



Revolutionizing Human Resources through Artificial Intelligence and Automation

S. Shaheera Bhanu

Department of MBA, Viswam Engineering College, Madanapalle, Andhra Pradesh-517325, India;

* Corresponding Author: shaheera.srb@gmail.com

Abstract: The current study article examines the growing use of automation and Artificial Intelligence (AI) in enterprises' diverse human resource roles. The process of improving the HR department's efficiency through human resource automation involves relieving staff members of time-consuming manual activities so they can concentrate on more complicated responsibilities like decision-making and strategy-making. Technology like artificial intelligence is defining modern paradigms for conducting business. It is a solution that completes the majority of low-value HR tasks so that the strategic scope of work can receive more attention. Artificial intelligence is most frequently used in human resource applications like hiring and onboarding, internal mobility and employee retention, and task automation. HR professionals may expedite candidate vetting with the help of AI. By employing more user-friendly forms and experiences that draw higher talent and guarantee that interested parties complete their applications, adopting AI tools improves the application process for candidates as well. This research work is based on concepts and descriptive analysis. This research study used secondary data from recent research articles that were found on search engine websites. The study is an effort to recognize the important role AI has played in improving organizational decision-making. AI has the potential to improve HR departments in a number of ways. Employing AI may assist HR managers in a number of ways, including keeping up with trends; analysing employee sentiment; streamlining talent acquisition and onboarding; and spotting patterns to make decisions. HR will take on more strategic roles and become more data-driven. For HR professionals who are eager to keep up with the pace, the technology reckoning can open up a whole new chapter. This observation will assist policymakers in understanding the advantages and importance of implementing AI in human resource management.

Keywords: Artificial intelligence, Automation, Human Resource Management, HR Professionals, Technology.

1. Introduction

A few scientists from a number of disciplines (mathematics, psychology, engineering, economics, and political science) started debating the viability of developing an artificial brain in the 1940s and 1950s. In 1956, the academic discipline of artificial intelligence research was established. For a very long time, people have entertained the notion that inanimate objects could suddenly become sentient beings.

Ancient Greeks created robot-related tales, and Chinese and Egyptian engineers created automation. The first attempts to characterize human thought as a symbolic system by classical thinkers are where modern Artificial Intelligence (AI) got its start. The phrase "artificial intelligence" was first used at a conference at Dartmouth College in Hanover, New Hampshire, in 1956, but the field of AI was not fully established until then.

Many people believe that the 21st century is a technological era. Technology today plays a crucial role in our daily lives. Technology has always played a role in accomplishing company goals by increasing efficiency and optimizing processes. How people interact with technology is about to improve thanks to artificial intelligence. AI is changing every element of life, including the workplace. Leading companies are aware of how AI is transforming company models, worker demographics, and the expectations of both customers and staff. Strategic insight and AI together provide new business opportunities and are revolutionizing how HR contributes to a company's competitive advantage.

2. Related Work

Tiwari et al. (2021), Thanks to artificial intelligence technology, the organization has been able to enhance its existing performance and successfully complete daily tasks. Humans working in specific



managerial positions are currently under stress and are knowledgeable of the need for artificial intelligence in the workplace due to the dynamic and competitive environment.

Jake Frankenfield, (2021), Artificial Intelligence (AI) is the replication of human intelligence by robots that can be programmed to act and think like humans. The phrase can also be used to describe any computer that exhibits traits of human thought, such as learning and problem-solving.

Negi, R. (2020), Artificial intelligence (AI) is a cutting-edge technology that has revolutionized the advanced virtual era. Chakraborty, et al. (2020). Information technology, a crucial commercial tool for several firms, is on the agenda of many people, notably professionals and academics. Today, it dominates almost every key commercial development in a variety of organizations, including banking, internet commerce, and the travel sector.

Bhardwaj, G. et al. (2020). Astonishing advancements have given AI the potential to become a part of everyday life, inspiring scientists to examine this marvel from all angles as it relates to certain research sectors. Society 5.0, unlike Industry 4.0, which we are already seeing, isn't driven by the manufacturing industry but instead permeates everyday life with the integration of AI, the Internet of Things, extended reality, and robots.

Richa, Vermaa. Srinivas, Bandib. (2019). Understanding the function of AI in recruitment is the author's primary goal in this research. The author has come to the conclusion that artificial intelligence plays a significant role in the hiring process. Using this technology, the company can filter applicants, send automated messages to candidates, manage employee relations, schedule interviews, and more.

Prakash Rao, (2019), In this study, Human-AI Symbiosis in Organizational Decision Making, artificial intelligence and the future of work are discussed. The purpose of this study is to determine how valuable AI is for those who work in organizations

2.1. Objectives of the Study

The following research objectives are enlisted:

- To study the concept of automation and artificial intelligence.
- To study the role and sources of artificial intelligence in managing human resources.
- To research artificial intelligence's potential and take into account the challenges that human resources may face in the future.
- Artificial Intelligence And Automation Definition:

Artificial Intelligence: Technology like artificial intelligence is defining modern paradigms for conducting business. It is a solution that automates and completes the majority of low-value HR tasks so that the strategic scope of work can receive more attention. AI is a catch-all word that includes concepts like cognitive computing and machine learning. Computer science's branch of artificial intelligence (AI) is concerned with simulating intelligent behaviour in machines. Visual perception, natural language processing, speech recognition, speech-to-text conversion, language translation, tone analysis, and other fields have all benefited from the usage of AI.

Automation: Software is used in human resources automation (HR Automation) to digitize and automate time-consuming, repetitive operations, including payroll, timekeeping, and benefit administration. Employees in HR are thus freed to concentrate on adding more value to the firm through strategic activities.

The Challenges of Adopting Artificial Intelligence (AI) In Human Resources:

Adapting artificial intelligence (AI) to human resources management presents challenges.

Lack of Skilled Talent: Given the scarcity of skilled workers in the modern era, integrating HR capabilities may be quite expensive.

Privacy concern: There is a privacy concern since HR information is extremely private and needs to be kept secure. Data security is a significant challenge when combining HR skills with AI.

Ongoing Maintenance: Comparable to other technologies. Artificial intelligence requires constant opinions and updates, which makes it a laborious maintenance method.

Complex Talent Integration: The shift to SAAS (Software as a Service) has limited data availability, which eventually limits the breadth of technologically integrated HR capabilities.

Artificial Intelligence Helping Human Resources Challenges- How AI Helps Address Common HR Challenges (Obstacles).

Talent acquisition: A modern company must have efficient recruiting. When done properly, it enables businesses to expand and improve in their particular markets. However, existing talent acquisition initiatives frequently experience a number of problems or issues:

Time-consuming: Activities like awaiting approvals, preliminary candidate screenings, and

drawn-out decision-making processes slow down the process. The majority of white-collar roles have seen an increase in time to hire over the past ten years, despite new recruiting methods.

Rooted in subjectivity: organizations can no longer make hiring judgments based on general inquiries like "Can you walk me through your resume?" in the age of data-driven business decisions. Or "How do you envision yourself in five years?"

Reactive instead of proactive: A hiring need arises frequently as a result of attrition or changing needs. Businesses should be proactive and constructive, yet they frequently react to the past rather than planning strategically for the future when it comes to hiring new employees.

2.2. In HRM, Artificial Intelligence:

Artificial intelligence (AI) is a branch of computer science that focuses on building smart machines that behave and act like people. In the workplace, artificial intelligence is "winning more hearts and minds." Currently, 50% of workers use AI at work, up from 32% last year, with certain countries seeing nearly twice as many people utilize AI as others.

2.3. Interviewing And Screening

The employment of digital assistants for a more engaging applicant experience during the interview stage is a significant advantage of AI, which can: Encourage applicants to develop greater independence: They have complete control over every aspect of the interviewing process, including scheduling, cancelling, sending reminders, exchanging notes, and suggesting resources for review.

Assist hiring managers: AI can help recruiting managers by providing information about prospects and reminding them of impending interviews. By compiling information from prior workers in comparable tasks.

Selecting And Offering: Even though ML applications shouldn't ever be used as the deciding factor, AI can aid recruiters and managers in making better hiring decisions. It enables them to: Assess prospects against current high performers. Compare job prospects with others who have succeeded in roles comparable to theirs within the company using benchmark data and AI.

Make Specialised Offers: Consider the variety of information in relation to the regional market and published salaries by competitors to get a strategic and nuanced understanding of how roles should be bundled. Even

more specifically, AI can boost recruiting effectiveness by comparing a specific offer with unique employee and employment histories to estimate the likelihood that a candidate will accept.

Anticipate Candidate Behaviour: estimate a candidate's propensity to accept, perform well, and hold onto the job being given.

2.4. Applications Of Artificial Intelligence In HR

Artificial intelligence (AI) is a capability that allows machines to mimic human abilities such as problem-solving, learning, critical thinking, and perceptual skills. Human resources are significantly impacted by artificial intelligence. Through talent human resources management, undertakings may be more forward-looking and driven, and the optimum designation of HR and other assets can be determined.

Recruiting and Staffing Employees: The impact of AI has been observed in the field of recruitment, where a particular stage of the recruitment project advanced by AI is video meetings, the use of talk robots to deliver tailored online experiences, and to streamline some aspects of the recruitment cycle.

Employee Benefits: Employee benefits should include the following services, as permitted by law and employers: medical, retirement coverage, medical services with flexible plans, family leave facilities, family allowances, and other associated services.

Employee Compensation: Even if the payment is made on an hourly basis, for vacation, or for sick leave, bonuses paid under a human resources performance-based payroll will always be very advantageous and very motivating to the employees.

Employee and Labor Relations: Human resources must follow the unions and employees established procedures. Employers must be aware of collective bargaining strategies. Government legislation will outline the employee's working hours, the hiring process according to the job description, employee termination, and protection against discrimination based on race, age, or sex.

Organizational Structure: The organizational structure's layout The management group is accountable for managing human resources. The HR department must aid in the creation of the organization's business plans, missions, and aspirations, as well as a conceptual organizational structure that will map out the division of labour and job descriptions. The responsibility for keeping track of all information about the

organization's working environment falls on the payroll and human resources departments.

Employee Training and Development: Before training, artificial intelligence may identify the shortcomings of HR in businesses and must take targeted actions in terms of skills, i.e., to analyse the HR training requirements of projects through AI.

2.5. Trends in Employment and Workplace

Play a role in how AI affects employment and workplace trends, such as the safety nets required to shield people from a changing economic structure. In other occupations, like driving cabs and trucks, AI is set to displace people. In many fields, however, AI is more likely to create new employment than it is to destroy existing ones in the near future. However, compared to the present occupations that will probably be lost, the new jobs that will be created are more difficult to envision in advance. A lot of goods and services will become more affordable thanks to AI, improving everyone's situation. In the long run, AI may be viewed as a fundamentally new method of wealth generation in which everyone should be entitled to a share of assets produced by AI. The social discussion about how the financial benefits of AI technologies should be distributed is not too soon.

3. Conclusion

AI can help us remove prejudice from the system and better inform people's judgments. We must fulfil that obligation. We are dealing with people, their lives, and their private information. It is our duty to use AI constructively. AI-based HR interventions can significantly boost employee productivity and assist HR professionals in improving employee output and satisfaction. Businesses are concentrating on filling skills shortages, matching skill sets to present and future company requirements, maintaining compliance, and assuring swift reactions to shifting industry changes. To solve operational difficulties and prepare their workforce for the future, firms must also concentrate on their leadership pipeline in addition to these important responsibilities. Utilizing technology, the market goes above and beyond expectations to satisfy consumer demand. Therefore, all industries use cutting edge technology to meet client demands. To do this, businesses require both skilled human resources and technology.

References

- [1]. Garima Bhardwaj, S. V. Singh, Vinay Kumar. (2020). An Empirical Study of Artificial Intelligence and its Impact on Human Resource Functions. International Conference on Computation, Automation and Knowledge Management (ICCAKM).47-51. IEEE
- [2]. Jake Frankenfield. (2021). Reviewed by Gordon Scott. Article Artificial Intelligence (AI). Updated Mar 8, 2021.<https://www.investopedia.com/terms/a/artificial-intelligence-ai.asp>
- [3]. Pooja Tiwari, Rudresh Pandey. (2021). Application of Artificial Intelligence in Human Resource Management Practices, Conference Paper · January 2021, DOI: 10.1109/Confluence51648.2021.9377160.
- [4]. Prakash Rao. (2019). The future is now: The changing role of HR. <https://economictimes.indiatimes.com/small-biz/hr-leadership/leadership/the-future-is-now-the-changing-role-of-hr/articleshow/68229542.cms>