A Study on the Impact of Artificial Intelligence on Human Resource Management

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Abstract

AI is an Internet enabled technology; the Internet Society recognizes that understanding the opportunities and challenges associated with AI is critical to developing an Internet that people can trust. The traditional goals of AI research include reasoning, knowledge representation, planning, learning, natural language processing, perception, and support for robotics. Objectives of the study are to understand how artificial intelligence will impact human resource management, to understand how Al can help in various HRM functions and limitations of Al in HR Functions, to analyzing the significance of Artificial Intelligence on Human Resource Management etc., Deep learning uses several layers of neurons between the network's inputs and outputs. The multiple layers can progressively extract higher-level features from the raw input. Further this theoretical study is revealed that, Artificial Intelligence in Human Resource Management, How Al can help in recruitment, How AI can help in Selection Process, Significance of Artificial Intelligence (AI) in Human Resource Management (HRM) Practices, Influence of AI Technology and its Adaptation in Human Resource Process on HRM Effectiveness. The confirmed positive effects on efficiency, coupled with insights into the specific HR functions where AI adds the most value, provide a roadmap for organizations aiming to leverage technology for enhanced human resource practices.

Keywords: *Opportunities, Knowledge, Technology, Efficiency*

Introduction

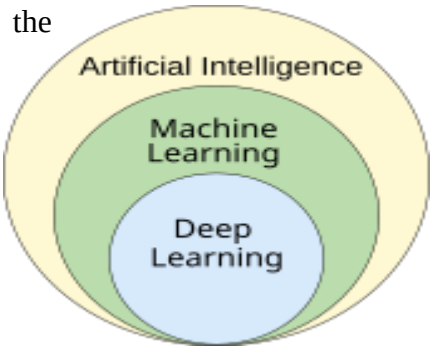
Artificial intelligence (AI), in its broadest sense, is intelligence exhibited by machines, particularly computer systems. It is a field of research in computer science that develops and studies methods and software that enable machines to perceive their environment and use learning and intelligence to take actions that maximize their chances of achieving defined goals. The various subfields of AI research are centered on particular goals and the use of particular tools. The traditional goals of AI research include reasoning, knowledge representation, planning, learning, natural language processing, perception, and support for robotics.

John McCarthy is considered as the Father of Artificial Intelligence. John McCarthy was an American computer scientist. The term “Artificial Intelligence” was coined by him.

Artificial intelligence was founded as an academic discipline in 1956, and the field went through multiple cycles of optimism, followed by periods of disappointment and loss of funding, known as AI winter. Funding and interest vastly increased after 2012 when deep learning outperformed previous AI techniques. This growth accelerated further after 2017 with the transformer architecture, and by the early 2020s hundreds of billions of dollars were being invested in AI (known as the "AI boom"). The widespread use of AI in the 21st century exposed several unintended consequences and harms in the present and raised concerns about its risks and long-term effects in the future, prompting discussions about regulatory policies to ensure the safety and benefits of the technology.

Deep Learning

Deep learning uses several layers of neurons between the network's inputs and outputs. The multiple layers can progressively extract higher-level features from the raw input. For example, in image processing, lower layers may identify edges, while higher layers may identify the concepts relevant to a human such as digits, letters, or faces.



Deep learning has profoundly improved the performance of programs in many important subfields of artificial intelligence, including computer vision, speech recognition, natural language processing, image classification, and others. The reason that deep learning performs so well in so many applications is not known as of 2023. The sudden success of deep learning in 2012–2015 did not occur because of some new discovery or theoretical breakthrough (deep neural networks and back propagation had been described by many people, as far back as the 1950s) but because of two factors: the incredible increase in computer power (including the hundred-fold increase in speed by switching to GPUs) and the availability of vast amounts of training data, especially the giant curates datasets used for benchmark testing, such as Image Net.

AI is the ability of a machine to display human-like capabilities such as reasoning, learning, planning and creativity. AI enables technical systems to perceive their environment, deal with what they perceive, solve problems and act to achieve a specific goal.

Artificial Intelligence in Human Resource Management

Artificial intelligence (AI) has the potential to alter the way we live and work, whether it is through the automation of tedious and time-consuming jobs or the augmentation and amplification of human skills. Al is assisting in the facilitation of complex HRM processes like talent management, staff development, employee assessments, employee benefits allocation, employee selection, employee engagement, tracking employee performance and feedback, etc.

This presents HR with both an opportunity and a pressing need to adapt and adopt. It has been concluded that today AI and HR are combined, it is up to HR managers to decide how much AI should be allowed to influence HR processes. It is necessary to clearly separate tasks controlled by AI from those handled by HR, and in all roles, the Al should be strengthened by HR influence.

The capacity to reason, plan, understand concepts, solve problems, and apply knowledge gained through experience is referred to as intelligence. If someone can meet requirements and standards in the most effective way, that person is intelligent. Artificial intelligence (A) is the term used to describe when machines display similar intelligence features. The underlying premise of the area is that human intellect may be so precisely characterized that a machine can replicate it.

Objective of the Study

The objectives of the study are as follows:

- To understand how artificial intelligence will impact human resource management
- To understand how Al can help in various HRM functions and limitations of Al in HR Functions
- To analyzing the significance of Artificial Intelligence on Human Resource Management.
- To identify the role of AI based software in hiring the best talent from industry
- To evaluate the function of AI based software specifically towards the screening process which is the primary process of hiring and cost of using such systems

Human Resource Management

Every establishment depends on constant expansion and growth. The company needs human capital for the same objective. Effective recruiting provides a fair response to the labour demand in order to staff all organizational operations continuously throughout the year. The asset that helps a company grow in value,

get more market share, and prolong its existence is its human resource. Through a process of recruiting, selection, training, and ultimately placement, human capital is brought into the company. The hiring process is a time consuming and laborious undertaking in and of itself.

How Al can help in recruitment?

- ✓ By comparing individuals' abilities and experiences with job requirements, AI can assist in identifying the greatest fit from a pool of hopeful applicants.
- ✓ Al can aid job seekers in finding the ideal position by timely alerting them whenever a position that meets their qualifications surfaces online.
- ✓ AI-based candidate matching leverages HR data to determine an applicant's propensity to stay on the job, the duration of the project, and his likely performance in the position.
- ✓ AI can assist in hiring since candidates can reschedule their interviews, select the time and place that work best for them, share notes, and suggest resources for further research.

How AI can help in Selection Process

AI can facilitate the selection process in the following ways:

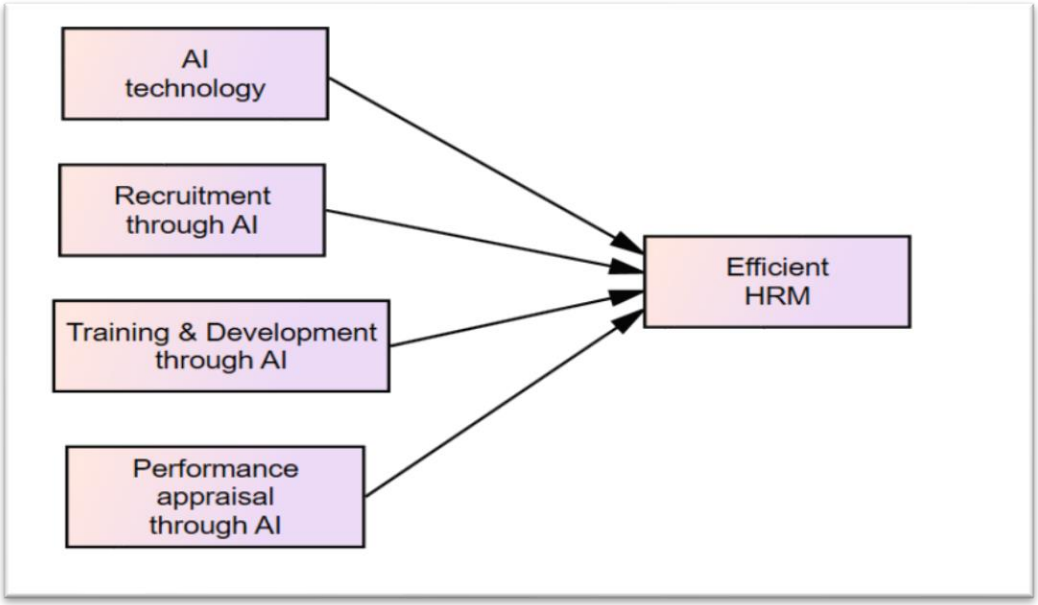
1. Comparing the top prospects to the present top performers and the job description may be helpful in the process.
2. Comparing the compensation information among companies that are offering identical job responsibilities might aid in the creation of individualized offers.
3. By comparing a specific offer with an employee's past and determining whether the individual will accept the job offer or not, Al can help selection processes be more effective.

Significance of Artificial Intelligence (AI) in Human Resource Management (HRM) Practices

The human resources department has the most intricate requirements for data administration and analysis among other departments. Artificial intelligence has the capability to alleviate employees' workload, streamline operations, analyses data, and do other tasks. AI engineering establishes connections between particular machines and computers and designated gadgets. The AI framework has several applications such as applicant screening, staff participation, re-engagement, and career development.

The AI programme enables the human resources department to assist employees in several ways, such as facilitating certification preparation, providing comprehensive education, and fostering the acquisition of new skills. AI programmes enable individuals to work at their own pace, but an exceptionally remarkable programme can enhance rapid progress by offering rewards and incentives tailored to each worker's profile.

The existing literature on artificial intelligence (AI) in human resource management (HRM) highlights its significant positive impact on the sector, with applications ranging from recruitment to training and development.



Influence of AI Technology and its Adaptation in Human Resource Process on HRM Effectiveness

Every organisation must provide the new AI technology, Recruitment through AI, Training and Development through AI and Performance appraisal through AI. Efficient organisation must using AI in human resources (HR) functions has been positive impact on the HR (efficient HR). These AI-based HR tools may be able to analyse, forecast, and diagnose; yet, they lack the emotional and cognitive talents of humans. Nevertheless, they are a significant tool for any organisation.

Conclusion

AI-based functions would affect certain percentage of workers, and it is the responsibility of HR leaders and companies to reflect on their employee needs and future outcomes. The research

underscores the pivotal role that AI plays in shaping the future of HRM. The confirmed positive effects on efficiency, coupled with insights into the specific HR functions where AI adds the most value, provide a roadmap for organizations aiming to leverage technology for enhanced human resource practices. As organizations navigate the evolving landscape of HRM in the digital era, the study's implications contribute valuable knowledge for informed decision-making and successful adaptation to the transformative influence of Artificial Intelligence.

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