

Role of Artificial Intelligence in HRM

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ABSTRACT

Artificial intelligence is useful in reshaping a great number of human resource practices. It provides technology equipment to enhance efficiency, automation and enhances the general employee experience. During this period, technology was set on fire that led to development or artificial intelligence implementation in diverse management functions. It helps the organizations to work in quicker way and effective way to finish the work. Like any other functions AI also optimised the role of HR which commences with the Automated recruitment process to performance appraisal and T&D. The current paper examines the use of AI in different aspects HR functions. It also attempts to investigate multiple opportunities and challenges of AI in the sphere of HRM. The research has established that one of the functions of AI is quite significant to perform the different tasks of human resource department in which AI can be used to perform recruitment, hiring, performance appraisal, T&D, assignment of the Jobs, decreasing the workload in the place of work and enriched place of work efficiency. It will also provide a small idea about how artificial intelligence will come out in future in the study.

Keywords: Artificial Intelligence, HRM, Automation, Digitalisation.

Introduction

In the modern era technology has been applied extensively in all the fields. Quite a large portion of every human being is under the control of Intelligence system. Our lives have been transformed a lot by the information and communication technology. Technology provides us with a motto of Ease of Doing work, in the contemporary world we are far more reliant on the technology. And that consciousness regarding methods of artificial intelligence is extremely important. This now is where the human being requires machines or technology that assist him or her in their lives and is also intelligent. Artificial, as per the definition of the Oxford Dictionary is any product created or manufactured by people, as opposed to being created naturally, particularly, as a replica of anything natural (Oxford Dictionary, 2019). Thus, it can be determined that artificial is what human beings have created to imitate a natural occurrence that is normally expected. We are in that age where AI abilities are reaching new levels and have a significant influence on the way we accomplish our objectives in our lives. Artificial intelligence is a technology that sounds like the human intelligence. AI can be described as the capability of such items as machines to learn, interpret and understand independently in a comparable manner that human beings do. AI referred to the simulation of human intelligence in machines which are programmed to mimic human behaviour and think like humans. The term can be used as well to refer to any type of machine that displays characteristics related to a human mind like learning and solving problems (Investopedia, 2020). AI is able to achieve the task just as it was done by human being employing intelligence. According to Salin and Winston (1992), AI was a set of methods that enable the computers to complete the tasks that would otherwise require the reasoning capabilities of human intellect. The use of AI will be special to human with high speed calculation, large volume of good quality data processing and sophisticated algorithm. The power of any organization in this competitive world is fast and right decision. Nilsson (2005) argues that most of the tasks that human intelligence requires should be handled by machines, and these he

refers to as human-level AI. AI has no limits in its application because it can be applicable in various fields and industries. AI will also be useful in routine work or tasks in addition to strategic decisions. The opportunities that AI technique offers to HR functions include training and development, transactions, recruiting and talent acquisition, payroll, reporting, access policies and procedures. New technology has been embraced by many organisations in several HR processes such as recruitment and selection process, performance appraisal process, cloud based HR systems (Jain, 2018). The aspects of HRM are numerous, including training employees, recruitment, employee relations and the development of the organization (Wall and Wood, 2005). Artificial Intelligence, therefore, is very essential and revolutionary in enhancing the effectiveness of the modern organisations.

Review of Literature

Huang, M.-H., & Rust, R. T. (2018). Artificial intelligence in service. *Journal of Service Research*, 21(2), 155–172. This article explains that AI is fundamentally transforming service sectors including HRM by automating administrative work and enhancing decision-making accuracy. Their study focused that AI systems supported by machine learning minimize manual workload and enhances HR efficiency, enabling HR professionals to focus more on strategic management such as talent management and organizational development.

Upadhyay, A. K., & Khandelwal, K. (2019). Applying artificial intelligence in human resource management. *International Journal of Innovative Technology and Exploring Engineering*, 8(9), 219–227. This paper discussed how AI-driven recruitment tools—including automated resume screening, chatbots, and applicant tracking systems—have made hiring quick and more accurate. Their findings indicate that AI minimizes human biases, improves the quality of shortlisted candidates, and streamlines the entire recruitment cycle.

Sharma, R., & Bhatnagar, J. (2020). AI applications in human resource management: An Indian perspective. *South Asian Journal of Human Resource Management*, 7(1), 20–39. This study examined the increasing use of AI technologies in the Indian HR department. They concluded that AI-based analytics, digital onboarding systems, and employee engagement platforms are becoming integral to HR functions, ultimately making HR processes more accurate, responsive, and employee-oriented.

Nair, S., & Shetty, P. (2021). AI-enabled performance appraisal systems. *Journal of Human Values*, 27(3), 183–195. Their study found that AI-driven performance evaluation helps reduce subjectivity, enhances fairness and provides real-time insights into employee performance. They also highlighted that AI tools support better identification of training needs and improve employee development strategies.

Khan, M., & Malik, A. (2022). AI adoption and employee experience in HRM. *Journal of Management Research*, 22(1), 45–60. This study discussed how AI positively impacts employee experience through predictive analytics, chatbot-based support, and personalized digital learning. Their research suggested that AI improves communication skills, enhances employee engagement and contributes to a more adaptive and supportive HR environment.

Sehgal, W., & Thenmozhi, M. (2024). Artificial intelligence in human resource management: A bibliometric review. *International Journal of Current Research and Review*, 16(2), 10–22. Their study found a significant increase in global research interest on AI in HRM, focusing on ethical AI, algorithmic fairness, talent analytics, and employee data governance. Their findings indicate that AI has become a central theme in contemporary HR research.

Research Objectives

- To study the role of AI in HRM.
- To investigate the effect of artificial intelligence on HRM.
- To examine the opportunities that have been countered during incorporating AI and the HRM.
- To research the issues of artificial intelligence in the HRM.

Research Methodology

- **Research Design:** In the study, research design that is being employed is descriptive research design where surveys, observational study and case study are employed to describe the problem.
- **Data Collection Method:** This research has employed the secondary data. The secondary data has been obtained through the research papers, published materials, online websites, HR blogs, and survey reports of different research organizations.

Role of AI in HR Functions

The HR department is moving towards the digital in modern era. Artificial, revolution and taking the work simplified through the analysis of big data with different approaches, intelligence, and cloud computing (Amla & Malhotra, 2017). The AI presents much great possibility to uplift the HR world. It will enable the organizations to attain what they want in a superior and productive way. The organization will with the technological advancement be in need of high skilled professionals that can cause the machine to execute the task as per the requirement. Artificial Intelligence will be used to help the employees balance their work life effectively. Employee will be capable of doing his work within the deadline. The dependency on employees will decrease in the organization.

Following are the role of artificial intelligence in human resource management:

- **Recruitment** – In most of the organisation recruitment process is speeding up day by day by using artificial intelligence. Leading organisation such as Facebook, TCS, Infosys, HDFC and many more organizations are using digital platform in the process of recruitment and interview which help them to determine the new and best pool of talent. AI can help the acquisition managers to examine the applicant quickly and effectively. Artificial intelligence technique such as Interactive Chat box system or automated answering machine plays important role to solve the queries like about job description and specification or any other doubt regarding the process of recruitment in an organization. AI compares the interviewed applicants to the top talent employees in the organisation and finally recommend the best applicants to recruiters (HireVue, 2018).
- **Selection** – The next step in the process of HRM is selection. It usually takes place after the organization have been doing initial recruitment where the HR manager identify a pool of qualified applicants and now have to choose the right candidate for the right job. (Newell, 2005). AI assist the human resource manager to track right candidate in short time of span and technology will helps out to identify the best candidates as per required skills sets (Rajesh, Kandaswamy, & Rakesh, 2018). Artificial intelligence techniques used in selection process are based on machine learning and natural language processing for automated resume screening and analysis. Applicant tracking system and chat box are used for answering the questions and doubts of candidates during selection process.
- **Induction** – Induction program plays very significant role for the new selected employees. It familiarize the new comer to the organizational culture and climate, policies, structure and processes. AI can assist the new employees to answer other common questions, information and resources that may help the new join to break the ice and make the workplace comfortable and easy to work. AI techniques are primarily based on automation personalisation and support such as chat box and virtual learning technique that helps to understand the capability and scope for improvement in career of new employees.
- **Employee relations-** AI assist employee relations in human resource management by sentimental analysis, automated chat box system and data driven insights to analysis is the grievance among the employees and prediction regarding employee turnover in the organisation. AI boost up the employee relations by scheduling virtual meeting with HR manager and share and discuss their grievances with him.
- **Work Scheduling:** HR manager finds it difficult to perform the job of work scheduling as it is time consuming process and distract the manager to perform innovative work in the organisation. Here, AI will play a very important role. It assist HR manager in work scheduling, information circulation and collecting the information or preferences from the employees through the automated chat box, predictive forecasting, and natural language processing for request management. These techniques help the manager to perform the task of work scheduling in an effective and efficient manner.
- **Compensation Management:** Traditionally compensation management was called to be very tedious process because if it was not done correctly or poorly handled, then it may give rise to various interpersonal conflicts or grievance among employees in the organisation. Now a days, AI will help in compensation management as all the information are now transparent, employee's bank accounts are linked and salary will automatically credited to their accounts and all the tax related issues are also resolved.

- **Training and Development** - AI transformed the field of training and development by personalised training methods, automated content creation and administrative system and real time feedback system that help in creating more creative, engaging and relevant workforce in the organisation.

The primary AI techniques used in training and development are:

- Machine learning and predictive analysis to analysis employee data, performance and skills to predict skill gap and required scope for training for the employees.
- Natural language processing powers conversational AI chat box virtual assistance 24 x7 learner support and analysis text feedback and performance review.
- Generative AI to automatic create or customised content creation, quiz and role playing scenarios.

Thus Artificial Intelligence helps in transforming manual Training and Development to automated training methods.

- **Performance Appraisal** – It is one of the crucial function an HR manager has to perform in the organisation. It should be timely and accurate as it is the most important source of satisfaction for the employees. AI transforms performance appraisal in HRM by making it more objective, accurate and continuous feedback through automated data analysis. It helps in reducing human error and biasness and enhances efficiency of the result of performance appraisal that ultimately leads to more satisfied and dedicated workforce in the organisation.

Challenges of AI in HRM

- **Data Privacy & Security Issues**

AI systems depends heavily on employee data—personal details, performance data, behaviour patterns. The biggest Challenge is Protecting this sensitive information from misuse, leaks, or unauthorized access. For example AI-powered monitoring techniques collecting employee data may violate data privacy.

- **Bias & Discrimination**

AI tools learn from past data. If the past data is biased, the AI will also become biased. The biggest Challenge is to ensuring fairness and avoiding discriminatory hiring or promotional decisions. For example: If past selection data prefers male candidates, AI may also prefer male candidates.

- **Lack of Transparency (Black Box Problem)**

Many AI algorithms has failed to explain its own decisions. The biggest Challenge experienced by HR managers is they cannot understand or justify the AI decisions. for Example- AI rejects a candidate but HR cannot explain the reason for rejection to the candidate.

- **Resistance from Employees**

Employees may fear that AI will replace jobs or continuously monitor their activities in their jobs. The biggest Challenge is to Building trust and promoting acceptance of AI techniques for Example: Employees may hesitate to use AI-supported feedback or training applications.

- **High cost of Implementation**

AI tools, software, integration, training, and maintenance are very expensive. The biggest Challenge is for Small and medium organisations may not afford full-scale AI integration in all procedures in the organisation.

- **Skills Gap in HR Professionals**

AI requires data literacy, analytical and conceptual skills, and technical knowledge. The biggest Challenge is that Many HR managers are not fully trained to interpret AI results.

Example: HR managers fails to understand predictive analytics reports.

- **Legal and Ethical Concerns**

Employment laws are still updating to address AI-driven decisions. The biggest Challenge is that Organizations must ensure AI use complies with labour laws.

Example: Automated hiring of employees may violate or going against equal opportunity regulations.

- **Overdependence on Technology**

Over dependency on AI may reduce human judgement, empathy, and relationship-building in HR is the biggest Challenge Maintaining the balance between automation and human touch.

- **Quality & Reliability of Data**

AI output is totally depends only as good as the data it receives. The biggest Challenge is Inaccurate, incomplete, or outdated data leads to wrong HR decisions that ultimately leads to high level of dissatisfaction in the organisation.

- **Integration with Existing HR Systems**

AI tools need to be compatible with existing HR practices going on in the organisation. The biggest Challenge is technical integration problems can create workflow disturbance in the organisation.

Opportunities in the field of HRM

- **Faster & Smarter Recruitment**

AI changed the entire hiring workflow in the organisation.

Opportunities for hiring provided by AI-

- Screening of resume in seconds.
- Shortlisting of employees automatically.
- AI-driven interviews (video/voice analysis)
- Best eligible candidate-job matching
This results in faster hiring, reduced workload, and improved accuracy.

- **Improved Decision-Making with HR Analytics**

AI study large HR data to generate insights. AI put forth multiple Opportunities such as -

- Predicting employee turnover ratio.
- Identifying high performer employees.
- Efficient human resource planning.
- Data-driven promotion & hiring decisions.

This results in more objective and strategic HR decisions that leads to more efficient and effective organisation.

- **Better Employee Experience**

AI chatbots and virtual assistants provide 24x7 support to the employees in the organisation. Some of the important opportunities that can be grasped by the HR manager.

- Fast answers to HR queries (leave, salary, policies).
- Personalized training and development suggestions.
- AI-driven onboarding support.

This Results in better employee satisfaction and engagement of employees in their allotted work in the workplace.

- **Personalized Learning & Development**

AI helps in tracking the learning behaviour and performance patterns and helps to provide best training method to train the employees in best manner.

Some opportunities that can help h r manager in his work are as follow -

- Customized training methods for the employees.
- Adaptive and automated learning modules.
- Identification of skill gap.

This Result in Faster upskilling and better talent development in the organisation.

- **Efficient Performance Management**

AI facilitates monitoring of performance of employees continuously that leads to efficient performance management.

Some of the important Opportunities that comes in the path of success are:

- Real-time performance analytics.
- Predictive evaluation of performance.
- Automated goal setting & tracking of performance

This Results in Fair, accurate, and continuous appraisal of employee performance that ultimately leads to higher job satisfaction and engagement.

- **Cost Savings & Operational Efficiency**

AI eliminates repetitive administrative tasks and integration of automation of work in the organisation.

Some crucial opportunities are as follow -

- Automated Salary processing
- Online Attendance management
- Automated Leave management
- Quick Document verification

This results in HR teams can save time, reduce errors, and focus on strategic work. Rather than involved in clerical work.

- **Better Talent Acquisition & Retention**

AI can evaluate employee behaviour and engagement trends that helps in better retention of employees in the organisation.

Some of the Opportunities are as follow

- Predicting attrition rate
- Identifying flight-risk employees
- Personalized retention strategies and exit interviews

This results in Reduced turnover and stronger retention of employees in the organisation.

- **Diversity & Inclusion Improvement**

AI reduce human bias in HR processes that makes the process more productive.

Some Opportunities are:

- Blind hiring of eligible candidates
- Fair candidate evaluation of performance
- Diversity analytics

This result in more inclusive and equitable workplace.

- **Enhanced Employee Monitoring & Well-being**

AI identifies changes in behaviour, mood or productivity of employees at their workplace.

Some of the opportunities that can be utilised are:

- Identifying burnout ratio
- Monitoring mental well-being indicators
- Recommending wellness programs

This result in Healthier and more productive employees with better job satisfaction.

- **Strategic HR Transformation**

AI shifts HR manager from administrative tasks to strategic functions that are more productive in nature.

Some opportunities are as follow:

- Strengthening the role of HR Business Partner.
- More focus on leadership & motivation

The Result is that HR becomes a strategic driver of the organisation.

Conclusion

HR practices that are AI based have immense influence on HR team that render them more productive and creative. It is not only useful in assisting them to update their knowledge and skills but also in assisting them improve or increase employee involvement and engagement. Do not think that AI will make perfectly the help of HR Managers that assist them in making the decisions strategic, tactical or decisions operational. It may not always be possible that AI will give the right suggestion or make the best decision. The HR manger must reconfirm and verify on the algorithms and logic and then proceed with making a crucial decision. Time saved in redundant HR work will enable managers to perform more creative and strategic work towards the prosperity of the organization depending on how, the company will be successful. They are efficient and intelligent integrators or matchers of people, process and technology to provide value any transformation at a low cost. AI-powered HR software is capable of analysis, diagnose, project, implement and emerge as more potential and dominant resource. Organizations should discover the necessity of AI and imagine how it could be implemented in your organizational values and culture prior to employing the solutions of AI. Employees can be influenced with AI in whereof there are many considerations so fast play and that ought to be adjusted to the need and ability of employees. Thus, there are two sides of a coin -heads and tail, so there are two sides to AI. It has positive and negative influence on the functions of HR. It entirely depends on the talents of HR. manager what he can do to effectively and efficiently use the power of the artificial intelligence in the organisation.

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