

Artificial Intelligence in Human Resource Management

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Abstract - In today's fast-paced industries, gathering accurate data and analyzing it effectively is crucial for a company's growth and daily operations. Artificial Intelligence plays a key role in helping industries work more quickly and efficiently. AI is now being used in different departments such as human resources, finance, marketing, and production. By using AI systems, organizations can get insights into their current performance and manage daily tasks more smoothly. As business pressures continue to rise, managers are starting to realize the value of AI in the workplace. The research paper is descriptive in nature. The researcher used secondary data, which was collected from various sources like research papers, publications, websites, and HR blogs. The main goal of the study was to examine the role of AI in the HR department and understand the challenges faced in this area. The research found that AI has a significant role in various HR functions, such as recruitment, hiring, data analysis, data collection, reducing workload, and improving workplace efficiency.

Index Terms – artificial intelligence, machine languages, human resource management.

INTRODUCTION

Technology plays a big role in shaping industries. Since the 19th century, robots have started replacing workers in production areas. The third industrial revolution began in the 1970s when personal computers and the internet became part of work life, leading to more machines taking over tasks that were once done by humans. Today, digital technologies such as machine learning and artificial intelligence are becoming part of everyday work at the workplace, and this is changing how businesses operate. Artificial intelligence is defined as an ideal intelligent machine that can act as a flexible agent, understanding its environment and taking actions that help it achieve its goals. AI refers to intelligence shown by machines, as opposed to the natural intelligence that humans possess. The term “artificial intelligence” was first used in academic

circles in 1956. AI is helpful in many business areas, where it can lighten the workload and reduce stress for employees. Businesses today need quick responses to fast-changing demands, and using AI systems allows organizations to monitor performance and handle daily operations more effectively. With increasing pressure in the business world, managers have come to realize the value of AI in the workplace. Now, AI is part of an organization's overall system, and one area where it is being used is human resources. In this department, AI helps with tasks such as candidate screening, recruitment, organizing human resource activities, and managing employee performance.

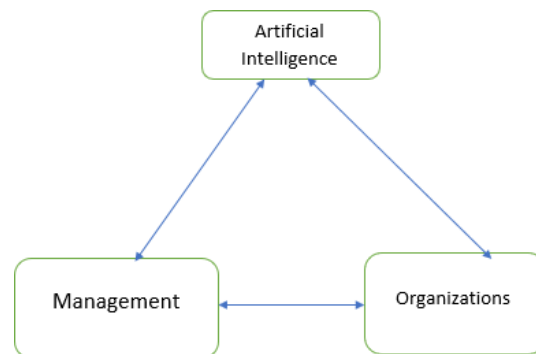


Figure:1

A framework illustrates how management and organization interact with artificial intelligence. The research authors (Duchessi, O'Keefe, & O'Leary, 1993) in their article discussed that artificial intelligence and digital technology influence ownership and responsibility for decision-making, cost reduction, improved service, changes in personnel, and workforce downsizing. These factors also affect organizational structure and workforce management. In the Literature Review (Kapoor, 2010), the researcher examined the role of business intelligence in human resource management. This research looked into the features of business intelligence and data analytics included in HR management modules by examining leading business intelligence vendors. (Jain, 2018) The research paper identified the role of artificial intelligence in human resource management. The researcher noted that many companies have adopted modern technology in various HR processes like recruitment, performance appraisal, and cloud-based HR systems. (Dirican, 2015) A researcher in his paper titled "The Impact of Robotics, Artificial Intelligence on Business and Economics" studied that the use of robotics and artificial intelligence in businesses may have negative effects on organizational functions such as production, performance management, sales, strategic planning, customer relationship management, banking systems, coaching, training, and taxes. (Buzko, et al., 2016) In the paper titled "Artificial Intelligence Technologies in Human Resource Development," the researchers discussed the challenges of AI in the HR field. The authors noted that AI is not able to determine the effectiveness of training costs. The researchers also mentioned that AI helps humans analyze data quickly. (R & D, 2018) The research paper titled "Recruitment through Artificial Intelligence: A Conceptual Study" discusses the role of AI in the recruitment process.

AI plays an important role in screening candidates, sending automatic messages to candidates, managing employee relations, and scheduling interviews. (Jarrahi, 2018) In his research paper titled "Artificial Intelligence and the Future of Work: Human-AI Symbiosis in Organizational Decision Making," the researcher talked about the usefulness of AI for humans. AI supports decision-making, handling uncertainty, and especially in situations where decisions are ambiguous in an organization. However, in many industries, the role of humans remains essential, and technologies must rely on human judgment when subconscious decisions are needed to evaluate and improve the outcomes of decisions.

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.

(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.

RESEARCH OBJECTIVES

1. To study the concept of artificial intelligence.
2. To study the role of artificial intelligence in human resource management.
3. To study the benefits of artificial intelligence in human resource management.
4. To study the challenges of artificial intelligence in human resource department.

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.

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 chat bot, machines learning, and robot process automation in human resource management which support in recruitment, screening, on boarding, and interviewing etc.

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

1. **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.
2. **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.
3. **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.
4. **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 - 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. candidates as ill sets per required sk
5. **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).
6. **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.

7. 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).

BENEFITS OF ARTIFICIAL INTELLIGENCE IN HR

1. Reduce the burden on administrative staff in company.
2. It will helps 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

CHALLENGES OF ARTIFICIAL INTELLIGENCE IN HR

Today, with the increasing use of artificial intelligence in human resources, employees need to develop new skills to keep up. It's often hard for workers to learn and get comfortable with AI tools and digital technologies (Jain S., 2017). The human resource department is a key part of any company, and introducing AI systems can change how decisions are made, which might make employees feel uncertain. Finding the right people who can manage AI tools is a big challenge for industries, and it's tough for HR teams. Another issue is that technology can limit the daily decision-making power of HR, reducing their role and authority in the workplace.

CONCLUSION

In today's competitive environment, the industrial sector is experiencing significant growth. However, managing continuous improvement remains a major challenge for industries. To boost efficiency and handle routine tasks, many industries are turning to modern technologies. Researchers and experts are also advising companies to use artificial intelligence and digital

tools. These technologies are widely adopted in human resource departments, where AI plays a key role in recruitment, selection, hiring, performance analysis, employee data collection, and providing real-time and accurate information.

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