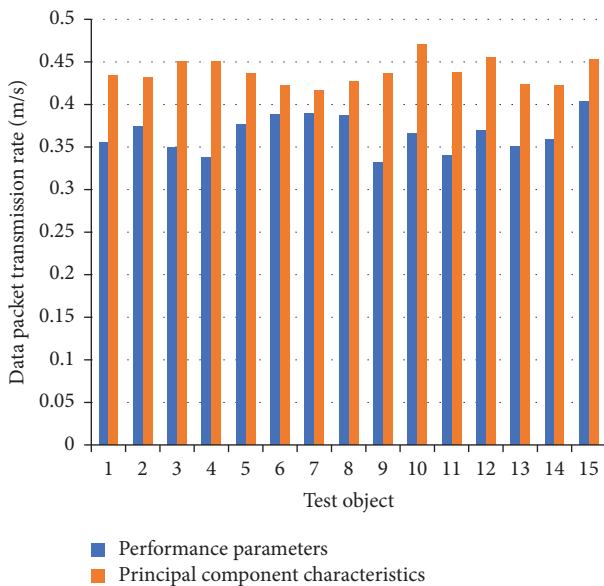


FIGURE 10: Comparison of the performance parameters and principal components of characteristics.

### 5. Conclusions

The growth of the Internet of Things is undeniable and unstoppable. The Internet of Things (IoT) is revolutionary and has been motivated by social demands and economic possibilities via demand-pull and supplier push. It is made possible by several strands of technological innovation and application development in various fields, including hotel and human resource management. Therefore, this article proposes a performance model of hotel green human resources based on fuzzy theory to accelerate the transformation of hotel’s human resource management from pure functional management to information management and achieve the optimal allocation of hotel green human resource management. The fuzzy analysis model of salary data of hotel green human resource management is constructed. The quantitative fusion feature clustering method of absolute salary and relative salary is adopted to make fair scheduling and adaptive equilibrium game of salary distribution in hotel green human resource management. The sample data of hotel green human resource performance is obtained by the fuzzy information sampling method, and the information fusion parameter matching template function of hotel’s human resource management performance is obtained by the multidimensional feature parameter decomposition method. The fuzzy analysis model of salary data of hotel green human resources management is constructed, and the quantitative fusion feature clustering method of absolute salary and relative salary is adopted. The analysis shows that the application of the hotel green human resource performance management system in hotel green human resource management is helpful to analyze the service performance law of human resources in complex data. It provides data support and optimizes the management process in combination with the characteristics of hotel green management.

### Data Availability

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

### Conflicts of Interest

The author declares that he has no conflicts of interest.

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