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## Application of Artificial Intelligence in HRM practices in Hospital Industry; Challenges and opportunities

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### **Abstract**

*Hospital Industry has witnessed a tremendous transition from its conventional patterns of management to the intense and rapid interventions of Artificial Intelligence (AI) and Human Resource Management (HRM) practices are not an exception. However this transition has posed several challenges and opportunities in the planning and execution of the changes and it demands a greater level of smooth integration of the systems and processes.*

*AI has an incredible impact on the human life at all levels varying from the automation of tedious, time-consuming tasks to the augmentation of human capabilities and the amplification of human functions.*

*Challenges in implementing AI in HRM in hospitals may be data privacy and security, bias and fairness, change management and technical challenges and opportunities be efficiency and cost reduction, improved patient care, employee development, enhanced employee experience and competitive advantage.*

*AI has a massive impact on the entire HR 360 that leads to major developments in the HR industry. It changes most of the present scenario and creates lot of novel kind of working system and the job market.*

*The integration of AI in HRM practices in the hospital industry presents substantial opportunities for improving efficiency, patient care and employee development However addressing challenges related to data privacy, bias and change management is crucial for successful implementation.*

*The present paper is an attempt to explore various opportunities and challenges pertaining to the introduction and integration of AI into the HR systems and processes in Hospital Industry.*

**Key words:** AI, HR Roles, Challenges of HR, Opportunities of HR

## 1 Introduction

Human resource plays a very important role in the improvement of any business, HR gives equal importance to wellbeing of both employees and company, companies deal with code of conduct, equality, health and safety and HR plays a major role in implementation of these policies

Artificial Intelligence (AI) is machine-displayed intelligence that simulates human behavior or thinking and can be trained to solve specific problems. AI is a combination of Machine Learning techniques and Deep Learning. Types of Artificial Intelligence models are trained using vast volumes of data and have the ability to make intelligent decisions.

Artificial Intelligence (AI) offers several applications in Human Resource Management (HRM) practices within the hospital industry. Here are some key applications, along with associated challenges and opportunities.

## 2 Applications

### ❖ Recruitment and selection:

Recruitment process is done by using two methods such as internal

recruitment and external recruitment.

Internal recruitment primarily focuses on the existing employees to fulfill the vacant positions and external recruitment focuses on the candidates who belong to the outer part of the organization.

Selection is also a key component for the fulfillment of job requirements in the organization. The different and most commonly used methods in the selection process are skill testing, resume screening, references, phone screening, and group interviews, in person interviews.

AI has a major role in recruitment and selection which gives the liberty to automatic tracking system to enhance the ability to hire in an effective way in a limited time.

### ❖ Employee On boarding

It's a new hiring orientation process in the initial stages where the new employees will learn about the organization and its structure, the employees attains the required knowledge, talents and skills to

become an effective organizational member.

The AI reduces the on boarding process and uplift the induction program by undergoing the document exchanges it also creates documents by using natural language processing that helps the HR to enhance the speed and accuracy,

❖ **Training and development:**

The performance of the employees are mainly depended on the training that he undergoes and enhance the existing skills by adopting the necessary training methods and other educational activities. Due to artificial intelligence the scenario of training and development is almost modified and the quality training is providing to the employees for their betterment. AI can automatically track the performance of every individual. It also includes customized learning, blended learning, Gamification type of learning and many more.

❖ **Performance management systems:**

The continuous and cyclical process that involves goals setting along with plan and action, performance review and evaluation with continuous monitoring of the performance by using different performance management concepts or trends such as

continuous performance management .AI is used in performance management for automated performance reviews, continuous real time assessments, learning and development, easy internal communication, remove bias, continuous performance feedback.

❖ **Employee relations:**

The primary focus is made on the relationship between the employer and employee; the different methods are used to maintain the healthy relationship between them and also to uplift the existing relationship for the betterment of the company. AI is used in employee relations by understanding employee referrals, candidates resume on smart digital forms, HR reporting confidence in AI integration, AI backed Chabot's keep engagement conversation going, powering workforce analytics.

❖ **Compensation and Benefits:**

The most attracted component of an employee in any organization is the compensation ,the major 4 categories of the compensation is guaranteed pay(salary and allowance),variable pay, benefits and equity pay .The benefits includes several kinds of insurances, perks and other non-monetary benefits. Artificial

Intelligence can help to automate the operational activities to provide an improved employee experience, combined with machine learning.

### 3 Challenges

#### ❖ **Data privacy and security:**

Artificial intelligence in health care is evolving nowadays and there is an increasing discussion about its development. Most of the AI technologies are owned and controlled by private entities. The application of AI could mean such entities will have a greater than typical role in obtaining, utilizing and protecting patient health information. The major concerns include access, use and control of patient data in private hands. This raises privacy issues relating to implementation and data security.

Implementing AI has resulted in poor protection of privacy. Appropriate precautions must be taken to maintain privacy. Firms must ensure that they have robust data protection procedures to prevent unauthorized access to sensitive data.

#### ❖ **Bias and fairness**

Bias in data sources is the cause for unfairness and it is the most common ethical issue. Data bias may be based on sexual orientation, gender, race or economic factors. For example; a study

conducted in the United States showed that clinicians might have neglected African Americans' positive results because they assumed that the model's positive predictive value for African Americans was low. Actually, the low positive rate was caused by the small number of African Americans who participated in the initial experiment, and false-positive results were more likely. The possibility for bias in AI algorithms presents another difficulty for AI in HR. AI-powered systems base their decisions on data; if the data is distorted, so will the algorithms. For instance, an AI algorithm may favor male candidates over female prospects if trained on historical data biased towards male candidates. Organizations must ensure that the data they utilize to train AI algorithms is balanced and diversified.

#### ❖ **Cost and ROI**

Numerous advantages, such as the mitigation of expenses and heightened accuracy in data-based decision-making, may ensure the implementation of AI in HR Software.

AI incorporation in HR systems comes with certain challenges. It includes the difficult task of calculating return on investment, insufficient technical

expertise, and prospective price escalation. To maximize their investment in AI, companies must ensure appropriate policies and data infrastructure.

#### ❖ **Integration with existing HR Systems**

One of the challenges of integrating AI with existing HR systems is that AI's dependence on patterns and databases makes it objective, which can restrict HR processes. HR technology frequently, faces problems with disparate, awkward systems that result in insufficient data and poor reporting. Although fragmented HR systems first appear to be cost-effective, they hardly interact with other systems.

A high level of technical competence is needed to enable various systems to communicate and work as needed so the business benefits.

#### ❖ **AI can't account for human emotion**

During hiring companies decision making process includes both hard and soft skills AI cannot evaluate human emotion and also it cannot account for personalities and how emotions affect teams as AI operates without the background understanding of complex human emotions there may be error in evaluation process

#### ❖ **AI lacks ethical responsibility**

There will be a lot of ethical issues like equal employment opportunity, harassment, hiring a minor, sexual assault in these cases AI can be biased as it only works on algorithms which is programmed by humans so their opinions may be biased, all the departments should work together to identify bias and prevent it from influencing hiring process, AI can replace a certain number of workers at a company, but they might face the challenging question of deciding which employee to replace

#### ❖ **AI lacks Human Touch**

AI can assess the ability and skills of candidates but deeper analysis of their social life and family values and morals cannot be understood, this is where the lack of human touch can be seen clearly.

#### ❖ **AI cannot be entirely reliable for screening candidates**

AI can either miss out on important aspects or leave out resourceful candidates in the name of equal opportunity

A large applicant pool may be impossible for recruiters to go through thoroughly. AI can help in this, but it solely depends upon the job profile data that is fed into the system.

#### ❖ **Limited to Candidate Pool that Applies through the System**

Although candidate experience is better when recruited through AI, it is quite possible that candidates miss to apply through these systems. Because it is essential to maintain a sense of organized decorum for the AI to screen objectivity and qualitatively, there is a dire need for candidates to apply through the system. These limits the ways an application can be submitted, which can be disadvantageous for both, the candidate who is unable to get an opportunity, and the recruiter who may lose out on a resourceful employee.

#### ❖ **Lack of trust in AI**

A major issue with machine learning and AI in HR functions is a lack of confidence in the technology. The use of the technology may be hindered by certain HR professionals' skepticism over the dependability and accuracy of AI-powered solutions.

- ❖ Firms must train HR workers on AI's capabilities and how to use them to enhance HR procedures to overcome this problem. Yet AI is a technology that can assist in decision-making and human judgment. AI should not entirely replace it, and HR professionals must be aware of this.

#### **4 Opportunity**

##### ❖ **Streamlining recruitment and selection**

AI helps to identify potential candidates who have skills and experience needed for the job it makes sure company hires the right person at right time for the right job and saves money and time. It also helps to analyze the present and future workforce requirements based on market trends and organization strategy by utilizing AI to attract potential candidates, we can increase the company's visibility and reach, attracting more high-quality applicants. AI helps in screening process by screening resumes and also administering exams and assessments such as personality and skill evaluation.

##### ❖ **On boarding**

AI help in automating manual time consuming activities in the process of employee on boarding, It also helps in speeding up the process and helps the HR professionals to focus on strategic parts of on boarding process such as developing connections with new workers and assimilating them into the organization's culture. AI may also deliver individualized on boarding

experiences based on each new employee's unique requirements and preferences, which can enhance engagement and retention.

#### ❖ **Learning and Development (L&D)**

AI plays a major role in teach the employees new skills and customize activities on the basis of individual needs this helps the employees be updated and perform better organizations can save money and time .The personalized approach of AI not only leads to better learning outcomes but can also increase employee engagement and retention. IT also provides employees with tailored feedback suggest specific areas for improvement, along with actionable advice. The personalized coaching can help employees develop their skills and achieve their career goals in an efficient manner that also keeps employees motivated and optimistic about their personal and professional growth.

#### ❖ **Increasing performance management**

Setting the aim, doing a self-assessment, supervisors' appraisal, debating, and signing off are all time-consuming stages in traditional performance management. AI can help in the real-time monitoring of

goals and offer feedback on what has been completed and what remains to be completed. It can also assist in highly useful information for HR professionals in succession planning.HR professionals utilize AI to create goals, track team, and individual performance, learn about developments and changes, and save operational time. This leads to increased productivity and overall positive outcomes.

#### ❖ **Employee engagement**

AI tools can improve the employee experience by customizing learning and development programs and HR process for individual needs of employees which increases their satisfaction, Use of chat bots will assist employees to answer their queries, AI lets employees to communicate more openly about their ideas. It provides real-time feedback to both employees and HR professionals.

#### ❖ **Employee retention**

Employee retention is the biggest challenge in the organisations.HR tries to imply new techniques for employee retention and identify new growth opportunity like career planning, identifying opportunities for growth, better work life balance and improving productivity.

## 5 Conclusion

The application of AI in HRM practices within the hospital industry presents a transformative landscape. The challenges of ensuring data security, addressing ethical consideration, overcoming employee resistance and managing implementation costs underscore the need for careful planning and strategic execution, however the opportunities including streamlined recruitment processes, enhanced employee engagement, personalized training and effective workforce planning, demonstrate the potential for AI to significantly improve HRM in health care settings. Success will depend on a balanced approach that prioritises ethical considerations.

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