

Role of Artificial Intelligence in Human Resource Management

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Abstract-Artificial Intelligence (AI) refers to the capability of machines to learn from past experiences, identify patterns, and make decisions or recommendations based on that learning. The applications of AI in human resource management are diverse and can significantly enhance efficiency and streamline various processes.

The Human Resources (HR) department is crucial in creating a healthy work environment for employees and ensuring their well-being, productivity, and creativity. With the advancement of technology, artificial intelligence (AI) has become an essential tool in improving the HR department.

AI automates low-value HR tasks, allowing more focus on strategic work. It has the potential to revolutionize employee experiences in areas such as recruitment and talent management by processing massive amounts of data quickly and accurately.

AI is amalgamated with HR using pre-programmed algorithms and coherent computing approaches, enhancing the human component of HR with the intelligence of technology. This integration will lead to an evolved and upgraded condition for applicants and workers, contributing to the production of better and faster outcomes.

Some of the applications of AI in HR include talent acquisition and recruitment, which are essential tasks of the HR department. AI reduces the time and effort required for screening applicants, maintaining databases, arranging interviews, and resolving contestant queries, among other boring activities.

Literature Review -The emergence of what has been termed the "Fourth Industrial Revolution" or "Industry 4.0" has brought about the integration of intelligent technologies such as Artificial Intelligence (AI) (Kong et al., 2021). With the rapid advancements in information and communication technologies (ICT), AI has gained significant prominence and has the potential to profoundly impact various facets of society (Bolander, 2019). It has become a key driving force behind the transformative changes witnessed in numerous aspects of life during this era (Aloqaily and Rawash, 2022).

Due to economic, political, social, and particularly technological transformations (Jatobá et al., 2019), Human Resource Management (HRM) has evolved into a strategic trend within organizations. However, not all departments have fully embraced this new role, resulting in a slow and occasionally problematic strategic positioning (Poba-Nzaou et al., 2020).

In such instances, the incorporation of technologies like Artificial Intelligence (AI) necessitates an adaptation to align with the changing landscape of society (Michailidis, 2018). According to Verma and Bandi (2019), a wide range of businesses within the IT sector are leveraging artificial intelligence (AI) to enhance the efficiency of their human resources. This initiative encompasses automating recruitment processes and extending to performance appraisals of employees. Organizational leaders and human resource executives believe that integrating AI into HR functions such as onboarding and benefits management has the potential to significantly improve the overall employee experience.

AI and HR

Artificial Intelligence (AI) can bring significant benefits to various aspects of human resource management. Some of the top applications of AI in HR include automating administrative tasks,

enhancing the recruitment process, improving employee engagement and retention, enabling personalized learning and development, and facilitating data-driven decision-making. By leveraging AI, HR professionals can focus on higher-level strategic initiatives and make more informed and efficient decisions that positively impact the organization's overall performance.

1) **Recruitment- Artificial Intelligence (AI)** has the potential to benefit both hiring organizations and job applicants. AI technology can improve the application process by designing more user-friendly forms that increase the likelihood of completion and reduce the number of abandoned applications. Moreover, AI-powered chatbots can assist applicants in answering frequently asked questions, provide real-time feedback, and even conduct initial screening interviews. By leveraging AI in the recruitment process, organizations can create a more positive candidate experience, enhance their brand image, and attract top talent. AI technology has become an essential tool in candidate rediscovery, enabling HR professionals to identify qualified employees from past applicant databases who are an excellent fit for new roles as they open up. With AI's ability to analyse vast amounts of data and identify patterns, it can quickly and accurately sift through the existing pool of applicants, saving HR professionals time and resources that would otherwise be spent searching for fresh talent. By leveraging this technology, organizations can potentially reduce recruitment costs, minimize time-to-hire, and foster a more productive and engaged workforce.

2) **Internal Mobility and Employee Retention**

Artificial Intelligence (AI) can also significantly impact internal mobility and employee retention. HR professionals can leverage AI-powered personalized feedback surveys and employee recognition systems to better understand employee engagement and job satisfaction, leading to higher retention rates and improved employee well-being. By analysing data gathered from these systems, HR departments can identify skill gaps and provide customized learning and development opportunities, thus fostering a culture of continuous growth and improvement. Additionally, AI can analyze employee data to identify high-potential candidates for internal job opportunities, improving internal mobility and reducing recruitment costs. Overall, AI can play a vital role in creating a positive employee experience, enhancing talent management strategies, and ultimately contributing to an organization's success.

3) **Automation of administrative tasks using Artificial Intelligence (AI) has become a game-changer in human resource management**-Artificial Intelligence (AI) can help HR professionals shift their focus from low-value, repetitive administrative tasks to strategic planning at the organizational level. By automating processes such as benefits administration, candidate pre-screening, and interview scheduling, AI can significantly reduce the time and resources required to carry out these functions, freeing up HR professionals to focus on higher-level initiatives that create greater value for the organization. This shift can help HR departments become strategic business partners, enabling them to contribute more meaningfully to the organization's success. By leveraging smart technologies, HR professionals can streamline administrative tasks, increase efficiency, and enhance the employee experience, ultimately leading to a more engaged and productive workforce.

Conclusion-The implementation of AI-based HR interventions has the potential to greatly enhance employee productivity and assist HR professionals in improving overall performance and experience. AI-powered HR applications have the capability to analyze, predict, and support decision-making for key stakeholders. However, there are challenges to consider, such as privacy concerns, skill gaps, maintenance requirements, integration capabilities, and limited proven applications. Artificial Intelligence (AI) has the potential to greatly impact the field of Human Resources (HR) by automating repetitive tasks, enhancing decision-making processes, and improving overall efficiency. Here are some key roles that AI can play in HR. It's important to note that while AI can automate certain tasks and provide valuable insights, human judgment and intervention are still crucial in HR decision-making. AI should be used as a tool to augment HR professionals' capabilities, enhance efficiency, and improve decision-making processes rather than replacing human involvement entirely.

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