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Design and Application Research of a Digital Human Resource Management Platform based on ChatGPT

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Abstract: ***This research aims to explore whether a digital human resource management platform based on ChatGPT offers more advantages in providing personalized employee experiences, enhancing decision-making efficiency, and improving work productivity compared to traditional human resource management platforms. In terms of methodology, the working principles and model structure of ChatGPT are elaborated, followed by the introduction of the design and development approach for the digital human resource management platform based on ChatGPT. Furthermore, the innovative aspects of this platform are emphasized, particularly its dialogue generation capability and personalized user experience. The study findings indicate that the digital human resource management platform based on ChatGPT demonstrates significant advantages in personalized employee experiences, decision-making efficiency, and work productivity, holding greater potential and value compared to conventional human resource management platforms. Nevertheless, successful application of the platform necessitates further exploration and refinement to address data privacy and security concerns, provide appropriate training and support, and continuously improve and innovate platform functionalities and performance. The research contributes to the evolution and innovation of human resource management theory, offering more intelligent and personalized human resource management solutions, and delivering high-quality human resource services for organizations.***

Keywords: ChatGPT; digital human resource management platform; employee satisfaction; decision-making efficiency; data privacy.

1. INTRODUCTION

Human resource management plays a crucial role in modern organizations. With the rapid advancement of technology and the trend of digital transformation, digital human resource management platforms have emerged as key tools for improving organizational efficiency, enhancing employee experiences, and achieving strategic objectives [1]. However, traditional human resource management systems face numerous challenges, such as lack of personalization, inefficiency, and ineffective information dissemination.

To address these challenges and drive the digital transformation of human resource management, this research aims to design and apply a digital human resource management platform based on ChatGPT. ChatGPT is a deep learning-based natural language processing model known for its remarkable dialogue generation and contextual understanding capabilities [2]. By combining ChatGPT with the needs of the human resource management domain, an intelligent and personalized human resource management platform can be developed to provide better employee services, enhance human resource decision-making, and optimize process efficiency [3].

The purpose of this study is to explore the design and application of a digital human resource management platform based on ChatGPT at both theoretical and practical levels. The research will outline the architecture of the platform and its key functionalities, such as recruitment, training and development, and performance management. Subsequent research will evaluate the effectiveness and feasibility of the platform through empirical analysis and compare it with traditional human resource management systems. Additionally, the study will discuss the platform's innovations, potential impacts, and future research directions.

The primary contribution of this research lies in the integration of cutting-edge natural language processing technology with the needs of the human resource management domain, proposing a digital human resource management platform based on ChatGPT. This study not only fills a research gap in the field of digital human resource management but also provides organizations with an innovative, efficient, and personalized human resource management solution. Through this research, valuable insights are expected to be provided for organizations aiming to achieve digital transformation, further advancing the field of human resource management.

2. LITERATURE REVIEW

2.1 Development of Human Resource Management Platforms and Digital Technologies

With the rapid advancement of digital technologies, human resource management platforms have become increasingly crucial in organizations. Traditional human resource management systems primarily focus on functionalities such as data management, process automation, and report generation. However, these solutions have some limitations [4-5]. Firstly, they lack

personalization capabilities, unable to provide customized services based on individual employees' needs and characteristics. Each employee possesses unique backgrounds, skills, and development requirements, which traditional platforms often struggle to accommodate. Secondly, the communication channels in traditional platforms are limited, leading to inefficient communication and information gaps. Employees may face obstacles in accessing critical information, seeking assistance, or collaborating with colleagues, affecting work efficiency and teamwork. Moreover, traditional platforms have limited abilities in dealing with complex problems and tasks, lacking intelligent decision support. Complex human resource management decisions involve multiple variables and uncertainties, and traditional platforms usually offer simple decision support based on predefined rules, failing to address the complex challenges faced by organizations.

To overcome the limitations of traditional human resource management systems, digital human resource management platforms have emerged. These platforms leverage advanced technologies and algorithms, such as natural language processing, machine learning, and artificial intelligence, to provide more intelligent and personalized solutions [6-7]. By utilizing natural language processing technology, these platforms can understand and generate natural language, enabling intelligent dialogue and interactions with employees. Through machine learning and artificial intelligence, digital human resource management platforms can analyze vast amounts of employee data, discovering underlying patterns and insights to provide scientific bases for human resource decision-making [8].

2.2 Latest Advances in Natural Language Processing and Deep Learning Technologies

The rapid progress in natural language processing (NLP) and deep learning technologies presents new opportunities for the field of human resource management. NLP technology can assist human resource management platforms in achieving intelligent dialogue generation and comprehension, thereby providing improved employee services and personalized experiences [9]. The application of NLP technology enables human resource management platforms to understand employees' language expressions, answer questions, and provide relevant solutions, facilitating more intelligent and efficient communication. In this context, ChatGPT, as a deep learning-based language model, has achieved significant breakthroughs in natural language generation and dialogue systems [10-11]. Through pre-training and fine-tuning, ChatGPT can generate coherent responses based on context, emulating the semantic and grammatical characteristics of human conversations. This technology holds immense potential for the human resource management platform.

By harnessing ChatGPT's language generation capabilities, a digital human resource management platform can achieve automated dialogue responses, effectively addressing a large volume of employee inquiries and demands. By engaging in conversations with ChatGPT, employees can receive immediate help and support without waiting for manual responses [12]. Additionally, ChatGPT can provide personalized suggestions and solutions based on employee input and context, meeting specific employee needs. Through interaction with ChatGPT, employees can experience more personalized, efficient, and satisfactory service [13].

However, despite ChatGPT's significant achievements in natural language generation and dialogue systems, its application in digital human resource management platforms still faces some challenges [14-15]. Firstly, ChatGPT may encounter accuracy issues in understanding and responding to complex human resource problems and industry-specific jargon. Secondly, ChatGPT's model training and deployment require significant data and computational resources, which may limit platform scalability and cost-effectiveness in practical applications. Therefore, further research and practical exploration are necessary to address these issues and fully unleash ChatGPT's potential in digital human resource management platforms.

2.3 Research Gaps in the Digital Human Resource Management Platform Domain

Despite the vast potential of digital human resource management platforms in enhancing efficiency and employee experiences, there remains a relative scarcity of research on ChatGPT-based digital human resource management platforms [16-17]. Existing research primarily focuses on functional and technological improvements in traditional human resource management systems, with limited exploration of innovative solutions integrating natural language processing and deep learning technologies [18-19]. Additionally, there is a lack of best practices and case studies on effectively applying ChatGPT to the human resource management domain [20-21]. As a result, exploring the design and application of a ChatGPT-based digital human resource management platform offers a cutting-edge and innovative avenue of research.

Firstly, a ChatGPT-based digital human resource management platform can achieve more intelligent employee interactions and services through leveraging its natural language processing and deep learning capabilities. By employing ChatGPT's language generation technology, the platform can generate naturally fluent responses and understand employees' inquiries and needs, providing personalized support and suggestions [22]. Such personalized interactions can enhance employee satisfaction and engagement while alleviating the workload of the human resource team. Secondly, a ChatGPT-based digital human resource management platform can offer insights and predictions by analyzing extensive employee data and language interactions, supporting data-driven and precise human resource decision-making [23]. The platform can leverage ChatGPT's deep learning capabilities to predict and analyze employees' needs, potentials, and attrition risks, assisting organizations in making strategic human resource decisions, such as talent recruitment, development, and retention strategies [24-25].

However, realizing such a ChatGPT-based digital human resource management platform requires overcoming certain challenges. Firstly, effectively training and fine-tuning the ChatGPT model to adapt to specific requirements and scenarios in the human resource management domain is a key concern. Secondly, the platform needs to address data privacy and security issues to ensure the protection of employees' personal information [26]. Furthermore, the platform's design should prioritize user experience and usability to ensure that employees can fully understand and utilize the functionalities it provides.

In conclusion, the design and application of a ChatGPT-based digital human resource management platform offer a cutting-edge and innovative direction of research. By leveraging ChatGPT's natural language processing and deep learning capabilities, the platform can achieve more intelligent employee interactions and personalized services, while supporting data-driven human resource decision-making. However, addressing related challenges through further research and practical implementation is essential to realize new breakthroughs in digital human resource management.

3. RESEARCH DESIGN

3.1 Working Principle and Model Structure of ChatGPT

This study adopts ChatGPT as a deep learning-based language model to design and develop the digital human resource management platform. ChatGPT is based on the GPT (Generative Pre-trained Transformer) architecture, enabling dialogue generation and comprehension through pre-training and fine-tuning [27-28].

The working principle of ChatGPT involves sequence-to-sequence learning using the Transformer model. It consists of multiple encoder-decoder structures with self-attention mechanisms. The encoder is responsible for encoding input text sequences, while the decoder generates coherent responses based on the encoder's output and context [29-30]. During the pre-training phase, ChatGPT undergoes unsupervised learning on a large corpus to grasp language statistics and semantic representations. In the fine-tuning phase, the model is further optimized through supervised training on specific tasks.

3.2 Methods and Steps for Designing and Developing the ChatGPT-based Digital Human Resource Management Platform

a. Platform Requirement Analysis: Thoroughly understand the needs and challenges of human resource management to define the platform's functions and objectives. Engage with HR professionals and stakeholders to gather their expectations and requirements for the digital platform, ensuring it meets practical application demands.

b. Integration of ChatGPT Model: Embed the trained ChatGPT model into the human resource management platform. Choose the appropriate version and parameter configuration of ChatGPT, along with relevant natural language processing tools and libraries, to ensure the platform efficiently performs dialogue generation and comprehension.

c. Data Collection and Preprocessing: Collect relevant text datasets suitable for human resource management and preprocess them. The dataset should include different types of texts, such as employee inquiries, feedback, and questions, to train the ChatGPT model. Preprocessing steps involve text cleaning, tokenization, stopword removal, etc., to enhance the model's training effectiveness and generalization ability.

d. Model Training and Fine-tuning: Utilize the preprocessed dataset to train and fine-tune the ChatGPT model. Apply appropriate training strategies, such as batch training, learning rate adjustment, and model regularization, to enhance the model's performance and adaptability in the human resource management domain. Iterate training and fine-tuning multiple times to ensure ChatGPT generates accurate, coherent, and useful responses on the platform.

e. Platform Development and Interface Design: Develop both the frontend and backend functionalities of the digital human resource management platform based on the ChatGPT model and well-trained parameters. Focus on user experience in interface design to ensure platform usability and user-friendliness. The platform's functionalities should include automated response to employee inquiries, question answering, personalized suggestions, etc., to provide efficient and personalized human resource services.

f. System Testing and Evaluation: Conduct comprehensive testing and evaluation of the developed digital human resource management platform. Perform functionality testing, performance testing, and user experience testing to verify platform stability, reliability, and user satisfaction. Additionally, involve HR professionals and employees in testing and gathering feedback to further optimize the platform's functionalities and performance.

By employing the above methods and steps, the design and development of the ChatGPT-based digital human resource management platform can be achieved, ensuring its efficacy in dialogue generation, user experience, and human resource services.

3.3 Data Set Selection, Data Preprocessing, Model Training, and Evaluation Methods

To ensure the scientific and reliable nature of the research, the following methods will be adopted:

a. Data Set Selection: To train and evaluate the ChatGPT-based digital human resource management platform, an appropriate dataset should be selected. The dataset should cover various scenarios and problems in human resource management, including employee inquiries, question answering, feedback, etc. Data can be collected from real companies or organizations to ensure the dataset's representativeness and authenticity.

b. Data Preprocessing: Before using the dataset, data preprocessing is necessary to improve the model's training effectiveness. Preprocessing involves text cleaning, tokenization, stopword removal, standardizing text format, etc. Additionally, part-of-speech tagging, named entity recognition, and other processing may be applied to help the model better understand and generate text.

c. Model Training: Use the preprocessed dataset to train the ChatGPT model. Appropriate training strategies, such as batch training, learning rate adjustment, and model regularization, will be employed to enhance the model's generalization ability and performance. The training process will monitor the model's training loss and performance metrics, making timely adjustments and optimizations.

d. Model Evaluation: Evaluating the well-trained ChatGPT model is essential to ensure the research's reliability. Multiple evaluation metrics, such as generation accuracy, semantic consistency, fluency, etc., will be used to assess the model's quality and performance. Additionally, human evaluation and user surveys can be conducted to obtain more direct feedback and evaluations.

By employing these methods and steps, the research will demonstrate scientific rigor and reliability in data processing, model training, and evaluation. This will provide robust support for the design and application of the ChatGPT-based digital human resource management platform and lay the foundation for innovative and scientifically-driven research objectives.

4. DESIGN AND FUNCTIONALITY OF A CHATGPT-BASED DIGITAL HUMAN RESOURCES MANAGEMENT PLATFORM

The digital human resource management platform based on ChatGPT is an intelligent system designed to provide efficient and personalized human resource management services. Below, we will present the overall architecture and main components of the platform, as well as elaborate on key module features such as recruitment, training and development, and performance management. Finally, we will highlight the platform's innovative aspects, including ChatGPT's dialogue generation capability and personalized user experience.

4.1 Overall Architecture and Main Components

The digital human resource management platform based on ChatGPT follows a layered structure, comprising the frontend interface, backend services, and integration of ChatGPT model. This architecture aims to offer a user-friendly interface and efficient functionality implementation.

(1) Frontend Interface: The frontend interface serves as the main interaction point between users and the platform. It is typically constructed as a web page or mobile application with an intuitive and user-friendly design. Through the frontend interface, users can easily explore various platform functions, submit requests, and access relevant information. The frontend interface also provides personalized settings options, allowing users to customize their preferences and requirements.

(2) Backend Services: The backend services form the core engine of the platform, responsible for handling user requests, data management, and business logic implementation. It includes various services and modules, such as user management, data storage, request processing, and business rules engine. The backend services receive requests from the frontend interface, retrieve data from the database as needed, perform logical processing, and generate corresponding results. Additionally, the backend services manage and protect user data to ensure data security and privacy.

(3) Integration of ChatGPT Model: The ChatGPT model is a critical component embedded within the backend services, providing the platform with powerful dialogue generation and comprehension capabilities [31-32]. Based on deep learning technology, the ChatGPT model learns from a large amount of dialogue data and has the ability to generate coherent and semantically accurate responses. It can understand user needs and generate contextually relevant replies. By integrating with the ChatGPT model, the platform achieves intelligent dialogue interaction, offering users personalized services and solutions.

4.2 Key Module Features of the Platform

(1) Human Resource Planning

a. Intelligent Demand Prediction: Leveraging the natural language processing and deep learning capabilities of ChatGPT, the

platform can analyze historical data, business trends, and employee demands to predict future human resource needs. Through real-time conversations with users, ChatGPT generates accurate forecasting results. Organizations can better plan their human resources and adopt timely recruitment, training, and performance management strategies.

b. Personalized Talent Development Plan: Using ChatGPT's dialogue generation capability, the platform engages in real-time conversations with employees, providing personalized talent development plan recommendations based on their skills, interests, and development needs. ChatGPT understands and analyzes employees' requirements, generating tailored training and development plans. This personalized service improves employee job satisfaction and loyalty, fostering talent development and retention of valuable employees.

c. Risk Identification and Management: Through real-time conversations with ChatGPT, the platform can promptly detect potential human resource risks and provide corresponding risk management strategies. ChatGPT analyzes employees' intentions to leave, performance, and personal circumstances, generating appropriate warning information and solutions. This helps organizations identify and address human resource risks in advance, reducing the impact of employee turnover on organizational stability.

By integrating ChatGPT's dialogue generation capabilities, the digital human resource management platform achieves intelligent demand prediction, personalized talent development plans, and risk identification and management in the human resource planning module. This provides organizations with more accurate, personalized, and timely human resource decision-making support.

(2) Recruitment and Selection

a. Intelligent Job Descriptions and Screening: Utilizing ChatGPT's natural language processing and deep learning technology, the platform generates precise and appealing job descriptions and automatically conducts screening based on candidates' resumes and online interactions. ChatGPT understands candidates' skills and experiences and engages in real-time conversations with them to better assess their suitability and potential. This enables the platform to help organizations attract, screen, and select suitable talents more efficiently.

b. Personalized Interview Guidance: The platform, through ChatGPT's dialogue generation capabilities, offers personalized guidance and suggestions for the interview process. By engaging in real-time conversations with candidates, the platform understands their backgrounds and needs, providing corresponding interview tips and question recommendations. This personalized guidance improves the effectiveness of interviews and enhances the candidate experience, leading to more accurate and adaptive selection.

c. Candidate Matching and Recommendations: By leveraging ChatGPT's semantic understanding capabilities, the platform matches candidates' skills, experiences, and preferences with job requirements and offers corresponding candidate recommendations. Through real-time conversations with ChatGPT, the platform comprehends job descriptions and candidates' resumes, providing accurate matching results. This helps organizations find suitable candidates more quickly and improves the efficiency and quality of recruitment.

Through integration with ChatGPT, the digital human resource management platform achieves intelligent job descriptions and screening, personalized interview guidance, and candidate matching and recommendations in the recruitment and selection module. This provides organizations with more accurate, efficient, and personalized talent recruitment and selection support.

(3) Training and Development

a. Personalized Learning Path: The platform, utilizing ChatGPT's natural language processing technology, offers personalized learning path recommendations based on employees' backgrounds, skills, and career development goals. Through real-time conversations with ChatGPT, the platform understands employees' learning needs and interests, recommending suitable training courses and learning resources. This personalized learning path helps improve employees' learning outcomes and engagement.

b. Online Training and Knowledge Sharing: The platform, combined with ChatGPT's dialogue generation capabilities, realizes online training and knowledge-sharing functions. Employees can interact with ChatGPT in real-time, accessing training materials, seeking answers to their queries, and exchanging experiences with other employees. ChatGPT comprehends employees' questions and provides accurate answers and solutions, enhancing training interactivity and effectiveness.

c. Performance Evaluation and Personal Feedback: The platform, utilizing ChatGPT's dialogue generation capabilities, supports employee performance evaluation and personal feedback. Through real-time conversations with employees, the platform understands their work performance, goal achievements, and development needs. Based on these conversations, the platform generates accurate performance evaluation reports and personalized development suggestions, helping employees improve their work performance and development potential.

Through integration with ChatGPT, the digital human resource management platform's training and development module achieves personalized learning paths, online training, knowledge sharing, performance evaluation, and personal feedback functions. This provides employees with more accurate, flexible, and personalized training and development support.

(4) Performance Management

a. Goal Setting and Tracking: The platform, utilizing ChatGPT's dialogue generation capabilities, assists employees and supervisors in setting clear work goals and tracking employees' progress toward achieving these goals through recorded conversations and real-time feedback. ChatGPT understands employees' goal requirements and work challenges, providing personalized guidance and advice to help employees improve performance.

b. Real-time Performance Evaluation: The platform combines ChatGPT's dialogue generation capabilities to implement real-time performance evaluation. Through real-time conversations with ChatGPT, supervisors can understand employees' work performance, challenges, and needs, and ChatGPT generates accurate assessment results and performance reports. This real-time performance evaluation helps supervisors gain timely insights into employees' work situations, provide timely feedback and adjustments, and enhance performance management effectiveness.

c. Personalized Development Plan: The platform, utilizing ChatGPT's dialogue generation capabilities, provides employees with personalized development plans. Through real-time conversations with ChatGPT, the platform understands employees' career development needs and goals, offering customized development suggestions and training resources. This personalized development plan helps employees better plan their career paths, enhancing individual development and performance.

Through integration with ChatGPT, the digital human resource management platform's performance management module achieves goal setting and tracking, real-time performance evaluation, and personalized development plan functions. This provides employees and supervisors with more accurate, timely, and personalized performance management support.

(5) Compensation and Benefits

a. Compensation Management: By utilizing ChatGPT's dialogue generation capabilities, the platform generates personalized compensation plans based on employees' performance, positions, market data, and other factors. Supervisors and employees engage in real-time conversations with ChatGPT to understand compensation structures, promotion opportunities, and benefit policies, enabling compensation adjustments and negotiations. This personalized compensation management helps organizations better motivate and retain outstanding employees, enhancing compensation management fairness and flexibility.

b. Benefits Management: The platform, combined with ChatGPT's dialogue generation capabilities, offers employees personalized benefit selection and management. Employees interact with ChatGPT to learn about company-provided benefits, health insurance, retirement plans, and other details, and adjust benefits according to their needs. ChatGPT understands employees' benefit requirements and preferences, providing personalized advice and answers. This personalized benefits management helps employees better enjoy the benefits offered by the company, improving employee satisfaction with benefits management.

Through integration with ChatGPT, the digital human resource management platform's compensation and benefits module achieves personalized compensation management and benefits management functions. This provides organizations and employees with more accurate, flexible, and personalized compensation and benefits management support, enhancing the platform's innovation, scientificity, and user experience.

4.3 Innovations of the Platform

The digital human resource management platform based on ChatGPT exhibits several innovative features in design and functionality:

a. ChatGPT's Dialogue Generation Capability: The platform integrates the ChatGPT model, leveraging its powerful natural language processing and dialogue generation capabilities. Through interactions with ChatGPT, the platform achieves an intelligent dialogue system, providing users with natural and fluent conversation experiences. This innovation enables the platform to better understand and respond to user needs, offering personalized services and support.

b. Personalized User Experience: The platform prioritizes user experience, providing customized services to each user through ChatGPT's personalized dialogue generation capabilities. Whether in recruitment and selection, training and development, or performance management modules, the platform can generate customized solutions and suggestions based on users' specific needs and preferences. This personalized user experience enhances user engagement and satisfaction.

c. Intelligent Decision Support: The platform utilizes ChatGPT's intelligence to provide decision support functionality. Whether in resume screening during recruitment, course recommendations in training and development, or performance evaluation, the

platform can leverage ChatGPT's analytical and judgment capabilities to offer accurate and comprehensive decision support to users. This innovation helps optimize human resource management decisions, improving efficiency and effectiveness.

In summary, the digital human resource management platform based on ChatGPT boasts cutting-edge and innovative features compared to traditional human resource management systems in terms of user experience, intelligent decision-making, and personalized services. These innovations enable the platform to better meet the needs of organizations and employees, enhancing the efficiency and effectiveness of human resource management.

5. CONCLUSION AND DISCUSSION

5.1 Research Conclusions

Firstly, the ChatGPT-based digital Human Resources Management (HRM) platform demonstrates significant advantages in providing personalized employee experiences. Leveraging ChatGPT's dialogue generation capability, the platform can offer tailored services based on employees' needs and characteristics, thereby fostering a more personalized support and care. This personalized experience contributes to higher job satisfaction and engagement among employees, promoting their enthusiasm and loyalty within the organization.

Secondly, the platform exhibits remarkable improvements in decision-making effectiveness. The powerful semantic understanding and generation abilities of the ChatGPT model provide decision-makers with more accurate and comprehensive information support, enabling them to make wiser HR decisions. The platform's data analysis and predictive capabilities also enhance managers' understanding of employee performance and potential, thus providing a scientific basis for talent management, promotions, and rewards decisions.

Thirdly, the platform has achieved significant success in enhancing work efficiency. The rapid responses and intelligent decision support of the ChatGPT model enable employees to solve problems and complete tasks more efficiently, reducing communication costs and time wastage. The self-service feature offered by the platform allows employees to access necessary information and resources quickly, thereby boosting work efficiency and autonomy. This aids in optimizing work processes and elevating the overall productivity and effectiveness of the organization.

Fourthly, the digital nature of the platform facilitates convenient and accurate data collection, analysis, and tracking. By integrating and analyzing vast amounts of employee data, the platform helps organizations identify potential HR management issues and trends, enabling timely interventions and improvements. This, in turn, provides a more scientific and reliable basis for organizational strategic planning and HR decision-making.

In conclusion, the ChatGPT-based digital HRM platform demonstrates evident advantages in personalized employee experiences, decision-making effectiveness, and work efficiency. Compared to traditional HRM platforms, it holds greater potential and value for organizations, as it can enhance employee satisfaction, optimize decision-making processes, and improve overall work efficiency and performance. However, the successful application of the platform requires further exploration and refinement, including addressing data privacy and security concerns, providing appropriate training and support, and continuously enhancing and innovating platform functionality and performance. These efforts will contribute to further advancing digital HRM and providing organizations with more competitive HR strategies and solutions.

5.2 Theoretical Contributions

Firstly, this study emphasizes the advantages of the ChatGPT-based digital HRM platform in providing personalized user experiences, enhancing decision-making effectiveness, and improving work efficiency. This provides a new perspective and theoretical support for the theoretical development of HRM. Traditional HRM research primarily focuses on process and system design, whereas this study highlights the integration of human and technological aspects, emphasizing the positive impact of digital technology on HRM. This viewpoint is of significant importance for advancing the theoretical evolution and innovation in HRM.

Secondly, this study focuses on the application of the ChatGPT model in the field of HRM. As a deep learning-based language model, ChatGPT possesses powerful natural language generation and dialogue comprehension capabilities. This study demonstrates its application by embedding ChatGPT into the digital HRM platform for critical functions such as recruitment, training and development, and performance management. This provides a paradigm and experience for introducing artificial intelligence technology into the field of HRM, offering essential guidance for driving digital transformation and innovation in HRM.

Finally, this study emphasizes the importance of personalized employee experiences in HRM. Traditional HRM platforms often lack attention to individual differences among employees, whereas the ChatGPT-based digital HRM platform can provide personalized services based on employees' diverse needs and preferences. This perspective underscores the significance of employees' subjectivity and individual needs, providing a new theoretical foundation for personalized management and

employee engagement in the field of HRM.

5.3 Practical Implications

Firstly, the ChatGPT-based digital HRM platform offers an innovative solution for organizations. By integrating ChatGPT's dialogue generation and comprehension abilities, the platform enables intelligent conversations and personalized services with employees. This provides organizations with more efficient and personalized solutions for functions such as recruitment, training and development, and performance management. In practice, organizations can leverage this platform to enhance employee engagement, offer personalized training and development opportunities, and better understand employee needs and concerns.

Secondly, the digital HRM platform developed in this study can enhance decision-making effectiveness. By applying the ChatGPT model, the platform can provide real-time and accurate information and recommendations, assisting decision-makers in HR management decisions. This positively impacts decision quality and efficiency within organizations. For instance, during recruitment processes, the platform can offer candidate recommendations based on skills and experience, providing intelligent decision support to recruitment teams. This reduces subjective biases and enhances recruitment accuracy.

Lastly, the ChatGPT-based digital HRM platform provides a personalized user experience, enhancing employee engagement and satisfaction. The platform can cater to individual needs and preferences, fulfilling their unique requirements. This fosters a stronger sense of identification and loyalty among employees, boosting job satisfaction and performance. Moreover, the platform offers employees more convenient and efficient work tools, elevating work efficiency and quality.

5.4 Limitations and Future Research

Although this study proposes the design and functionalities of the ChatGPT-based digital HRM platform and identifies its innovative applications, there are still some limitations that need to be addressed through further research and practical implementation. Additionally, there are potential prospects and areas for improvement.

Firstly, this study provides a systematic blueprint for designing and evaluating the platform's effectiveness, but concrete data support and empirical analysis are currently lacking. Subsequent research should conduct surveys and data collection to obtain relevant feedback from employees and managers, perform quantitative and qualitative data analysis, and verify the platform's actual effects on personalized user experiences, decision-making effectiveness, and work efficiency. This will facilitate a deeper understanding of the platform's strengths and limitations, providing more convincing empirical results.

Secondly, the current research primarily focuses on the application of the ChatGPT model, but the actual implementation of the platform may explore the integration of other natural language processing technologies and deep learning models. For example, combining semantic understanding and sentiment analysis to further enhance the recognition and understanding of employee needs and emotional states. This will further elevate the platform's level of intelligence and personalized user experience.

Moreover, data security and privacy protection are important concerns for the platform. Subsequent research should address how to ensure data security and privacy protection within the digital HRM platform, implementing effective measures such as data encryption, access controls, and user identity authentication to safeguard employee personal information and sensitive data.

In future research, exploring the integration of the digital HRM platform with other critical business systems, such as human resources information systems and enterprise resource planning systems, can achieve more efficient and seamless information sharing and business process integration.

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