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## **Implication of AI in transforming Human Resource Management**

**\*S. Basu Choudhury<sup>1</sup>, Dept. of Business Analytics, ISMS, Pune, Maharashtra**

Email Id: subhrodiptobasuchoudhury@gmail.com

**S. Garani<sup>2</sup>, Dept. of Life Science, WBUAFS, Kolkata, West Bengal**

Email Id: somagofficial@gmail.com

**S.Majumder<sup>3</sup>, Dept of Management, Rani Durgawati University, Jabalpur, Madhya Pradesh**

Email Id: majumder41@gmail.com

**\*Corresponding author:** subhrodiptobasuchoudhury@gmail.com

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Email Id: subhrodiptobasuchoudhury@gmail.com

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Email Id: majumder41@gmail.com

**\*Corresponding author:** subhrodiptobasuchoudhury@gmail.com

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### **ABSTRACT**

Human resource is the backbone of any organization. It has the ability to create, innovate and apply knowledge for the progress and development of a firm. Management of human as resource is a crucial task for successful completion of assignment to comply with mission and vision of any organization. Human resource department of an organization acts as regulatory body as it forms regulation which employees need to comply with. This paper aims to study the benefit of Artificial Intelligence (AI) in different processes involved in human resource department. The processes of human resource include recruitment, compensation and benefit, training and development, career succession planning and retirement. This study also highlights the benefit of AI in updating the parameter of balance scorecard which is used by organizations to measure different aspect of performance.

**Keywords:** Artificial Intelligence recruitment, management, balance scorecard, regulatory

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## 1. INTRODUCTION

Human as a resource is a very efficient. It has the capacity to develop and build knowledge. It can bring out the application from their knowledge base and work for the advancement of the society. Human resource department has the power to frame regulatory policy for the employee in an organization. It has many stages in its whole process. A block diagram on the process involved in human resource management has been mentioned below:

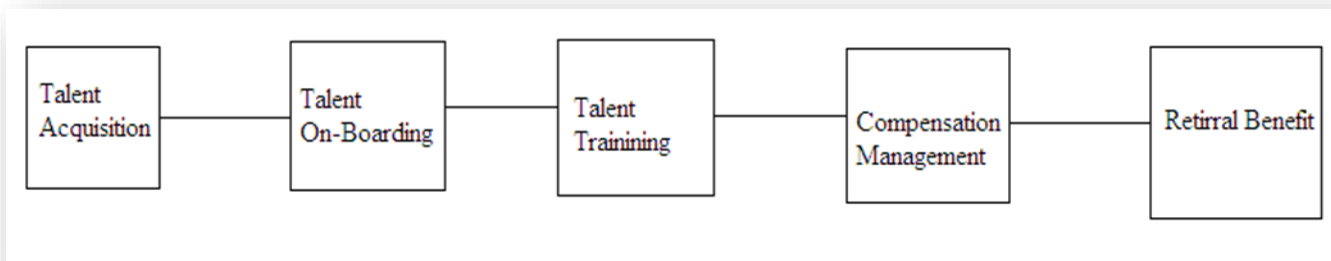


Fig.1: Stages of process involved in Human Resource department

- It mainly keeps a check on the following key performance metrics of the organization:
- No. of candidate on-boarded as per qualification
- How many varied candidates have been employed based on geography and qualification?
- To settle inter-departmental conflict
- Compensation and benefit sanctioning from higher management
- No. of candidates promoted to higher level department-wise
- No. of retiree
- No. of candidates exiting the organization
- Benefits to the retiree
- Participation of the organization in Corporate Social Responsibility (CSR) activities

Human Resource Management (HRM) is a crucial function within organizations, focused on acquiring, motivating, and retaining a skilled workforce. The recruitment process is a fundamental component of HRM, aimed at minimizing costs, shortening recruitment timelines, and strategically deploying a competent workforce. With the integration of Artificial Intelligence (AI) technologies, traditional recruitment methods are evolving (Aswathy and Anusree,2023).

AI is revolutionizing recruitment processes through tools like Applicant Tracking Systems (ATS), AI-powered chatbots, video chat analysis, and social media scanning (Mukherjee I., Krishna ,2002). These technologies enhance efficiency by automating repetitive tasks, improving candidate engagement, and analyzing candidate features. However, organizations must carefully consider the challenges presented by the implementation of AI in recruitment, such as high costs, data privacy concerns, and uncertainties regarding candidate acceptance.

The integration of AI in recruitment is reshaping the industry, leading to a transformation in recruitment roles and processes. While some roles may benefit from fully automated processes, human interaction remains essential in other scenarios. Recruiters emphasize the importance of staying updated on technological advancements to remain competitive (Mukherjee I., Krishna ,2002). The future of recruitment processes is envisioned to be data-driven, with AI aiding in decision-making based on analyzed data.

Despite the advancements in AI, human recruiters continue to play a vital role in recruitment processes. Humans excel in tasks requiring emotional intelligence, relationship-building, talent identification, and interpreting candidates' qualities beyond technical skills Venkatesh A., Prof. Kaveri,2019<sup>1</sup>. The ability of human recruiters to assess candidates based on personal chemistry and social interactions remains irreplaceable in the recruitment process.

The integration of AI in recruitment processes presents opportunities for efficiency and innovation. While AI technologies enhance various aspects of recruitment, the human touch in recruitment remains indispensable for tasks that require empathy, intuition, and a deeper understanding of candidates beyond technical qualifications. Balancing AI tools with human expertise is crucial for optimizing recruitment processes and ensuring successful candidate placements.

## 2. RESEARCH METHODOLOGY

Several research articles have been reviewed on application of AI in human resource department. Most papers focused on the recruitment part and how AI simplifies the recruitment process of the department. This paper will focus on the overall implication of AI in human resource department process. Few advantages of AI in human resource departmental process has been found out after various surveys and literature review:

1. Simplification and faster talent acquisition process
2. Un-biased result
3. Proper promotion through learning and development
4. Up-gradation of metric in Balance Score Card
5. Proper accounting of extra benefits (like over-time, TA, DA, etc.)
6. Employee grievance redressal system

With the involvement of AI in human resource processes people can also search for their job opportunities through various social media platform using predictive analytic techniques. Earlier candidate has to wait for job opening advertisement in media and newspapers after that they have to submit the documents against the advertisement. They were then shortlisted manually. The whole process takes a lot of time and most candidates lose their patience.



Fig.2 Process involvement in Balance Score Card (BSC)

### 2.1 Integration of AI in the Balanced Scorecard (BSC)

The BSC is a strategic tool that measures organizational performance across four perspectives: Financial, Customer, Internal Processes, and Learning & Growth. AI enhances the BSC by providing predictive analytics, automating data collection, and offering real-time insights, thereby improving decision-making and strategic alignment.

## 3. RESULT DISCUSSION

In all AI has simplified the process involved in human resource department. It has leveraged benefits both for the employer and employee. Employees can even check the review on various performance parameters of any organization before appearance of interview to get employed. Sometimes, shortlisting the candidates based on job description manually becomes hectic. As there are many qualifications which may closely align with the job description.

AI helps in removal of these types problems using SVM (Support Vector Machine) or CNN (Convolution Neural Network) machine learning algorithms. Sometimes measuring the efficiency of workers in any department manually is difficult as there will be different personal interpretation of the same as per different persons. AI helps in mitigate these type of situations by removal of personal biases.

**3.1 Future Scope:** Artificial Intelligence (AI) is revolutionizing Human Resources (HR) by automating tasks, enhancing decision-making, and improving employee experiences. In recruitment, AI streamlines processes by screening resumes and identifying top candidates efficiently, reducing time-to-hire and improving the quality of new hires.

Also, AI-driven tools provide real-time feedback and personalized development plans, enhancing performance management and employee growth. AI also plays a crucial role in promoting diversity and inclusion by minimizing biases in hiring and promotion decisions, leading to more equitable workplaces. Thereafter, AI enhances employee engagement by analyzing feedback and predicting turnover risks, enabling proactive retention strategies.

In compensation management, AI ensures fairness and competitiveness by analyzing market data and employee performance, aiding in the design of equitable salary structures. Overall, AI's integration into HR functions leads to more efficient, fair, and effective human resource management.

### 3.2 Conclusion

The implementation of Artificial Intelligence in Human Resource Management has fundamentally transformed organizational processes, from recruitment to retirement planning. AI has demonstrated significant advantages in streamlining talent acquisition, delivering unbiased results, facilitating proper promotions through learning and development, and upgrading Balance Scorecard metrics. Through machine learning algorithms like SVM and CNN, organizations can now more effectively match candidates to job requirements, eliminating the traditional challenges of manual screening. The integration of AI into the Balanced Scorecard

framework has enhanced performance measurement across all perspectives, providing real-time insights for strategic decision-making. AI-driven tools have simplified employee grievance redressal systems and improved the management of benefits like overtime and travel allowances. While AI brings technological advantages, the human element remains crucial in HR management, serving as an enabler rather than a replacement. The technology has benefited both employers and employees, with the latter now able to research organizations and their performance parameters before interviews. Organizations that effectively integrate AI into their HR processes while maintaining human-centric values will likely see enhanced operational efficiency and improved employee satisfaction. Looking forward, AI's continued evolution in HR promises even greater potential for automation, personalization, and strategic workforce management. The future of HR lies in the strategic combination of AI capabilities with human expertise, creating more efficient, fair, and effective human resource management systems.

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