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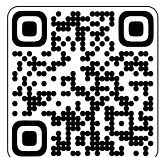


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ARTIFICIAL INTELLIGENCE (AI) IN HUMAN RESOURCE MANAGEMENT: OPPORTUNITIES, CHALLENGES, AND ETHICAL IMPLICATIONS IN THE INDIAN CONTEXT

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ABSTRACT

India is rapidly evolving digital infrastructure, expanding corporate ecosystem, and demographically diverse workforce have made it a fertile ground for innovation in Human Resource Management (HRM). Among these innovations, Artificial Intelligence (AI) has emerged as a transformative force, reshaping traditional HR practices such as recruitment, performance management, employee engagement, and retention strategies. With the proliferation of AI tools like recruitment chatbots, sentiment analysis software, and predictive attrition models, Indian organizations are increasingly exploring AI to gain competitive advantages in managing talent. However, the Indian context presents unique challenges. Cultural heterogeneity, linguistic diversity, and complex labor regulations necessitate a localized approach to implementing AI-driven HR systems. For instance, recruitment algorithms must accommodate a multilingual environment, while performance evaluation tools must account for the hierarchical nature of Indian workplaces. Additionally, ethical concerns around bias, transparency, and employee surveillance continue to raise questions about the responsible deployment of AI in HR processes. This study seeks to bridge the gap in

current research by examining both the transformative potential and ethical ramifications of AI in HRM within Indian organizations. Specifically, it aims to: Investigate how AI can enhance HR efficiency while addressing India-specific socio-cultural and legal challenges. Assess ethical concerns, including algorithmic bias, data privacy, and employee trust in AI-driven HR systems.

Keywords: Artificial Intelligence, Human resource management, India, Opportunities, Challenges etc.

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1. Introduction

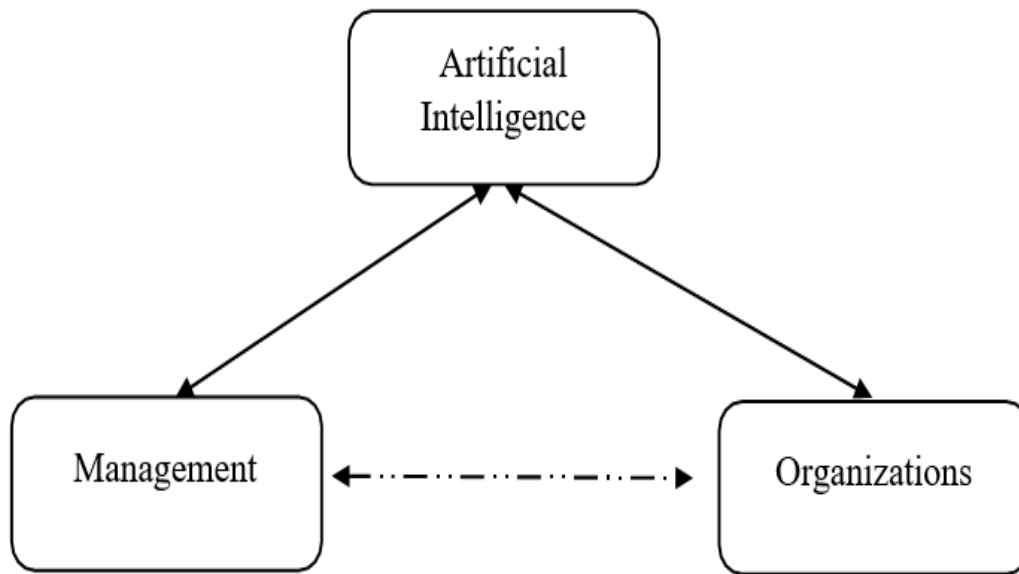
In the competitive world Industries, collect the accurate data and analyzed the collected data for the use of companies growth and daily working is essential. Artificial Intelligence helps the industry to work in faster way and efficient way to complete the work. Artificial Intelligence is entering into various department like human resource department, finance department, marketing and production department. With using AI system organization can able to inform the existing performance and day-to-day functions. In business pressure has been increasing, tough managers understood the importance of artificial intelligence at workplace. The research paper is descriptive in nature. The researcher was used secondary data where the data was collected from research papers, publications, websites, HR blogs, survey reports etc. The core objective of the study was examine the role of artificial intelligence in human resource department and understand the challenges in HR department. The research study has concluded that a role of AI is larger into various functions carried out in human resource department where by robotics companies can handle recruitment, hiring, analyzing the data, collecting the data, reducing workload at workplace and enriching workplace efficiency.

The incorporation of Artificial Intelligence (AI) technology is experiencing a substantial transition in the area of human resource management (HRM). By automating routine activities, improving decision-making, and offering insightful data, AI, a field of computer science that allows computers to execute tasks that traditionally need human intellect, has the potential to completely transform HRM practices. This introduction gives a general

overview of AI's function in HRM while emphasizing its significance, advantages, and ramifications. Human resource management (HRM) has historically included a broad variety of tasks, including hiring, training, performance evaluation, and employee engagement. These procedures often include protracted administrative responsibilities, arbitrary judgment calls, and a significant quantity of data analysis. However, the development of AI has given HRM professionals new opportunities to shorten these procedures and make data-based judgments. HRM professionals now have the potential to automate tedious activities, sift through massive volumes of data, and derive insightful conclusions because of AI technologies like machine learning algorithms, natural language processing, and predictive analytics. For instance, AI-powered technologies that analyses resumes, conduct video interviews, and determine job fit may help with the screening and selection of applicants. This not only lowers bias and saves time and money, but also raises the quality of recruiting choices. Additionally, AI may support employee growth and engagement by offering individualized learning suggestions, feedback, and performance assessments. To improve the entire employee experience, intelligent chatbots and virtual assistants may be used to provide workers immediate assistance and respond to HR-related questions.

2. THEORETICAL BACKGROUND

Technology is one of the major influential factor in an Industry. Since the 19th century, the role of robot have been replacing employees in production department. In third revolution began in the year of 1970s personal computers and the internet entered into working life and human labor were replaced by the machines. Now a days digital technologies like machine language (ML) and artificial intelligence (AI) both are entering into day to day working at workplace and which will lead transformation in business. “Artificial intelligence is defined as “an ideal intelligent” machine that is flexible agent that perceives its environment and takes actions that maximize its chance of success at some goal.” Artificial intelligence is an intelligence that demonstrated by machine, in contrast to the natural intelligence done by humans. Artificial intelligence was coined first time in academics in 1956.



Source: - (Duchessi, O'Keefe, & O'Leary, 1993)

Figure: 1 A framework shows the relationship between the management and organization with artificial intelligence. The research author (*Duchessi, O'Keefe, & O'Leary, 1993*) in the research article discussed that artificial intelligence and digital technology has impact on the ownership and responsibility for decision making, cost reduction and enhanced service, personnel shifts and downsizing, has impact on organizational structure, workforce management.

Artificial intelligence is helpful in various business functions where it can help to reduce the workload and work pressure on the employees at workplace. Rapid changes in business needs fast response. With using AI system organization can able to inform the existing performance and day to day function. In business pressure has been increasing, tough managers understood the importance of artificial intelligence at workplace. Now a days artificial intelligence has entering into the overall system of an organization and one of the area is human resource department where by using AI system human replaced the human and all functions in human resource department is carried like candidate screening, recruitment, alignment of human resource activates and performance management etc.

Table: 1

	Humans Mind	Artificial Intelligence
Uncertainty	Makes swift intuitive decisions in the face unknown.	Provide access to “real time” information.
Complexity	Decide where to seek, and gather data. Choose among options with equal data Support.	Collect, accurate, process, and analyze data.
Equivocality	Negotiate, build consensus, and rally support	Analyze sentiments, and Represent diverse interpretations

Source: (Jarrahi, 2018)

3. REVIEW OF LITERATURE

Jain, (2022) the research paper identified the role of artificial intelligence in human resource management. The researcher has quoted that most of the companies has been adopting modern technology in various HR process like recruitment process, performance appraisal process, cloud-based HR systems.

Jarrahi, (2018) in his researcher paper title, Artificial Intelligence and the Future of work: Human- AI Symbiosis in Organizational Decision Making. The researcher papers talked about the usefulness of AI for human. Artificial intelligence has been supporting in decision making, dealing with uncertainty, and especially equivocality of decision-making in an organization. Still in an industry the role of human is essential and technologies have to depend on human when subconscious decisions are essential to evaluate and facilitate the outcomes of decisions.

Merlin.P & Jayam.R, (2018) in the research title, Artificial Intelligence in Human Resource Management, the researcher has insight the role of AI in human resource. An Author has concluded that AI is useful in workplace and help to HR professional to understand their working and to identify the problems and trends in advance.

Buzko, et al., (2016) in paper title, Artificial Intelligence technologies in human resource development. The researchers, ponder on hurdles of AI technologies in human resource area where authors noted that AI not able to identify the effectiveness of training costs. In the research paper authors noted that artificial intelligence technologies facilitate the prompt analysis of data by human.

Dirican, (2015) A researcher in his research paper, title “The Impact of Robotics, Artificial Intelligence on Business and Economics” has studied that use of Robotics and

Artificial intelligence in business may have negative impact on the overall functions of an organization like production, performance management, sale, strategic planning, customer relationship management, banking system, coaching, training, taxes etc.

Kapoor, (2010) Researcher has examine the role of business intelligence and its use for human resource management. In this research article, a researcher investigated the leading business intelligence vendor to look into the business intelligence and data analytics features incorporated in human resource management modules.

4. RESEARCH OBJECTIVES

This study intends to: - Provide an overview of the present uses of AI in HRM processes via a thorough examination of the literature and research that has already been done.

1. Identify the difficulties and moral ramifications related to the use of AI in HRM.
2. Talk about the possible effects of AI on the labor market and transitional measures.
3. Examine the potential improvements and new directions that AI may offer to HRM procedures.

5. RESEARCH METHODOLOGY

The research study is using the descriptive research design. In the research study the researcher has used secondary data. The secondary data has been collected from research papers, published materials, online websites, HR blogs, and survey reports published by various research organizations.

6. ROLE OF ARTIFICIAL INTELLIGENCE IN HR

Now a days HR department heading towards the digital revolution and using various method to simplify the resources by using big data analysis, artificial intelligence, and cloud computing. (Amla & Malhotra, 2017) Most of the organization has been using artificial intelligence or digital technologies in HR like chatbot, machines learning, and robot process automation in human resource management which support in recruitment, screening, onboarding, and interviewing etc. Following are the role of artificial intelligence in human resource management;

Recruitment: - The researcher (**Amla & Malhotra, 2017**) in his paper defined that only 40 percentages of companies and industries are using artificial intelligence. Organizations like SAT, Facebook, GE are using digital technologies in screening, interview, and identify the new talent for the recruitment process in an organizational. Through AI recruitment manager can examine the application and candidate can get quick response. Chat box system or automated answering machine plays essential role to solve the quires and problems regarding the process of recruitment in an organization.

Screening and Interview Process: - Artificial intelligence is helpful in automating the interview process by examining them with word or speech patterns exams. Through Ay software digital interview can take place and AI also helps to improve the candidate experience. Tools like *Amy* and *Clara* are used to scheduling interviews, working meetings.

Reduce Administrative burden: - In an organization HR have to play multitasking roles where using technology and Artificial intelligence companies try to reduce workload. AI provides solutions of problems and it helps to increase the efficiency of HR in an organization.

Selecting: - The researcher (**Rajesh, Kandaswamy, & Rakesh, 2018**) has examined that through AI human resource manager can able to trace right candidate in short time of span and technology will helps out to identify the suitable candidates as per required skills sets.

Reduce Discriminations: - Nowadays, AI is being used to reduce the favoritism and will help to increase the transparency at workplace. In such a way organization can able to select the resume. AI applications can be used to analyze job descriptions (**Rathi, 2018**).

Increase Efficiency: - Artificial Intelligence will helpful to reduce the redundancy of employees at workplace. Various robotic task has been carried out to increase the efficiency at workplace. Robotic task includes collecting data, filing reports, copying data, identifying required data from available data, processing, collecting data for HR and payroll systems etc.

Enrich workplace learning: - Now a days, computers and digital technology can do the behind the scenes role in industry. Through computers and modern technology industries can able to manage data analysis and provide real-time feedback during training, alteration of course of actions based on progress and responses which industries got (**Riebli, 2018**). To save a time companies used Microsoft 365 which helps employees to work and increase the efficiency at workplace. AI tools like *Engazify* (To Provide feedback), *Obie* and *Niles* (For knowledge sharing), *Wade&Wendy* (For Career advancement), and *Duolingo* (Learning domain) are used (**Amla & Malhotra, 2017**).

7. BENEFITS OF ARTIFICIAL INTELLIGENCE IN HR

1. Reduce the burden on administrative staff in company.
2. It will help in talent acquisition and identify the right candidates for the job.
3. AI helps to predict the rate of employee retention at workplace.
4. It can overcome the limitations of human and work accordingly
5. The chance of error will be less.
6. It will maintain the workflow in various department.
7. Through AI companies can able to get accurate results.
8. It will increase the employee engagement at workplace.
9. It will minimize the bias behavior in decision making.

8. CHALLENGES OF ARTIFICIAL INTELLIGENCE IN HR

Nowadays, necessary skillset for employees are required due to involvement of artificial intelligence into human resource department. Most of the times it is difficult for employees to adopt and learn the AI tools and have a proficiency in the field of digital technologies (Jain S. , 2017). The core part in any company is their human resource and by implementing the AI system it may have impact on levels of management which will lead fearlessness in the mind of employees. Getting right candidate to handle AI tools is one core challenge in front of industry and it can be difficult to HR department. One more limitation and challenge is restrict HR department to take decisions in day-to-day life as technology overcomes the authority and role of HR into decisions making in an organization.

9. CONCLUSION

In competitive era there is tremendous growth for industrial sector. Managing continuous improvement is one challenge in front of industries. To enhance the speed and for routine work most of the industries adopting modern technologies. Most of the researcher and experts also recommending industries to make a use of artificial intelligence tools, digital technologies. Artificial Intelligence and machine language has been used by many companies in the field of human resource department where AI plays integral role in recruitment, selection, hiring, analyzing performance, collecting data regarding employees, providing real time information and providing accurate information.

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