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Leveraging Artificial Intelligence In Human Resource Management

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Abstract:

Artificial Intelligence (AI) refers to a technology that uses a certain level of intelligence to accomplish the assigned task, which was earlier supposed to be carried out by humans. AI has been studied and implemented in various functional areas of a business i.e. manufacturing, marketing, supply chain management, and human resource management. AI has provided an impetus towards the introduction of a culture that is persistent in flexibility and innovation. AI has varied numbers of implications in fields like talent management, recruitment, scrutinizing employees' sentiments, and providing self-service to employees for generic queries in the organization. Further, the functional impact of AI in human resource management is to enhance productivity and bring in some exceptional results in numerous processes under the organization's umbrella. Despite the positive implications of using AI in HRM, there are some challenging aspects, such as layoffs being forced by extensive use of AI and infringements over employees' sensitive data.

Purpose: *This paper has attempted to first understand the importance of AI into the HR function and how it can be incorporated into the overall functioning of this department. Elaborate discussion has been undertaken on its adoption in recruitment, orientation, learning and development, performance appraisal and even building better employee relations.*

Methodology: *The paper discusses the role of Artificial Intelligence in Human resource management with the help of the conceptual framework. This paper illustrates how AI use in human resource management and allows employees to self-service in handling personal data management, job role, task assistance, individual competence management, individual performance enhancement, monitoring, and improvement for better assistance.*

Implications: *The AI helps the human resource management managers to better know their workforce, to find the root cause of the problems, and to predict the forthcoming problems on the basis of the ongoing trends in the workforce data, using its advanced technology.*

Keywords: *Artificial Intelligence, Industry 4.0, human resource management, talent management.*

1. Introduction

AI is an activity dedicated to making machines more intelligent. Intelligence is a feature that empowers the machine to work suitably and with prudence in its environment (Wang, Han, Zhan, Xu, Liu, & Ren, 2015). AI-HRM as an enabler of technical transformation and

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innovation at the global level due to the re-organization and re-design of how the work should be done, such as reforming the working conditions and training methods by introducing automation and AI (Seeck & Diehl, 2017; Zanko, Badham, Couchman, & Schubert, 2008). The various tools available in AI increase the utility and the overall impact of the systems and ultimately changes the way a manager has been working. Artificial intelligence assists managers in speeding up their repetitive tasks. Throughout the human resource management process, AI tools can be used to get superior benefits. The trend of increasingly adopting AI into human resource management is proving to be very popular and is very much expected to remain in the limelight in the near future as well. AI use in human resource management also allows employees to self-serve in handling personal data management, job role, task assistance, individual competence management, individual performance enhancement, monitoring, and improvement for better assistance.

The field of information technology has seen numerous advancements in the recent years, and in this respect, artificial intelligence (AI) is a recent breakthrough (AI). For example, in the digital world, human understanding of artificial intelligence has emerged as the crucial component for an organisation to survive and adapt in a changing environment (Abdeldayem & Aldulaimi, 2020). Since Google's Alpha Go framework defeated South Korean player Lee Sedol in a mind-boggling victory, artificial intelligence has drawn the attention of both professionals and experts. Machine insight, often known as artificial intelligence, is a multidisciplinary field of study that mimics human aptitudes and intellectual behaviour (Upadhyay & Khandelwal, 2018). According to Elaine Rich, AI "empowers through associated algorithms to computers to get correct tasks better than people."

2. Literature Review :

As per the Deloitte Global HR Survey (2019), only 6 percent candidates feel good about the recruitment processes, while 81 percent have experienced poor recruitment process (O'Connor, 2020). Nevertheless, Artificial intelligence (AI) offers wonderful opportunities for the human resource practitioners. AI has applications for hiring organizations ranging from collecting relevant information from candidate resume; analyze their previous work experience and matching them to their requirements (Premnath and Chully, 2019). AI offers several ways to build agile learning models. Personalized learning programs based on job role, skill gaps, future roles, learning style etc (Abdeldayem & Aldulaimi, 2020; Rana & Goel., 2018). AI technology also supports in connecting their and organizational goals with the performance (WirePiazza, (2018). It allows supervisor to refer the factual information and take well-thought decisions during employee performance reviews. AI also aids in monitoring the employee real time work progress and provide instant feedback according (Abdeldayem and Aldulaimi, 2020).

IT is on the plans of many people, notably professionals and academics, as a crucial commercial tool for various firms. The majority of critical business decisions are now made using it, including those involving banking, internet commerce, the travel sector, and travel (Chakraborty et al., 2020). Because of their tech-friendly and tech-subordinate natures, it is also such organizations' fate. Particularly in light of e-HRM, it will generally maintain its benefits with regard to the management of representatives throughout time. What is much more persuading is that there is an endeavor being at the global level that aims to improve the capabilities of IT with the aid of AI or reciprocally intellectual figuring. According to Shao (2015), around 140 innovative startups in the field of AI have been acquired by various IT behemoths since 2011. These businesspeople are striving to integrate AI into several PC frameworks in order to provide standardized user experiences. The phrase "insight" has an overarching origin, and people are typically given credit for it. People create computer programs, perform calculations, engage in rational thought, acquire language, and operate vehicles—all of which need for understanding. Artificial intelligence wants to make it possible for robots to carry out such tasks in the same way that people do them (Guo, 2011).

3. Importance of AI in Human Resource Management

AI is very insightful in understanding the different aspects of workforce, like decisions pertaining to work allocation, succession planning, etc. (Infosys, 2018). Moreover, predictive modelling possible with AI helps in analyzing historical and current data and develops a model to predict future outcomes (Infosys, 2018). In the area of the talent human resource planning, which covers the AI into employee benefits, employee recruitment & staff, compliance, organizational structure, human resource information system, and other areas of the human resource management, employee benefits will display all the medical facilities and other benefits that the organization offers, and employee recruitment & staff process will provide the effectiveness and efficiency in selecting talent people.

Employee and labor relations will be helpful in demonstrating the laws and it will enrich the ethical activities of employees, human resource compliance represents the law as it is characterized towards the employee and employers, organizational structure will demonstrate how it will illuminate the hierarchy process, and compensation will provide all information about the payroll structure of the employee. The digitalization of HR operations, according to 55% of respondents in a 2020 PWC survey of 608 executives and HR professionals, is HR's most important contribution to the digital transformation (PWC, 2020). In a similar vein, according to Mercer's Global Talent Trends 2019, 59% of businesses in the US and 55% in China expect to increase their usage of automated workplaces by 2020. (Mercer, 2019). This explains why businesses everywhere are stepping up their HR investments in AI and associated technology in an effort to keep up with AI's transformative impact on HRM tasks. The relationship between AI and HRM functions has been investigated and advocated by several academics. Pillai and Sivathanu (2020) look into how using AI technology might change the way that talent is acquired. They give HR managers crucial information to benchmark the actions needed for AI-based talent acquisition. Similar to this, Tahira (2021) explores how AI may help and alter HRM activities including hiring, training, personnel management, and retention by evaluating secondary research data in 139.

4. Conclusion

With the use of technology, the business sector goes above and beyond expectations to satisfy client demands. Because of this, all businesses use cutting-edge technology to satisfy consumer demand. To do this, firms also require skilled human resources (Oswald et al., 2020). The main concern of every organization is employee training and development, to make track of the needs of the employee, make structural maps of programs, and opportunities in training and development. In the other area of human resource information and payroll, all the information as an input and make process and facilitated with desired reports. In conclusion, it may be claimed that everyday advancements in AI represent, on the one hand, a new strategy for managing staff members and boosting business performance. On the other hand, using AI in HRM still faces significant obstacles. On the whole, while summarizing, we suggest that the amplified involvement of AI into HRM has indeed caused a shift in the nature of jobs such as the rise of Electronic-HRM and AI-HRM by utilizing automated tools in the standard functions of recruitment, performance assessment, training, exit, and other decision-making exercises. It is definite that in the future, we will see more involvement of AI into HRM, with new technology coming as they develop.

References:

1. Abdeldayem, M.M. and Aldulaimi, S.H. (2018) The economic islamicity index, between islamicity and universality: Critical review w and discussion. *International Business Management*, Vol. 12(1),pp. 46-52.
2. Abdeldayem, M. M., & Aldulaimi, S. H. (2020). Trends and opportunities of artificial intelligence in human resource management: Aspirations for public sector in Bahrain. *International Journal of Scientific and Technology Research*, 9(1), 3867-3871.

3. Chakraborty, S., Giri, A., Aich, A., & Biswas, S. (2020). Evaluating influence of artificial intelligence on human resource management using PLS-SEM (Partial least squares-structural equation modeling). *International Journal of Scientific and Technology Research*, 9(3), 5876-5880.
4. Guo, J. (2011). A research of problems and countermeasures of human resource management in the assets rearrangement process of state-owned enterprises-The case of Chongqing Hualong Special Steel Co., Ltd. 2011 2nd International Conference on Artificial Intelligence, Management Science and Electronic Commerce, AIMSEC 2011 - Proceedings, 1848-1852.
5. Infosys (2018) Impact of Artificial Intelligence on HR, *Harmony*, Vol. 3, accessed online (January 12, 2021) at <https://www.infosys.com/services/oracle/offering/impact-artificial-intelligence-hr.pdf>.
6. Mercer. (2019, January 19). Global Talent Trends. Retrieved July 7, 2021, from Global Talent Trends: <https://www.mercer.com/content/dam/mercer/attachments/private/global-talent-trends/2021/gl-2021-gtt-global-eng-mercer.pdf>
7. O'Connor, S.W. (2020) Artificial Intelligence in Human Resource Management, accessed online (February 12, 2021) at <https://www.northeastern.edu/graduate/blog/artificial-intelligence-in-human-resource-management/>.
8. Oswald, F. L., Behrend, T. S., Putka, D. J., & Sinar, E. (2020). Big Data in Industrial-Organizational Psychology and Human Resource Management: Forward Progress for Organizational Research and Practice. *Annual Review of Organizational Psychology and Organizational Behavior*, 7, 505-533
9. Pillai, R., & Sivathanu, B. (2020). Adoption of artificial intelligence (AI) for talent acquisition in IT/ITeS organizations. *Benchmarking*, 27(9), 2599-2629. doi:10.1108/BIJ-04-2020-0186
10. Premnath, E. and Chully, A.A. (2019) Artificial intelligence in human resource management: a qualitative study in the Indian context, *Journal of Xi'an University of Architecture & Technology*, Vol. 11 (12), pp. 1193-1205.
11. PWC. (2020, August 30). How the new normal is shaping the future of HR. Retrieved July 5, 2021,
12. Rana, G., & Goel, A. K. (2018). A model for enterprise global knowledge management in an Indian electrical company. *Journal of Case Research*, 9(2), 19-39. Retrieved from <https://xub.edu.in/jcr/cases/Case02-Dec2018.pdf>.
13. Shao, X. (2015). The Human Resource Outsourcing Decision Analysis of the Enterprise. *International Conference on Economy, Management and Education Technology*, (Icemet), 179-183 (PDF) Exploring Artificial Intelligence Applications in Human Resource Management.
14. Seeck, H., & Diehl, M. R. (2017). A literature review on HRM and innovation-taking stock and future directions. *The International Journal of Human Resource Management*, 28(6), 913-944. <https://doi.org/10.1080/09585192.2016.1143862>.
15. Upadhyay, A. K., & Khandelwal, K. (2018). Applying artificial intelligence: implications for recruitment. *Strategic HR Review*, 17(5), 255-258.
16. Tahira, K. (2021). Effects of artificial intelligence on human resources management a study of it sector in Pakistan. 1(1), 61-78. doi:10.47604/ijodl.131
17. Wang, D., Han, H., Zhan, Z., Xu, J., Liu, Q., & Ren, G. (2015). A problem solving oriented intelligent tutoring system to improve students' acquisition of basic computer skills. *Computers & Education*, 81, 102-112.
18. WirePiazza, L.N. (2018). How Can Artificial Intelligence Work for HR? *SHRM* (7) (PDF) A Study of Artificial Intelligence and its role in Human Resource Management. accessed online (March 25, 2021) at https://www.researchgate.net/publication/331596981_A_Study_of_Artificial_Intelligence_and_its_role_in_Human_Resource_Management.
19. Zanko, M., Badham, R., Couchman, P., & Schubert, M. (2008). Innovation and HRM: Absences and politics. *The International Journal of Human Resource Management*, 19(4), 562-581. <https://doi.org/10.1080/09585190801953616>.