African Journal of Biological Sciences

Journal homepage: http://www.afjbs.com

Research Paper   **Open Access**
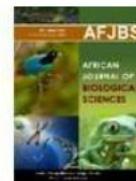
ARTIFICIAL INTELLIGENCE: A HUMAN RESOURCE MANAGEMENT PERSPECTIVE

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ABSTRACT

This research offers a comprehensive analysis of the primary topics and understandings concerning artificial intelligence (AI) from the standpoint of human resource management (HRM). It emphasizes the influence of AI on diverse HR procedures, including recruitment, workforce administration, employee growth, performance evaluation, and ethical deliberations. This dissertation explores the profound impact of Artificial Intelligence (AI) on Human Resource Management (HRM). The integration of AI technologies has revolutionized traditional HR methods, leading to improved efficiency and strategic insights. The discussion begins by examining how AI automates mundane HR tasks, streamlining workflows and allowing HR professionals to focus on strategic initiatives. It underscores the significance of maintaining a harmonious equilibrium between automation and human supervision to guarantee equitable and transparent decision-making. Additionally, the study investigates how AI enhances talent acquisition by refining recruitment processes, identifying top candidates, and reducing biases. A significant portion of the analysis focuses on the use of AI in employee engagement and performance management. AI's ability to analyze data and sentiments proves invaluable in creating a positive and productive organizational environment. The ethical considerations surrounding AI implementation in HRM are thoroughly examined, emphasizing the importance of responsible practices to maintain integrity, fairness, and trust.

Keywords: Artificial Intelligence, Human Resource Management, Optimization of Talent Acquisition, Enhancement of Employee Engagement, Ethical Implications.

REVIEWS OF LITERATURE

Waymond Rodgers, James M. Murray, Abraham Stefanidis, William Y. Degbey, Shlomo Y. Tarba (2022) has made an study on "An artificial intelligence algorithmic approach to ethical decision-making in human resource management processes". The aim of this study is to address the necessity of establishing an HRM accountability framework specifically tailored for the utilization and implementation of AI within the workplace. Given that algorithmic design has the potential to introduce bias into the decision-making process, this research endeavors to integrate an ethical decision-making platform that can provide guidance to HR professionals. By incorporating ethical considerations, decision-making processes, and managers' expertise, AI algorithms can effectively determine the most suitable HRM strategy for each unique situation.

Jennifer Johansson Senja Herranen, May (2019) has made an study on "The application of Artificial Intelligence (AI) in Human Resource Management: Current state of AI and its impact on the traditional recruitment process". In this thesis, a qualitative study is employed, utilizing semi-structured interviews conducted with eight international companies representing diverse geographical locations. The research is grounded in an interpretivism research philosophy, employing an inductive research approach.

T, S, M, K, Balakrishnan, C., Nithya, T., Maheswari, B., & Subramanian. S. (2023) has made an study on "Artificial Intelligence in Human Resource Management". This survey article explores the current state, challenges, and potential applications of artificial intelligence (AI) in human resource management (HRM). It highlights the use of AI in various HR processes, addresses ethical considerations, and suggests strategies to effectively integrate AI into HRM. The article emphasizes the need for data infrastructure, governance frameworks, and a data-driven culture to fully leverage the benefits of AI in HRM.

P.R. Palos-Sánchez ORCID Icon, P. Baena-Luna ORCID Icon, A. Badicu &J.C. Infante – Moro ORCID, Nov (2022), has made an study on "Artificial Intelligence and Human Resources Management". This Bibliometric Analysis endeavors to systematically analyze the scientific literature that explores the utilization and consequences of AI in the HRM field, with the aim of establishing a connected perspective.

Saraswathi T, Karthikeyan M, September (2023), has made an study on **"**Artificial Intelligence in Human Resource Management**"**. Advancements, Implications and Future Prospects, the use of AI algorithms and machine learning approaches to automate regular HR operations, analyse vast amounts of employee data, and provide insightful data to aid decision-making is addressed in this article.

Peter Cappelli1, and Valery Yakubovich1 (2019), has made an study on **"**Artificial Intelligence in Human Resources Management**"**. In the realm of human resource (HR) management, there exists a notable disparity between the promises made and the reality achieved with artificial intelligence. This article sheds light on four challenges that arise when utilizing data science techniques for HR tasks: the complexity surrounding HR phenomena, the constraints imposed by small data sets, the accountability issues linked to fairness and ethical/legal constraints, and the potential adverse reactions from employees towards management decisions driven by data-based algorithms.

Yang Y (2022) has made an study on **"**Artificial intelligence-based organizational human resource management and operation system**"**. The literature review focuses on the application of artificial intelligence (AI) in human resource management (HRM) systems. It emphasizes using AI to design HRM systems, mine relevant data, and improve the quality of employees. The review also discusses the challenges faced by HRM practices and the potential benefits of integrating AI technology.

Prasanna Tambe, Peter Cappelli, and Valery Yakubovich, August 2, (2019) has made an study on "Artificial Intelligence in Human Resources Management: Challenges and a Path Forward". This article highlights four obstacles encountered when applying data science methods to HR tasks: the intricate nature of HR phenomena, limitations posed by limited data sets, concerns regarding fairness and ethical constraints, and potential negative employee responses to data-driven algorithms used in management decisions. Subsequently, it suggests practical approaches to address these challenges, centered around three interconnected principles: causal reasoning, randomization and experimentation, and employee involvement.

Soumya Chowdhury (2022) has made an study on "Unlocking the value of artificial intelligence in human resource management through AI capability framework". The objective of this paper is to conduct a thorough examination of the diverse literature originating from International Business, Information Management, Operations Management, General Management, and HRM. The purpose is

to offer a comprehensive and unbiased comprehension of the organizational resources necessary for the advancement of AI capability in HRM.

Umasankar Murugesan, Padmavathy Subramanian, Shefali Srivastava, Ashish Dwivedi, June (2023) "A study of Artificial Intelligence impacts on Human Resource Digitalization in Industry 4.0". Industry 4.0 and the digitalization of human resources offer numerous advantages, including precision, efficiency, and flexibility. The successful implementation of AI applications in digital human resources requires a focus on improving well-being and safety. Additionally, this topic presents important managerial implications and provides directions for future research.

INTRODUCTION

AI in HR refers to the incorporation of artificial intelligence technologies and methodologies into the management of human resources within an organization. The objective of implementing AI in HR is to improve the efficiency, effectiveness, and strategic impact of HR functions by utilizing data-driven insights and automation. One way in which AI plays a significant role in HR is through the use of digital assistants. These assistants, powered by AI algorithms, are capable of understanding natural language and interpreting the intention behind a query. As a result, they can provide relevant responses and offer intelligent guidance to complete necessary tasks.AI encompasses a range of techniques that enable computer programs to make informed decisions. When integrated into HRM processes, AI has the potential to enhance organizational performance. AI applications excel in analyzing, predicting, and scrutinizing data, thereby enhancing the decision-making capabilities of HR teams.

AI IN HUMAN RESOURCE MANAGEMENT

1.RECRUITMENT

AI technology is revolutionizing the recruitment process for companies by effectively analyzing resumes and matching them with job descriptions. A notable example of this is Workable, which not only extracts information from resumes but also utilizes the gathered data to compile a comprehensive list of highly suitable candidates sourced from platforms like LinkedIn and other online resources. Furthermore, it goes a step further by generating personalized emails to entice these candidates towards available positions within your organization. This includes leveraging AI-powered tools for video interviews, personality evaluations, and various other assessments. By

incorporating AI into the evaluation process, not only are companies able to save significant amounts of time and effort, but they also minimize the risk of overlooking potential candidates due to human error or fatigue. In fact, ChatGPT itself can be utilized as a valuable resource, as highlighted by Nikitas Marinos in his tutorial on harnessing the tool to construct an ideal candidate profile.

2. PERFORMANCE EVALUATIONS

Consider the scenario of Alexandra, a department head responsible for conducting performance evaluations for her team. To streamline this process, she utilizes an AI-driven system that continuously monitors and assesses employee performance data throughout the year. This system takes into account various factors such as the completion of assigned tasks, involvement in projects, and feedback from peers. When the time for evaluations arrives, Alexandra receives a comprehensive report that highlights the strengths, areas for improvement, and progress of each team member over time. This eliminates any guesswork involved in the evaluation process, making it more objective and equitable for her team.

3. ONBOARDING AND OFFBOARDING PROCEDURES FOR EMPLOYEES

Newly hired individuals often find themselves overwhelmed with the abundance of paperwork and procedures during the onboarding process. Now, envision an AI-powered onboarding platform. When a new employee, let's say Maria, joins the company, this platform serves as her guide. It assists Maria in completing the necessary forms, acquaints her with company policies, and even arranges her initial training sessions. Consequently, Maria experiences reduced stress and a greater sense of being welcomed into the organization. Similarly, when an employee departs from the company, the AI can efficiently handle tasks such as conducting exit surveys, facilitating the return of company assets, and managing other offboarding responsibilities. This ensures a seamless transition for both the departing employee and the organization, resulting in a mutually beneficial outcome.

4. INITIATIVES TO ENHANCE EMPLOYEE ENGAGEMENT

Human resources teams often encounter difficulties in accurately gauging the sentiment of employees. However, with the implementation of an AI-powered survey tool, this process can be automated. For instance, a concise and engaging survey can be automated to solicit honest and anonymous feedback from employees, with the results being analyzed by an AI tool. As a result, trends and areas of concern can be identified, providing HR teams with valuable insights to enhance

employee satisfaction and engagement. This empowers organizations to make informed decisions and implement strategies that foster a positive work environment.

5. PERSONALISED LEARNING AND TALENT DEVELOPMENT

AI technology has the capability to personalize learning and development opportunities for employees. For instance, let's take the example of Marcel, an individual who is keen on advancing his skills in software development. It is not uncommon for tech workers like Marcel to find learning and development as a key motivator in their work, with a significant 62% of them expressing this sentiment. Now, envision an AI platform that thoroughly analyzes Marcel's existing skills and career aspirations. Drawing from his specific role and goals, the AI system can provide tailored recommendations for training courses, webinars, or workshops that would be most beneficial for his professional growth.

This personalized approach greatly appeals to individuals like Rachel, who find it highly motivating and actively engage in their career development as a result.

6. STRATEGIC WORKFORCE PLANNING

In addition to performance reviews, executives such as Alexandra, who was mentioned earlier as a department head, also need to identify gaps and opportunities within their teams. This enables them to effectively devise a hiring plan for the upcoming year. By leveraging AI tools that analyze various data points, including the current skill set of the workforce, industry trends, and the company's growth plans, executives can gain insights into the roles that may need to be filled in the near future. This proactive approach empowers individuals like Alexandra to strategize and plan ahead, ensuring that the organization always possesses the right talent pool. This strategic workforce planning methodology can be applied across the entire company, allowing even global C-suite executives to utilize these tools and enhance their perspective.

7. AI-POWERED HR CHATBOTS AND VIRTUAL ASSISTANTS

Lastly, let's consider the implementation of AI chatbots that serve as round-the-clock HR assistants. Employees can conveniently seek answers to their queries regarding leave policies, benefits, and other HR-related matters from these chatbots. This not only streamlines the process for employees but also enables the HR team to focus on more strategic tasks. By delegating routine inquiries to AI

chatbots, HR professionals can allocate their time and efforts towards more value-added activities. The instant availability of answers through these virtual assistants enhances the overall experience for employees, as they receive prompt and accurate responses to their questions.

THE ETHICAL DELIBERATIONS SURROUNDING THE IMPLEMENTATION OF AI IN HUMAN RESOURCES:

1.Fairness and Bias

The issue of fairness and bias is a significant ethical concern when it comes to the implementation of AI in HR. AI systems rely on historical data for training, and this can inadvertently perpetuate biases and discrimination. For instance, if a company's past hiring data exhibits a preference for candidates from specific backgrounds, an AI system trained on that data may inadvertently recommend similar candidates, thus perpetuating the existing bias. To mitigate bias, it is crucial for companies to ensure that the data used to train AI systems is diverse and representative of different backgrounds. Additionally, HR teams should actively monitor AI systems to ensure that they are not reinforcing any biases.

2.Privacy and Data Protection

Privacy and the protection of data are significant ethical considerations. AI systems often require access to personal information, including resumes, social media profiles, and performance reviews, in order to make well-informed decisions. While this data can enhance HR processes, it also raises concerns regarding the privacy and safeguarding of data. To address these concerns, companies should establish robust policies for data protection. HR teams must also ensure that they only collect the necessary data for the AI system to operate effectively and that they utilize the data solely for its intended purposes. Moreover, HR teams must ensure compliance with data privacy laws, such as the General Data Protection Regulation (GDPR).

3.Transparency and Explainability

Transparency and explainability are essential ethical considerations in the realm of AI implementation within the human resources domain. It is imperative that employees and candidates possess a comprehensive understanding of how AI is employed in HR and the decision-making process it entails. For instance, if an AI system recommends a particular candidate, HR teams should

be capable of articulating the rationale behind the decision and the various factors taken into account. To address these concerns, organizations must ensure that their AI systems are designed to be transparent and explainable. HR teams should actively engage in communication with employees and candidates, providing them with clear and concise information regarding the utilization of AI in HR and the specifics of the data collection process, as well as how this data is utilized.

4.Human Oversight

Despite the potential of AI to enhance HR processes, it is essential to recognize that it cannot fully substitute human oversight. HR teams must ensure that they do not solely depend on AI systems to make decisions and that there is always a human element involved in the decision-making process. To guarantee human oversight, organizations should establish protocols for evaluating the recommendations provided by AI systems. Additionally, HR teams should have the capability to override AI recommendations when necessary.

BENEFITS OF ARTIFICIAL INTELLIGENCE IN HUMAN RESOURCES:

In this there are numerous advantages to incorporating artificial intelligence (AI) into HR processes. discussion, we will explore several ways in which AI can greatly benefit organizations.

1. Eliminating Bias

The integration of AI in HR helps to ensure that data-driven decisions are made in critical processes such as recruitment, performance management, and leadership planning. It is crucial for HR to be mindful that a candidate's background does not influence hiring decisions or career progression for employees. By employing AI in the candidate selection process, organizations can ensure an impartial selection of candidates through various screening methods. The human resource department must strive for equal treatment of all employees at every level. Making fair decisions is essential for fostering an inclusive workplace and ensuring that employees feel valued and satisfied with their work.

2. Enhancing Employee Satisfaction

AI enables organizations to provide their employees with a personalized experience. Through the assistance of AI-powered chatbots, employees can have their queries resolved quickly. Employees no longer have to wait for an appointment with HR or for a response to their email regarding mundane

inquiries. Additionally, AI and HR tools offer personalized onboarding and training suggestions, further enhancing the employee experience. This personalized approach to HR fosters employee engagement and satisfaction.

3. Improving Efficiency

Companies that leverage AI in HR technology can significantly enhance the efficiency of their human resource department. AI automates repetitive tasks such as attendance and leave management, eliminating the need for manual paperwork. With reduced human involvement, HR can obtain accurate data and minimize errors.

4. Cost Reduction

The implementation of AI ensures a reduction in time and workforce investment required for manual record-keeping and documentation. By streamlining these processes through AI, organizations can save on costs associated with manual labor and allocate resources more effectively. Moreover, the HRMS software provides accurate data and calculations, resulting in cost savings for tasks like payroll and performance management. Additionally, the reduction in manual processes and corrections leads to a decrease in workforce requirements and overall costs. Furthermore, the implementation of AI tools in HR allows for the systematic storage of data in a centralized repository. This data can be easily accessed by human resources and other stakeholders as needed.

5.Making Well-Informed Choices

The utilization of AI tools in the field of human resources enables the systematic storage of data in a centralized repository. This data can be readily accessed by individuals in the HR department as well as other relevant stakeholders whenever the need arises. The availability of accurate data empowers decision-makers to base their choices on factual information, thereby minimizing the occurrence of misunderstandings or biases. Furthermore, the utilization of simplified analytics facilitates the formulation of profitable and pragmatic strategic decisions.

CHALLENGES OF AI IN HUMAN RESOURCE MANAGEMENT

1.Lack of trust in AI

The absence of trust in AI poses a major concern for AI in HR functions. HR professionals frequently harbor dubieties about the responsibility and perfection of AI- powered results, which creates obstacles in their relinquishment. To address this issue, associations must prioritize training HR workers on the capabilities of AI and how it can be effectively employed to enhance HR procedures. It's pivotal to emphasize that AI shouldn't be viewed as a cover for mortal judgment, but rather as a reciprocal technology that supports decision- timber. HR professionals need to be conscious of this distinction.

2.Data privacy and security

The integration of AI in HR necessitates the collection and analysis of a substantial amount of sensitive data, including personal information and payment details. This gives rise to concerns regarding the privacy and security of such data. To address these concerns, organizations must establish strong data protection protocols to safeguard against unauthorized access to sensitive information. Furthermore, it is imperative for them to ensure that any AI-driven systems they utilize comply with data privacy regulations, such as the General Data Protection Regulation (GDPR) enforced in the European Union.

3.Integration with existing HR Systems

Integrating AI into HR systems presents both advantages and challenges. One of the main challenges is that AI's reliance on patterns and databases can lead to objectivity, which may limit HR processes. Additionally, the absence of human emotion in AI can be a drawback when it comes to team management. Furthermore, the vulnerability of AI HR systems to attacks is also a cause for concern. HR technology often encounters difficulties with disparate and cumbersome systems, resulting in inadequate data and subpar reporting. While fragmented HR systems may initially seem cost-effective, they lack the ability to effectively interact with other systems.

CONCLUSION

To conclude, this research highlights the various implications of Artificial Intelligence (AI) in the realm of Human Resource Management (HRM). The dynamic interplay between AI and HR functions signifies a paradigm shift in organizational practices. As AI continues to redefine recruitment processes, streamline administrative tasks, and optimize talent management, HR professionals find themselves at the forefront of a transformative era. While the benefits of increased

efficiency, data-driven decision-making, and enhanced employee experiences are evident, it is crucial to address the challenges that come with it. Concerns regarding job displacement, ethical considerations in algorithmic decision-making, and the need for transparent AI governance mechanisms emphasize the complexity of integrating AI into HRM. In navigating this intricate landscape, HR professionals must not only embrace the technical aspects of AI but also develop a nuanced understanding of its ethical implications. The role of HR evolves from traditional administration to strategic oversight, requiring adaptability and continuous skill development.

REFERENCES

1. Waymond Rodgers , James M. Murray , Abraham Stefanidis , William Y. Degbey , Shlomo Y. Tarba (2022) has made an study on "An artificial intelligence algorithmic approach to ethical decision-making in human resource management processes" in journal of Human Resource Management Review Vol(33).

2. **Jennifer Johansson Senja Herranen, May (2019)** has made an study on "The application of Artificial Intelligence (AI) in Human Resource Management: Current state of AI and its impact on the traditional recruitment process" published in Jönköping.

3. **T, S, M, K, Balakrishnan, C., Nithya, T., Maheswari, B., & Subramanian. S. (2023)** has made an study on "Artificial Intelligence in Human Resource Management" published in vol. 11, no. 11s, Oct. 2023, pp. 266-81, doi:10.17762/ijritcc.v11i11s.8099.

4. **P.R. Palos-Sánchez ORCID Icon, P. Baena-Luna ORCID Icon, A. Badicu &J.C. Infante – Moro ORCID, Nov (2022),** has made an study on "Artificial Intelligence and Human Resources Management" in journal of Taylor & Francis Group, LLC.

5. **Saraswathi T, Karthikeyan M, September (2023),** has made an study on "Artificial Intelligence in Human Resource Management" published in IJRITCC.

6. **Peter Cappelli1, and Valery Yakubovich1 (2019),** has made an study on "Artificial Intelligence in Human Resources Management", Social Science Research Network, https://papers.ssrn.com › sol3 › papers

7. **Yang Y (2022)** has made an study on "Artificial intelligence-based organizational human resource management and operation system", School of Management and Economics, North China University of Water Resources and Electric Power, Zhengzhou, China.

8. **Prasanna Tambe, Peter Cappelli, and Valery Yakubovich, August 2, (2019)** has made an study on "Artificial Intelligence in Human Resources Management: Challenges and a Path Forward", https://doi.org/10.1177/0008125619867910

9. **Soumya Chowdhury (2022)** has made an study on "Unlocking the value of artificial intelligence

    in human resource management through AI capability framework",

    https://doi.org/10.1016/j.hrmr.2022.100899

10. **Umasankar Murugesan, Padmavathy Subramanian, Shefali Srivastava, Ashish Dwivedi, June (2023)** "A study of Artificial Intelligence impacts on Human Resource Digitalization in Industry 4.0", https://doi.org/10.1016/j.dajour.2023.100249

11. **Charlwood, A., & Guenole, N. (2022),** Can HR adapt to the paradoxes of artificial intelligence? Human Resource Management Journal. https://doi.org/10.1111/1748- 8583.12433

12. **Degbey, W. Y., Rodgers, P., Kromah, M. D., & Weber, Y. (2021)**, The impact of psychological ownership on employee retention in mergers and acquisitions, Human Resource Management Review, 31(3), 100745. https://doi.org/10.1016/j.hrmr.2020.100745