



## RESEARCH ARTICLE

# AI EMPOWERED HR: LEVERAGING STRENGTHS AND MITIGATING CHALLENGES

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### ABSTRACT

Human Resource management systems have helped organizations simplify their day-to-day HR-related jobs. These systems meticulously combine different HR functions under one platform. These applications have helped the employees to accomplish the business goals of an organization. These days organizations are planning to link their HRMS tools with artificial intelligence (AI) so that work accuracy and the productivity of the employees can increase. AI is a rapidly growing and fast-moving technology but practical implementation of the same in the HR domain might take time. With these emerging trends of AI entering into the sphere of HR, there are various challenges that HR professionals face practically. Undoubtedly, AI when collaborated with HR will help businesses grow. Against this backdrop, the present study aims to examine the perceptions of HR Professionals about AI applications in HR. Moreover, it aims to identify the challenges faced by HR in such applications.

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## INTRODUCTION

The use of artificial intelligence in human resource management can offer a powerful technical foundation for the growth of businesses. Simple, repetitive employment is gradually being replaced by smart robots in the new era of information and intelligence development. A study by Gartner (2023) states that 76% of HR leaders believe that if their organization does not adopt and implement AI solutions, such as generative AI, in the next 1-2 years, they will be lagging in organizational success compared to those that do. Also, another study by SHRM (2023) states that 85% of employers using AI in HR attest to time savings and increased efficiency. The adoption of AI in performance management and recruitment is also set to rise significantly in the coming years. In the era of artificial intelligence, the responsibilities of HRM professionals within organizations are undergoing continuous evolution. AI is revolutionizing numerous HRM functions and procedures within organizations, enhancing system efficiencies, conducting advanced data analysis, and contributing significantly to organizational value creation. A growing body of evidence underscores the advantages AI brings to HRM. However, despite the rising interest in AI-HRM research, there remains a limited and fragmented focus on the interaction between humans and AI in the workplace, as well as AI-based technologies for HRM. Furthermore, the absence of human considerations in the design and implementation of HRM technology can impede efforts toward AI-driven digital transformation. An article by ETHRWorld (2023) offers a contemporary and forward-thinking outlook on the strategic and human-centered role of HRM within organizations as AI integration deepens in the workplace.

It explores three distinct phases of AI-HRM integration—technocratic, integrated, and fully embedded—and examines the technical, human, and ethical challenges at each stage. Suggestions are provided on how to address these challenges through a human-centric approach. A study by Fenwick *et al.* underscores the significance of the evolving role of HRM in AI-driven organizations and offers a roadmap for bridging the gap between humans and machines in the workplace. The widespread application of artificial intelligence has significantly increased both management and manufacturing efficiency. The use of artificial intelligence in human resource development and corporate growth presents both potential and difficulties. The three key areas of opportunity are lowering the cost of human resource management, raising its effectiveness, and fostering change. The difficulties include the effect on low-paying occupations, an increase in equipment maintenance costs, and an urgent need for a large number of highly qualified individuals who comprehend the fundamentals of artificial intelligence. According to a survey conducted by Deloitte (2022), the organizations are planning to spend more year on year with 82% in 2021 in comparison to 88% in 2022. Also, 77% of the respondents feel that there will be a job cut with AI coming into the picture but at the same time, 88% of them confirmed that their leadership team has communicated the scope and utilization of AI in their respective organization. A research by Accenture (2022) talks about the scope and maturity of AI in upcoming years and it stated that machine learning models which are the share of organizations willing to implement AI will increase significantly, more than doubling from the current 12% to 27% by 2024. AI in HR creates an opportunity to innovate technology development in the organization. Along with these opportunities come some challenges too. Also, in a study conducted by Genius

Consultants in 2020, they conducted a survey of 825 organizations across various industries and stated that 68% of the companies believe that intervention of AI in HR will raise overall job accuracy. The report also stated that 48% of the organizations are not sure about using Chatbot. It also revealed that 68% of the participants do not think that AI will be beneficial for onboarding and other HR processes as it will involve high cost and will raise concerns over privacy. There is a huge purview with respect to AI collaborating with HR but at the same time there are a lot of challenges that exist in the same domain. Keeping this in mind, the present study aims to examine the perceptions of HR professionals in implementing AI in HR. The study also intends to investigate the challenges faced by HR professionals in this application.

## LITERATURE REVIEW

In order to explore the subject under study the past literature was reviewed and some studies considered in this context have been discussed below. The emergence of Artificial Intelligence has brought about a paradigm shift in HRM, further altering the role of HRM professionals in organizations. With their capacity for enhancing system efficiency, advanced data analysis, and innovation opportunities, AI technologies have begun to permeate multiple facets of organizational functioning, including human resource management (Guenole and Feinzig, 2018). Similarly, with the advent of AI, firms are assessing how they can implement AI technology to enhance efficiency and productivity (Chui *et al.*, 2023). According to a recent study by Budhwar *et al.* (2022) the emerging trends in HR are changing how major operations will be carried out in organizations, it is yet unclear how well it will affect the people, processes, systems, and structures of these organizations. It also reveals that with increasing digitalization employees interact more with digital tools in the organizational ecosystem, however there still remains a concern of working on an AI-assisted HRM. On similar lines, a study by Sheila *et al.* (2018), states that these HRM-related AI applications are still in the research stage. On the contrary, a different finding was highlighted by Mc. Donald *et al.* 2017, which reveals that AI technology will be mostly employed in hiring, training, employee engagement, and employee retention, which will reduce costs, save time, and improve the accuracy of HR activities. Intriguingly, a significant percentage (64%) of respondents trust robots more than their managers, as revealed by Oracle and Future Workplace's research, 2019. This statistic showcases the potential for AI-driven HR solutions to establish trust and improve employee experiences. With emerging trends in technology there has been a paradigm shift in the traditional practices of conducting business. Now individual local companies and their competitors compete on the new-fangled international technologies (Erixon, 2018). Utilizing AI technology in the development of HRM can provide better financial support because it frees up HR managers from tedious administrative activities by assisting them in making decisions and predicting employee behavior (Bersin, 2018). The primary tasks of the HR with the help of artificial intelligence will be to forecast the candidate's additional value to the organization, investigate the appropriateness of the description and designation, and attract talent with high potential (Kamarudin *et al.* 2019). On the contrary, a study reveals that AI implementation is a difficult endeavor to achieve. (Rajitha *et al.* 2021). However, there still exists a need for a study to investigate the comprehensive AI execution framework, as well as a comprehensive scope for HRM to examine its particular application (Zehir *et al.* 2020). On the contrary, a study states that because of AI, HR has been given more power to handle and resolve issues of employees effectively. AI is transforming everything in the world and is evolving quickly. AI still tries to create a space in the sphere of HR and at the same time, there exist challenges in this domain. To effectively address these challenges, it is imperative to methodically analyze them and devise strategies for resolution (Singh and Chouhan, 2022). The study also offers a structured framework that organizes HRM practices into three distinct categories: people management, culture, and compliance. Another study by Prikshat *et al.* (2023) states that people management

encompasses activities such as talent acquisition, development, and oversight, prioritizing the growth and well-being of the workforce. Compliance-related tasks involve ensuring adherence to legal and ethical standards, maintaining regulatory compliance, and upholding fairness and equity within the organization. Culture-related functions focus on shaping the organizational culture, fostering collaboration, and promoting values and behaviors aligned with the company's mission. This categorization aligns with the key areas where HRM professionals exert their influence. Similarly, despite obvious efficiency gains AI brings to organizations, human resource departments are facing new pressures associated with balancing these efficiencies and harmonizing human workforces. AI remains a significant source of concern for employees in many organizations (Palos-Sánchez *et al.*, 2022). The comprehensive use of AI in enhancing organizational design and creating new value propositions sets high AI performer firms apart, demonstrating a more integrated and strategic application of AI within their organizations (Chui *et al.*, 2023). Based on thorough review of the literature on the subject, it has been observed that there is an abundance of studies examining the challenges associated with AI collaboration in HR. However, there is a dearth of studies examining the perceptions of HR professionals on the application of AI in HR. Hence, the present study has been conceptualized with the intent of filling this research gap.

### Research Objectives

The study aims to fulfill the following objectives:

- To study the perceptions of HR Professionals about AI implementation in HR
- To investigate the challenges faced by HR professionals in AI application

## RESEARCH METHODOLOGY

The study has used both primary and secondary sources of data collection. The primary data has been collected through personal interviews with 30 HR professionals practicing AI across different sectors mentioned below (Refer Table 1). For conducting interviews, a structured questionnaire was prepared based on a thorough review of literature on the subject.

**Table 1. Respondents across various sectors**

| Type of Organization | Frequency |
|----------------------|-----------|
| Banking              | 1         |
| Digital Solutions    | 1         |
| Electronics          | 1         |
| Financial            | 4         |
| Fintech              | 1         |
| Logistics            | 1         |
| Manufacturing        | 3         |
| Marketing            | 1         |
| IT                   | 16        |
| Telecommunication    | 1         |

Interviews have been conducted to know their understanding regarding the use of artificial intelligence in various human resource processes along with the future scope of technology in HR. Moreover, the interviews also revolved around discussing the challenges faced by the HR professional while using AI in the HR. The secondary data has been collected from various journals, articles, magazines, etc. The responses received during the interviews were tabulated and the qualitative data analysis was conducted using QSR NVivo software.

## FINDINGS AND DISCUSSION

The qualitative research centered on exploring the subjective perspectives of HR professionals in Indian organizations across various sectors. Participants expressed their insights and experiences regarding the diverse applications, advantages and constraints

associated with the fusion of AI and HR in their respective workplaces which has been depicted through a word cloud as reflected in Fig 1.



Figure 1. (WordCloud of the responses collected)

Various themes that emerged from the data analysis have been discussed in detail below:

**Theme 1. Time efficiency** emerged as a significant theme based on the respondent's data. It is interesting to note that this research finding is in congruence with existing literature on the subject. For instance, a study by Premnath *et al.* (2019) states that everything is faster and much more time saving with AI. It also makes it easy for the HR to manage their time well. Irrespective of the function, whether recruitment, training, employee engagement or compensation or one of the other functions. Another study by Murugesan *et al.* (2023) states that AI-powered algorithms can scan resumes and job applications to identify suitable candidates based on predefined criteria, reducing the time and effort required for manual screening. In a study by Nawaz *et al.* (2020) claims that AI in HRM leads to time saving & cost reduction outcomes in human resources functions in Selected IT companies in Chennai City. Based on the interviews conducted some responses have been shared below which depicts that time efficiency has been explained as one of the major benefits of AI in HR:

*AI will help in improving the process as the onboarding documentation and many other processes will be simplified and will help in saving time.....(R13)*

*The time-saving aspect of AI, highlighting its impact across various HR functions such as recruitment .....(R1)*

*AI will only help in improving the process as the onboarding documentation and many other processes will be simplified and will help in saving time.....(R10)*

**Theme 2:** Another theme that was identified was the **expected growth** in the upcoming years. It has been observed that this research finding also resonates with the previous research findings. For instance, along with a fast pace moving technical advancement AI will play a significant role in being a change maker in organizations. It will also help saving a lot of time but along with that it will bring a positive change in the economy. According to research by HR Solutions, 2023 states that the AI HR market is projected to grow by 35.26%, from USD 3.89 billion in 2022 to USD 17.61 billion in 2027. An article by Economic Times, HR World, (2022) states that (AI) has the potential to lead to a variety of positive results in the HR department. Based on the interviews conducted, some responses that highlight the expected growth of AI in HR have been mentioned below:

*AI integration will have a greater scope for the future and will definitely grow in the next 5 years.....(R22)*

*AI will definitely have a great future ahead and will grow for sure. There surely will be a positive change with AI coming into picture.....(R25)*

*AI in HR will definitely grow but might take some time to come into picture in India completely.....(R26)*

*It is definitely one of the emerging trends but will take time as the finances attached to the same are huge.....(R6)*

**Theme 3:** Interestingly, the other theme that got captured during the data analysis was- 'AI in recruitment'. Again, this theme seems to reinforce the previous research findings in the existing literature. On similar lines, a report by Recruitment Marketing.com(2023) claims that utilizing AI for recruitment involves employing AI-based tools to enhance the efficiency of sourcing, screening, and assessing job candidates on a larger scale, while simultaneously mitigating biases that frequently infiltrate manual hiring procedures. On similar lines, a study by Jobylon(2023) states that 43% of Human Resources professionals are already using AI in their hiring processes globally. An article by Visage.jobs (2023) also states that recruiters see, on average, a 30% reduction in time to hire and a 20% reduction in their workloads when their teams utilize AI Recruitment tools. Some responses that reinforce the theme - 'AI in Recruitment' have been shared below:

*Their organization is using AI in the recruitment function only as of now and no other function.....(R4)*

*We are using HRMS till now in recruitment to collect references.....(R7)*

*We work in the recruitment team when we talk about hiring we take the interviews and get the references.....(R17)*

**Theme 4: Loss of Personal Touch** was another theme that emerged during the analysis. Even this theme seems to support the results of earlier research studies on the subject. Although AI has the capacity to optimize and automate HR functions, there is a potential threat of displacing human employees, particularly in domains like recruitment and talent management. Furthermore, AI falls short in emotional intelligence and empathy, which are crucial for fostering successful employee engagement and development (Premnath *et al.* 2019). Based on the interviews conducted, some responses depicted the lack of personal touch after AI came into picture. Some of these responses have been shared below:

*Driving employee engagement is a little difficult through our HRMS Software because in employee engagement the emotions of the employees are to be given importance .....(R5)*

*We always want to have human and personal touch with employees.....(R18)*

*The scope of AI in India depends as to what extent we are planning to use it. AI works on logic and employees in India work with emotions .....(R20)*

**Theme 5: Challenge in Employee Engagement** was also identified as one of the themes during data analysis. It is worth noting that this research finding is also in congruence with the evidences of the previous research studies. For example, with these technological advancements coming into picture, employee engagement will definitely get impacted. On similar lines, a study by Kabalisa & Altmann (2021) states that AI will help in improving work efficiency but it may in fact lead to reduced employee engagement. Based on the interviews conducted, some responses depicted the challenges that employee engagement will face with the advent of AI in HR. Some of these responses have been mentioned below:

*Driving employee engagement is a little difficult through 'Manaze' (their internal ERP tool) because in employee engagement the emotion of the employees is given importance.....(R5)*

*We want to always have that human and personal touch with employees, which seems to be missing in AI.....(R18).*

*The essence of personal touch is important and in AI it becomes difficult to interact and at the same time does not have personal touch .....(R6)*

**Theme 6: Huge Cost** emerged as one of the significant themes during the data analysis. Even this research finding resonates with the results of the previous studies on this subject. On similar note, a report by LinkedIn (2023) states that there is a huge hidden cost associated with AI implementation in HR. Based on the responses from the interviews conducted, it has been observed that there is a common sentiment amongst HR professionals that there is a huge cost associated with AI in HR. Some of the responses have been mentioned below:

*Coming of AI in India will be tough as the cost that companies will have to spend on AI is huge..... (R29)*

*Nowadays, there are HRM tools which are supported by AI components such as chatbots but a full-fledged AI tool is very expensive.....(R6)*

*We are an IT organization so we feel that we can make our own AI tool as expense would be a challenge.....(R10)*

*There are no such challenges but yes expenditure on AI tools is huge.....(R20)*

## CONCLUSION AND IMPLICATIONS

The findings of the present study provide rich insights into the common perceptions of HR professionals regarding AI application in HR in the corporate landscape. Based on the qualitative data analysis, various themes that emerged from the present study included - (i) time efficiency (ii) expected growth (iii) AI in recruitment (iv) loss of personal touch (v) challenge in employee engagement and (vi) huge cost. It is worth noting that some of these themes have been highlighted in previous studies as well. A closer look at the research findings reflect that these themes reflect both the strengths and the challenges associated with AI application in HR. Results suggest that AI powered systems will surely assist HR professionals. Moreover, it is evident from the results that HR professionals realize that AI will surely be a game changer when it comes to saving time. For example, recruitment processes become faster, employees can partake in training at their own pace and so on. It not only saves time but is also effective in getting work done at a much faster pace. On similar lines, HR practitioners can foresee that the AI application in HR is likely to grow in coming times. With diverse applications of AI in HR, they are aware that deploying AI in HR can surely help them stay on the top of trends, for instance, it will help them analyze employee sentiments, streamline talent acquisition and onboarding as well as detect patterns to determine actionable. At the same time, HR specialists claim that the majority of AI applications have been witnessed in the recruitment process worldwide. On the contrary, HR experts have taken cognizance of the various challenges associated with AI in HR. For instance, the integration of AI brings forth the apprehensions regarding the diminishing human element as it falls short in emotional intelligence and empathy. Since, personal touch is a prerequisite for any employee engagement initiative in an organization, absence of it will surely impact the efficacy of such engagement initiatives. Finally, HR professionals also understand the huge investment associated with AI in HR. Interestingly, the 'employee strength' of an organization emerged as an important factor influencing the decision to use AI in HR. Overall, the study has been able to capture true perceptions and sentiments of HR professionals regarding the AI application in HR across diverse sectors. Moreover, the findings from the present study contribute to both theory and practice. The results of the present study strengthen the existing strand of literature on the subjects as majority of the research findings validate the evidences of the preceding research. Further, it has immense implications for the HR professionals as the research findings will surely assist them in elevating the HR horizons by harnessing the strengths of AI and mitigating the associated challenges.

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