

The Role of Artificial Intelligence in Human Resource Management

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ABSTRACT

In the past ten years, the function of human resources has undergone tremendous change due to the development of technology. Organizations have improved their current performance and daily operations by adopting Artificial intelligence systems. Human resource managers generally believe that artificial intelligence systems will soon replace them, but AI makes their jobs easier by automating repetitive processes and offering insightful data free from cognitive bias. This study is conceptual in nature. It addresses AI in HR applications which are the possibilities of how Artificial intelligence is transforming and supporting the Human Resource functions like Recruitment and Onboarding, Internal Mobility and Employee Retention, Automation of Administrative Tasks, Referral Assessment, Training & Development, and Simplify Communication. Artificial intelligence is being incorporated into several departments, including those dealing with human resources, finances, marketing, and manufacturing which will gradually increase soon.

Keywords: *Human Resource Management, Artificial Intelligence, Recruitment, automation, Finances, Marketing.*

1.0 Introduction

Artificial intelligence (AI) is a dominant technology that is widely used in the service industry. AI holds the potential wherein can be used efficiently with enough research. Through the use of AI, financial companies have achieved ways to reach customer needs in smart and accessible methods. Over the past decade, the growth is immense and mentioning an area that has been beneficial is AI as assistants. AI in finance is used as a virtual assistant to serve customers. They have evolved in many sectors such as banking, marketing, and insurance.

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As of today's modern, world, AI has taken over fewer to many roles by replacing humans. As of that organizations are on the hunt of finding eligible candidates with multi skills qualifications. AI plays an important role in the recruitment process by choosing the best fit. Technology has played an important role for quite a while that has been recognized in sectors. Innovation is much needed for companies to keep up with the changes going around. As of today's organizations, hold a huge data, which makes them rely on technology themselves. According to huge data and information storage needs, AI is the main attraction of management companies. Adapting to AI systems has made a change in the business models of organizations.

All human resource department functions, including candidate screening, hiring, aligning human resource activities, and performance management, are now carried out by AI systems instead of people. A number of HR processes, including self-service transactions, hiring and talent acquisition, payroll, reporting, and access policies and procedures, can be significantly improved with the use of AI technologies. This is the time when AI capabilities are expanding to new heights and having a significant impact on how we run our businesses. Executives in human resources are certain that integrating AI into administrative HR tasks will benefit and enhance the entire employee experience. As a result, there will be more capacity, time, and money available, as well as more precise information for effective personnel management. The enormous potential of AI has spurred a number of tech startups in this field.

Newly established digital startups like Knockri in Canada are offering AI-based solutions tailored to the HR sector. With the aid of audio and video analysis, Knockri intends to assist every recruiting team in the world in finding the ideal candidate by evaluating their personality attributes and determining how well they match the needs of the company. Making a better choice when it comes to hiring will be made easier with the help of this screening procedure. Human decision-making would have been challenging because it is time-consuming and prone to bias.

HR specialists claim that the advantages of AI include time and energy savings for both employers and employees. The elimination of human biases, complete transparency, and automation of self-regulated processes, to name just a few Human resources a management. If more companies in the near future would depend on AI to perform administrative duties, human resource departments may become more efficient than ever. When a machine imitates cognitive processes that people often connect with other human brains, such as "learning" and "problem-solving," the phrase "artificial intelligence" is used.

2.0 Literature Review

Artificial intelligence has found its need in several sectors in today's world as AI's growth has been innumerable. Artificial intelligence is used in the financial sector, Various banking sectors use this method to reach their customers in easy, reliable, and efficient ways virtually. Artificial intelligence is helping companies be better in their programs and procedures and automate tasks. The evolution into the new generation has helped improve customer service as well. As AI is unique with its vast capabilities it can be used in many ways and sectors. AI has become a trusted part of banking and many more industries. (Li & Rahman, 2022)

The study relates the relationship between Artificial Intelligence (AI) and Human Resource Management (HRM), exhibiting its growing role in transforming key HR functions. AI is increasingly being used in recruitment, performance evaluation, training, and employee engagement (Afzal *et al.*, 2023; Gryncewicz *et al.*, 2023; Madanchian *et al.*, 2023). Research suggests that AI can improve the efficiency of decision-making, minimize bias, and streamline HR operations (Madanchian *et al.*, 2023). The application of AI in HRM is related to data privacy, ethical concerns, and responsible use of employee information. (Chowdhury *et al.*, 2024). The AI tools help the human resource department in selecting candidates and forecasting employee turnover. The importance of using AI to support human decision-making in HR is immense (Gryncewicz *et al.*, 2023). The advent of AI strategies address ethical considerations and employee well-being (Chowdhury *et al.*, 2024).

The Human Resources Management (HRM) recruiting procedures now use AI. Through this investment of time, energy, and labour, monotonous everyday chores are automated, freeing up time for people to concentrate on more crucial issues connected to improving performance and development. Systems might function similarly to the human brain in terms of data analysis and the capacity to develop an efficient systematic engagement to process the data in the recruiting process if they acquired automation, cognitive insights, and cognitive engagement.

AI solutions for human resources management are used to automate recruiting under the direction of problem-solving and one data-driven function. Artificial intelligence (AI) aims to mimic and improve human intellect, which is accomplished through contrasting the two forms of intelligence. For the top applicants, modern software recruiting firms employ AI-based solutions. (Fraij & Várallyai, 2021)

The intention of AI is not to take out on humans' jobs, instead, it is functionally used to work more efficiently. Hence it's less time-consuming and speeds up the process. AI plays a crucial role in the transformation of HR services, which has benefited

individuals, workers, and businesses. Organizations are using AI technologies to automate routine processes and use predictive algorithms to help make complicated strategic decisions more quickly and correctly. discovered that AI is having a favorable impact on workforce management in businesses. (Hemalatha *et al.*, 2021)

AI as Chatbots are popularly used by customers as it automatically responds when help is asked. It also consists of the basic information of the customer which makes the conversation quick and easy. The combination of AI and natural language learning processing technology for better interaction leads to better response logically. (Vedapradha *et al.*, 2019)

HR is currently advancing toward the digital revolution. It involves utilising a variety of techniques to simplify the resources. Big data analysis, artificial intelligence, and cloud computing are the available resources. Most businesses have implemented artificial intelligence in HR tools including chatbots, machine learning, and automated robotic processes. In order to support the hiring, screening, onboarding, interviewing, and other procedures, this aids human resource management. (Yawalkar, 2019)

According to research, artificial intelligence plays a significant influence in the majority of recruiting processes. Artificial intelligence assists with candidate screening, automatically created communications for candidates, scheduling of interviews, and other tasks. A growing quantity of HR data is being produced in the cloud by humans and learning robots, and the application of artificial intelligence analytics provides an improved understanding of how to execute and operate. Any organization's ability to intelligently integrate people, process, and technology to offer revolutionary value at an affordable price determines its success. Numerous back-office tasks may be effectively automated using AI to ensure dependable HR transactions and service delivery. Hence, AI may be the most effective solution to integrate and automate HR processes in a safe manner, in addition to its new benefits. (HRPA, n.d.)

Automating repetitive, time-consuming tasks in the hiring process will be made easier by artificial intelligence (AI). Finding the ideal employee quickly by sorting through a big applicant pool of resumes is a difficult task for HR managers. AI algorithms will examine, assess, and reject 75% of unqualified applicants. Intelligent screening software driven by artificial intelligence (AI) will examine resumes, discover employee experience and competency, evaluate their performance and turnover rates, and choose the best applicants. Through means of audio and video, digital interview. To assess if an applicant is a suitable fit for the role, AI software examines a candidate's body language, word choice, and voice. AI also aids in enhancing the applicant experience through chatbots by

continuously updating the requirements and offering comments and ideas. (Merlin & Jayam, 2018)

Coaching Success comprises HR departments using AI tools to assist with employee training, certification acquisition, cross-training, and the acquisition of new skills. A really effective AI program may hasten growth by providing incentives and rewards based on the profiles of each worker. Employees may work at their own speed thanks to AI algorithms. One can suggest outside resources or a human mentor to someone who is weak in a skill or idea. By eliminating favoritism AI is now promoted as a tool to fight bias and advance diversity by minimizing unintentional partiality. (Rathi, 2018)

Personalized work environments featured IBM In their study, authorities talked about how AI may be successfully included in the onboarding process for new employees. For example, an AI may suggest training activities or provide names, addresses, and phone numbers of people the user should try to contact during their first few days. The same employee may be advised by AI engines that a webpage for new hires has a plethora of useful information. According to two-thirds of respondents, chatbots are preferred by employees over other kinds of communication for ease of use. (Ahmed, 2018)

AI-powered HR analytics for training in career and development. The focus of the illustration is on how the public sector may create a platform to aid students and employees in obtaining and maintaining the skills they will need to succeed in the age of disruption. The public sector or the government can utilize CI and AI to collect datasets from the platform and the training in order to improve skills by developing career development platforms and training. Determine the talents that various components today and maybe in the future will need. Based on geography, provide instruction for those abilities. (Sooraksa, 2021)

To get the most out of it, it is necessary to learn and analyze how data is treated. The HR function will be able to leverage and elevate its function to a higher strategic and decisional level on the basis of this reflection and its intuition. Some people might believe that data and algorithms can take the place of their decision-making intellect, but in reality, they only allow for a more effective manifestation of that intelligence. It is crucial to comprehend that data is not autonomous if it becomes inevitable. The reading and interpretation of this data by the human intellect is where all of its worth rests. (Berhil *et al.*, 2020)

Presents a four-dimensional, systematic, and interactive environment of the synthesis between AI and finance that propels smart FinTech and EcoFin, where AI might play unique, irreplaceable, and crucial roles in solving the numerous sectors and difficulties. (Cao, 2020)

Artificial intelligence (AI) in finance applies to the use of AI methods in the financial industry. The application of both traditional and contemporary AI approaches to progressively greater spheres of finance, the economy, and society has drawn attention to this subject for decades. This review offers a thorough and complex landscape of the overpowering barriers, methods, and possibilities of AI research in finance and over past decades, in comparison to review sites on discussing problems, elements, and possibilities of financial services profited from particular or other new-gen AI and data science (AI) methods or the advancement of implementing specific techniques to addressing certain financial problems. (Bringas Colmenarejo *et al.*, 2022)

The Indian banking industry has been steadfastly integrating AI-enabled technology into its daily operations in recent years. While many industrial and commercial banks throughout the world have adopted AI and similar technologies to manage customer- and back-office-related tasks. Thus, in the Indian Fin-Tech space, AI is viewed as a profitable and viable business. The use of AI and machine learning (ML) in data analytics and customer service results in more customized and expedited services. (Malali & Gopalakrishnan, 2020)

Most firms continue to communicate financial data using antiquated conventional techniques. Although accurate forecasting results in sound, data-driven judgments, the activity is frequently carried out haphazardly and across departments. As finance enters an era of digital transformation, CFOs and senior management need financial models that support business strategy with the speed and insight of genuine innovation.

Modern planning solutions with AI support are responsive and swift, and they provide enterprises with a full picture of their data. The human resources department has to integrate artificial intelligence since finding talented workers is a difficult undertaking. Organizations must thus take this into account when implementing artificial intelligence in HR. Financial difficulty Finance is another difficulty in the use of artificial intelligence. An business needs a significant sum of money to apply AI effectively and run its HR department efficiently.

Data privacy is regarded as yet another obstacle to the widespread use of AI. The privacy of employee data must be maintained at all costs by HR professionals. Even a tiny degree of ignorance might result in significant losses. As a result, a company hires a person with strong technical abilities and expertise. (Murgai, 2018)

A business may develop and maintain a strong relationship with its target market through marketing. Artificial intelligence will determine how digital marketing is carried out today and in the future. One of the ways artificial intelligence technologies has altered the world of digital marketing is through marketing that is focused on consumer behaviour.

The advertising and marketing sectors are not an exception to the rapidly growing role that artificial intelligence (AI) is playing in contemporary digital life. Industry after industry is being transformed by artificial intelligence, from Siri to Tesla's self-driving technology. The potential that AI and robotics may give to the growth of the business sector has only recently been recognised by organisations. (Pandey & Khaskel, 2019)

AI decision-making that is data-driven enables the HR staff to gather data and offer real-time praise. The best thing is that artificial intelligence may aid HRM operations by reducing perceived human bias and inconsistency.

Employee productivity and engagement both have a direct bearing on the bottom line of the company. From assisting the recruitment and screening process to managing their records until their exit from the organization, AI is an enabler of many employee satisfaction tools. (Verma & Bandi, 2019)

It is frequently disputed that integrating AI into HR operations won't cause the workforce to lose a variety of occupations as intelligent software takes their place. But it will undoubtedly lead to a significant reclassification and revamping of occupations at all levels. Some industries may see a significant loss of jobs, but others may see the emergence of new positions requiring a high level of digital intelligence. (Rana, 2018)

The Technology Acceptance Model (TAM) is a theoretical framework used to understand how users to accept and use a new technology. It was developed by Fred Davis in 1986. In the context of AI in HRM, TAM can be used to understand how HR professionals accept AI tools for recruitment or performance appraisal. To assess employee acceptance of AI-based chatbots or training platforms and evaluate the success of digital transformation initiatives within organizations.

3.0 Methodology

This research takes on a qualitative approach that is centered on reviewing existing literature. As a conceptual paper, this work draws upon peer-reviewed journal articles, professional publications, industry reports, and case studies from the past decade. The purpose of this study is to assess the growing impact of Artificial Intelligence in Human Resource Management (HRM) by analyzing relevant data from reputable academic and professional online resources. The review captured all AI functions associated with HR work, including recruitment, onboarding, intern and employee mobility, retention, administrative automation, referral evaluation, training, development, and inter-employee communication. These findings help to suggest frameworks regarding the use AI in HR practices which can inform practical AI integration while providing a basis for further theoretical research.

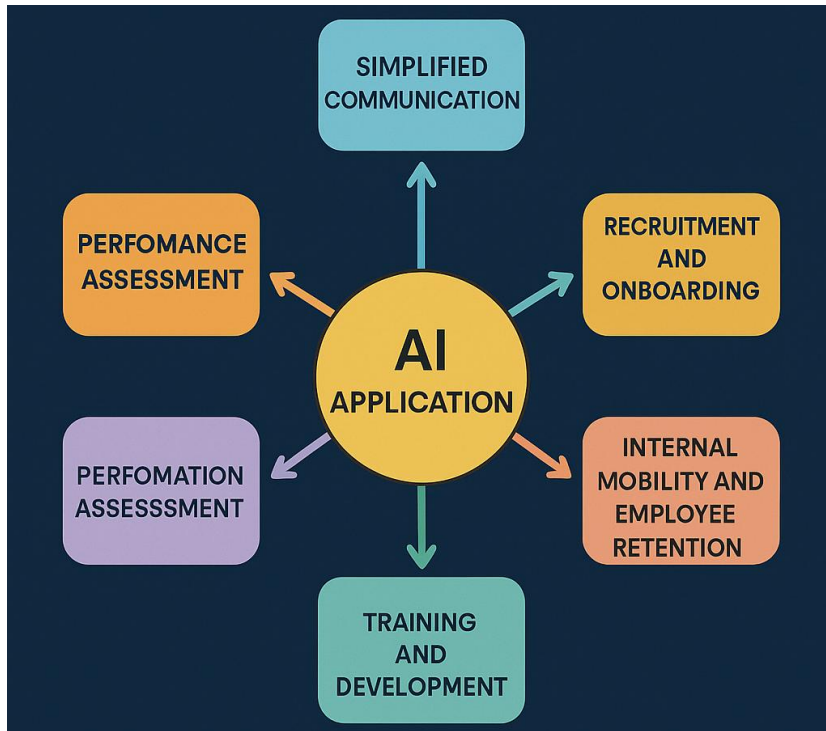
4.0 Discussion and Implications

Organizations of today have discovered many chances to improve their HR processes and operations as the digital transformation continues to have an impact. The recruiting, onboarding, and training of employees has changed throughout time as a result of artificial intelligence (AI) assisting and facilitating HR staff.

The interaction of AI and humans in HR procedures, the potential contribution of AI to the search for new talent, and the expanding application of AI and gamification in onboarding and training staff.

As recruiting models improve as a result of digital technologies, AI's involvement in talent acquisition is expanding. Automated recruiting software can do away with the necessity for labor-intensive background checks and quickly distinguish qualified candidates from the pool of untapped talent.

Figure 1: Application of AI in HRM



Source: Author's diagram

The capacity of HR managers to guarantee that AI adoption is changed to help people and businesses become more nimble, accurate, and efficient is crucial to AI's success in the modern world. In order to maximize labor productivity and achieve significant efficiencies in the upcoming months, time may be spent more effectively on tasks that add value and require smart and creative thinking. By implementing AI, an HR staff may spend less time on laborious, low-value tasks and more time responding to the changing demands of their workforce.

AI may be employed in the recruiting process to the advantage of both the employing company and the job candidates. AI technology, for instance, may speed up the application process by creating more user-friendly forms that job candidates are more likely to complete, hence lowering the number of incomplete applications.

Although this strategy has made the job of the human resources department in recruiting much simpler, artificial intelligence also enables candidates to complete applications that are simpler and more meaningfully, which has been seen to increase application completion rates.

Additionally, the identification of candidates has been greatly aided by AI. AI technology may examine the current candidate pool and identify people who might be a better match for new opportunities when they come up by keeping track of previous applicants. Human resource professionals may utilize this technology to find qualified individuals more efficiently and simply than ever before, saving time and money that would otherwise be spent looking for new talent (Figure 1).

- **Internal mobility and employee retention**

HR practitioners may use artificial intelligence to increase internal mobility and employee retention in addition to improving the hiring process. Human resources departments are now more equipped than ever to measure employee engagement and job satisfaction through customized feedback surveys and employee reward programs. This is quite helpful given how crucial it is to comprehend the general demands of employees, but there are other major organizational advantages to possessing this knowledge as well.

- **Automation of administrative tasks**

In fact, one of the main advantages of utilizing artificial intelligence in different human resources procedures is the same as it is in other fields and sectors: The automation of low-value, readily repetitive administrative chores frees up HR professionals' time to participate in organizational-level strategic planning. In turn, this makes it possible for the HR division to develop into a strategic business partner inside their enterprises.

Intelligent technology can automate a variety of tasks, including organizing interviews, administering benefits, and pre-screening applicants. While each of these jobs is fundamental to the success of a business, completing the activities associated with them typically takes a lot of time, and as a result, HR professionals sometimes have much less time to devote to providing their workers with more valuable support.

- **Referral assessment**

A fantastic use of AI in HR is the evaluation of employee recommendations. The kind of referrals that workers offer can be determined by the system. It provides information on those who provide the most fruitful recommendations.

AI systems examine referral-related data. It compares fresh recommendations to individuals that excelled during their term. Typically, candidates who fit with the prior performance convert. It aids in enhancing staff retention. Companies can see immediately if a suggested employee is performing to their full potential.

- **Training and development**

New hires and staff frequently need training. AI programmers create tools that educate users about their obligations. Artificial intelligence, on the other hand, suggests the essential training needed to succeed in a career depending on skill set.

HR managers must review resumes to determine what skill sets need to be enhanced. Services utilising artificial intelligence (AI) are easier. They assess the skill set listed on the CV and decide which skills need to be strengthened. Then, AI systems present the training materials.

- **Simplify communication**

Simplifying communication is among the most significant advantages of incorporating AI solutions in HR. Candidates who contact businesses must wait a while before hearing back from the business.

Chatbots, a wonderful use of AI, facilitate communication. They respond to frequent questions and send candidates automated emails. The AI system may conduct preliminary interviews to learn the fundamentals of the candidates. Additionally, it can make internal HR communication simpler. The system may determine which policy must be followed based on the supplied data.

5.0 Conclusion

AI has made it possible to implement highly organised and precise business solutions for HR. Artificial intelligence (AI) is making it easier to do duties like maintaining employee records, talent management, employee development, employee

assessments, allocating employee perks, employee selection, employee engagement, tracking employee performance and feedback, etc. The HR managers must decide how much technology will be used in their department. Others predict that AI will soon replace HR's crucial job since it has an advantage over HR in terms of error-free and quick answers. Some experts think AI cannot offset the vital input of HR abilities.

In fact, AI has made company operations more organized and precise.

Now that AI and HR are combined, it is up to HR managers to decide how much AI should be allowed to influence HR processes. It is necessary to clearly separate tasks controlled by AI from those handled by HR, and in every function, the AI should be strengthened by HR influence.

The value of human engagement in the execution of HR duties cannot be overstated, notwithstanding AI's ability to make work easier and more efficient in a variety of HR disciplines. Only the HR department is responsible for establishing personal connections and important behavioural understandings of human brains. The company could never be able to maintain its workforce or its dedication to the company if all duties are delegated to robots. So, instead of stopping what they were doing before, human resources must leverage AI to help them accomplish it more effectively.

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