

Role of Artificial Intelligence in Human Resource Management

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ABSTRACT

Artificial intelligence makes it feasible for the sector to thrive quicker and more efficiently in today's competitive industry. The swift growth of technology and the utilization of AI in HR have made major changes in hiring processes and practices. HR plays a vital role in strategic growth planning and execution, just like technology and business leadership do. It has been integrated into human resource management because it has the ability to benefit employees and customers in companies. In the modern day, the job of human resources has grown to cope with more advanced technologies that allow AI and artificial intelligence. Organizations can use AI for career development, employee engagement, and candidate screening.

AI breaks down and transforms data into a format that is easy to implement. It looks for patterns in the data and adjusts the program's behaviour accordingly. HR directors are using AI for corporate training and putting new training strategies into practice to manage large workforces. AI analyses pertinent employee data to help workers get ready for promotion. Organizations can improve employee performance overall, increase employee retention, promote efficiency, and streamline processes by incorporating AI into HR. The nature of the research text is descriptive.

The data collected were from research papers, publications, websites, HR blogs, reports etc. The objective of the study was to examine the role of AI in human resource department and understanding its impact in HR department. In this paper the researcher has discussed how AI is used in different sectors, the scope and factor responsible for impacting effectiveness. This study despite unique features it is not without limitations. It is difficult for some organizations to adopt to change in an effective manner and to understand the new technology. The research findings reveal that artificial intelligence significantly influences human resource functions through technological awareness, social media influence and personal innovativeness. The researcher has concluded that AI is necessary to achieve business benefits by exploring proper understanding of machine learning, its implication in the organizations.

KEY WORDS: *Artificial intelligence, Technology, Human Resource Management, Machine learning, Employee retention*

1. INTRODUCTION

Humans have improved the efficiency of their systems, leading to more comfortable lives. Technology has an impact on all facets of life and can at times be beneficial to individuals. Artificial intelligence (AI) is the field of computer science which focuses on developing intelligent machines that operate and think like people. Machine Learning is a research area of computer algorithms that progress on their own via practice (ML). Artificial Intelligence (AI), often referred to as machine intelligence, is a fast-growing subject of research and development in this era of globalization and technological advancement. Machine learning, a branch of artificial intelligence, explains how computers analyze data and learn new things. ML is able to detect patterns and provide predictions.

Machine learning, a branch of artificial intelligence, explains how computers interpret data and learn new things. Instead of needing a person to write code to alter a software, machine learning (ML) can find patterns and make predictions to help artificial intelligence (AI) operate more effectively. Algorithms are used by artificial intelligence to process data and find patterns so that decisions can be made. The mathematical models that underpin these algorithms are made to resemble human behavior. One of the main elements influencing an industry is technology. Artificial Intelligence is posing a threat to human resources as machines are replacing human labor. It has been determined which areas of AI and HRM still need research. Every organization needs to increase human capabilities in order to sustain its on-going expansion and growth.

As organizations incorporate AI into their human resource operations at varying rates, human resource professionals must prepare for these technological shifts that are changing their organization and workforce aspects. HR professionals these days are more concerned with optimizing the interplay between automated and human labor to create a simple and clear working environment. They have enough time to result in better output from employees. Human resource procedures include personnel development, talent management, appraisals, benefit distribution, employee selection, performance monitoring, and feedback tracking, among other things. Businesses that seek to thrive must prioritize achieving higher customer satisfaction, and to do so, they need to use revolutionary HRM techniques that will identify them from their competitors. Because AI and HR are so dependent on one another, businesses should focus on creating AI tools that strengthen HR.

2. RESEARCH OBJECTIVES

- To study artificial intelligence as a concept.
- To analyze the impact of artificial intelligence in human resource management.
- To study the advantages of artificial intelligence in human resource management.
- To identify the research gaps between AI and Human Resource Management.
- To understand the difficulties and challenges of Human resource department by adopting AI.

3. LIMITATIONS OF THE STUDY

- Most of the respondents were hesitant to give the information due to their company's policies.
- The topic is very advanced hence it was difficult to cover the entire part of the topic.
- Since the period to complete the study was short, I was only able to collect few samples.

4. ROLE OF ARTIFICIAL INTELLIGENCE IN HUMAN RESOURCE MANAGEMENT

1. **Planning Strategies:** Artificial intelligence (AI) technologies promote optimum strategic planning using decision-making processes. Data is gathered from internal and external sources utilizing tools for knowledge discovery and data mining. This helps in the information's summary, which is important for understanding the current situation as regard to human resources as well as for forecasting, assessing, and modifying the management of the business in the future.

2. **Recruitment and Selection:** AI offers decision assistance technologies that assist in reducing the average time spent on the selection process and mapping the most appropriate professional profiles for a certain position. Fuzzy logic, artificial neural networks, case-based systems, expert systems, or genetic algorithms could all be used in the development of the decision support system. AI can be used to create a virtual assistant that can answer questions from candidates, assess candidates' behavior and skills in real-world situations, and help match union candidates with businesses.

3. **Training and Development:** Maintaining the current pace of technological growth requires AI. The robot instructor can use the visual scanning system to track each student's daily learning progress, determine each student's overall attention level with accuracy, retrieve teaching events with varying levels of stimulation using data analysis, and modify the teaching rhythm and degree of relaxation based on feedback from the students during the training process. The visual scanning technology allows the trainer to recover instructional events with varying degrees of stimulation.

4. **Performance Management:** One extremely important HRM practice is employee performance management. Automatic and effective employee performance reviews can be achieved in an intelligent decision support system by utilizing 360-degree performance evaluation approaches as scientific methodologies. Along with the information gathered and analyzed on the workers' performances on the job, the performance appraisal model can also be incorporated into the system.

5. **Compensation Management:** Artificial intelligence (AI) technologies can help ensure equity in compensation management. Good compensation management can boost productivity within the organization. Compensation management is a crucial aspect of human resource management. Two types of employee compensation are direct monetary payments and indirect benefits. Artificial neural networks can be trained to act as intelligent decision support systems using big data. These systems can then be used to build equitable compensation evaluation systems.

5. RESEARCH METHODOLOGY

The research study is using the descriptive research design. In the research study the researcher has used both primary and secondary data. The primary data for the study collected through the set questionnaire with open ended and close ended questions. The secondary data has been collected from

research papers, published materials, online websites, HR blogs, and survey reports published by various research organizations.

6. REVIEW OF LITERATURE

Kalpan and Haentein(2020) A key attraction of AI is that it can perform a variety of human-like functions, learn from experience and adapt to new inputs and settings. To attain superior performance for specified tasks, AI makes use of relevant information sources such as Big Data.

Dinesh G.Harkut and Kashmira Kasat(March 2019) “Artificial Intelligence – Challenges and Applications” this study is based on open access, peer reviewed and concluded that building trust, AI human intervention, Investment, High expectation, Data security are few of the challenges which is faced by the organization.

Amla & Malhotra, (2017) Role of artificial intelligence in HR department is heading towards the digital revolution and using various method to simplify the resources by using big data analysis, artificial intelligence, and cloud computing.

Strohmeier & Piazza (2015) In the recent years, a new literature strand has begun to emerge, which looks into the actual and potential workplace effects from the use of AI within organizations.

Buzko, I., Dyachenko, Y., Petrova, M., Nenkov, N., Tuleninova, D., & Koeva, K. (2016)

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.

7. DATA ANALYSIS AND INTERPRETATION

Table 1: Occupation of the respondent.

Occupation	No . of Respondents	Percentage
Student	32	26%
Employee	61	51%
Business	20	17%
Others	07	06%
Total	120	100%

Interpretation:

From the above table, it can be interpreted that 51% of the respondents are employees, 26% of respondents are employees, 17% of respondents are into business and remaining 6% of the respondents are doing other occupation.

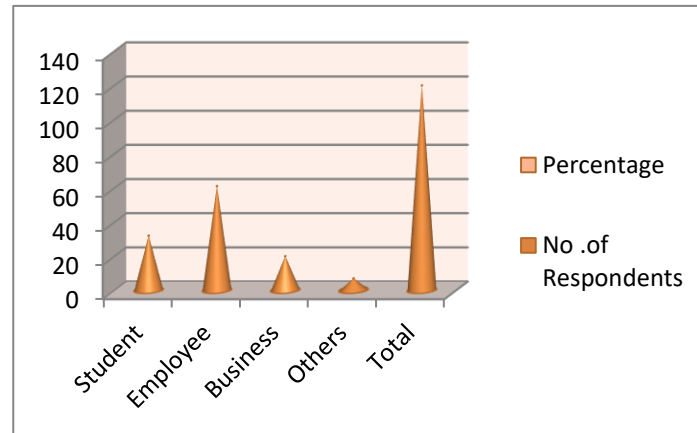


Table no.2: Organization adapts AI technology in HR functions

Adapts AI	No.of Respondents	Percentage
Strongly agree	50	42%
Agree	34	28%
Strongly disagree	23	19%
Disagree	13	11%
Total	120	100%

Interpretation:

From the above table, it can be interpreted that 42% of the respondents strongly agree, 28% of the respondents agree, 19% of respondents strongly disagree and 11% of respondents disagree that AI technology is adopted in HR functions in the organization.

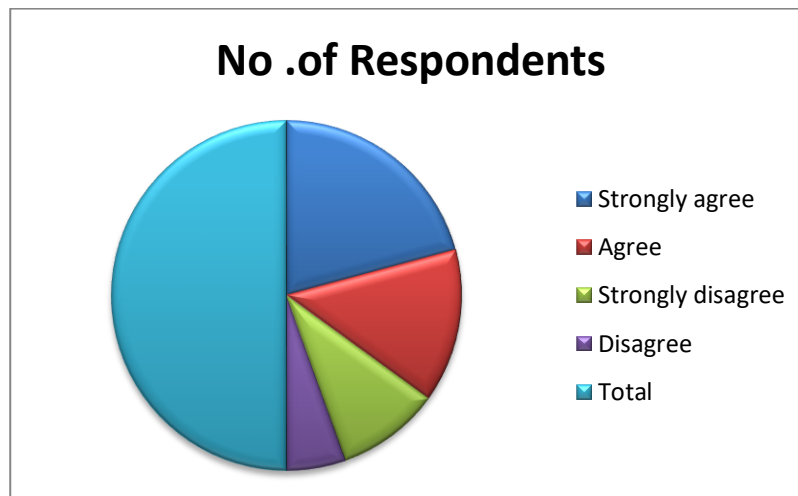


Table No. 3: Comfort level of employees using AI in HR profession.

Comfort level of AI	No .of Respondents	Percentage
Highly Comfortable	57	48%
Comfortable	36	30%
Discomfort	27	22%
Total	120	100%

Interpretation:

From the above table, it can be interpreted that 48% of the respondents are highly comfortable, 30% of the respondents are comfortable and remaining 22% of respondents are not comfortable while using AI technology.

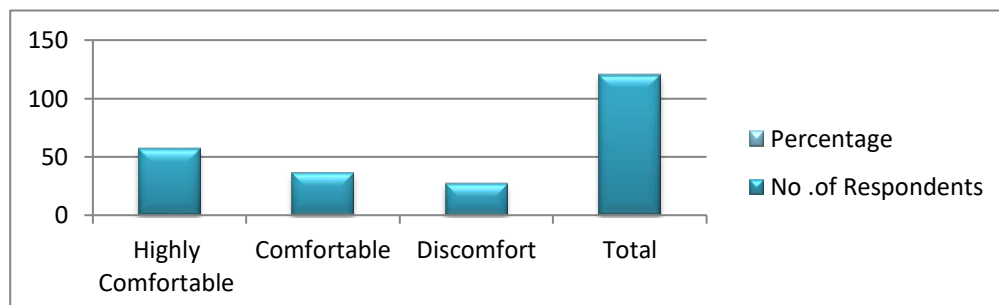


Table no.4: Effectiveness of AI technology in recruitment process

Adapts AI	No .of Respondents	Percentage
Strongly agree	54	45%
Agree	31	26%
Strongly disagree	20	17%
Disagree	15	12%
Total	120	100%

Interpretation:

From the above table, it can be interpreted that 45% of the respondents strongly agree, 26% of the respondents agree, 17% of respondents strongly disagree and 12% of respondents disagree that AI technology is effective in recruitment process in the organization.

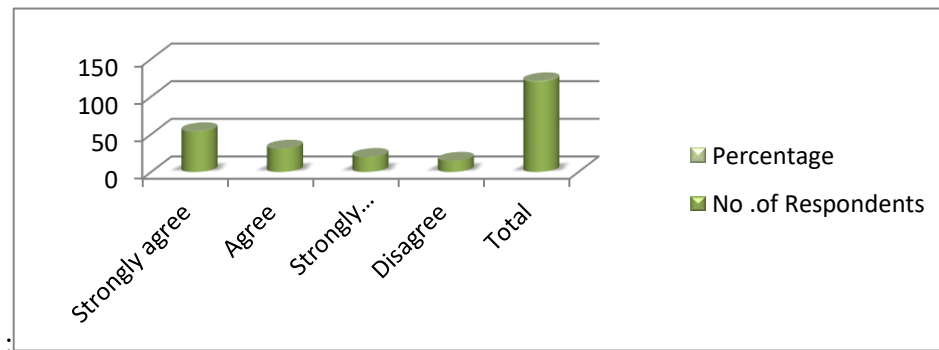
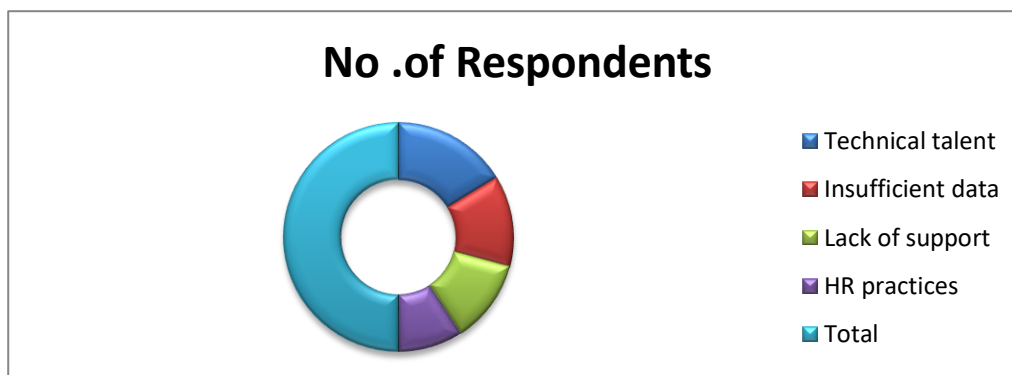


Table no.5: Challenges faced by employees while implementing of AI technology

Challenges	No.of Respondents	Percentage
Technical talent	39	33%
Insufficient data	31	26%
Lack of support	28	23%
HR practices	22	18%
Total	120	100%

Interpretation:

From the above table, it can be interpreted that 33% of the respondents are facing challenge in the area of technical talent, 26% of the respondents say that they have insufficient data, 23% of the respondents say that they do not have support and remaining 18% of the respondents are facing challenge in HR practices while implementing AI technology.



8. FINDINGS

- 51% of the respondents are employees.
- Majority of respondent strongly agree that their organization adapts AI technology in HR functions.
- 48% of the respondents are highly comfortable while using AI technology.
- The majority of respondents agree that the application of AI technology is very effective in the process of recruitment process in the organization.
- The majority of respondents are facing challenges in HR practices while implementing AI technology.

9. HYPOTHESIS OF THE STUDY

Null Hypothesis (H0): There is no significant relationship between employees with different roles and the awareness of AI technologies.

Alternative Hypothesis (H1): There is a significant relationship between employees with different roles and the awareness of AI technologies.

Null Hypothesis (H0): There is no significant correlation between the frequency of advanced technology usage and the level of familiarity with AI tools among employees.

Alternative Hypothesis (H1): There is a significant correlation between the frequency of advanced technology usage and the level of familiarity with AI tools among employees.

10. SUGGESTIONS

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. Even though AI has made impact in many HR functions in organizations, should look into this lag so that they can face the upcoming challenges.

- The researcher suggests that the basic talent acquisition that is screening can be entirely done through AI so that time can be saved effectively.
- AI can be used as a tool for training the employees so that the company can reduce training costs.
- The performance can be measured through AI tool so that the reputation of the work can be reduced.

11. CONCLUSION

The way businesses manage their human resources is changing as a result of the integration of artificial intelligence (AI) into HR management platforms. Learning AI can lead to new career opportunities in fields like data science, machine learning, robotics, and automation. AI-powered platforms can provide insights on workforce planning by analyzing factors like employee demographics, market trends, and goals. This helps HR professionals make decisions regarding talent acquisition, succession planning, compensation and benefits, talent management, resource allocation, and learning and development. Therefore, as technology advances, AI-powered HR management platforms will continue to shape the nature of work.

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