



UNDERSTANDING THE SCOPE OF ARTIFICIAL INTELLIGENCE IN HUMAN RESOURCE MANAGEMENT PROCESSES – A THEORETICAL PERSPECTIVE

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Abstract

Information technology has had intense effect on human resource management (HR) processes and practices. As we move towards building smart organizations, Artificial Intelligence plays a fundamental role towards the success of transforming human knowledge into organizational knowledge.

Artificial intelligence is an emerging area in the field of HR Technology which can replace or enhance the effectiveness of human resource management processes. Artificial Intelligence can be used by organizations for candidate screening, employee engagement, employee re – engagement and career development. It can be applied to HR policies, procedures and HR perspective and can enhance the effectiveness of human resource management.

The study will analyze the emergence of Artificial Intelligence in HRM process and the potential benefits of artificial intelligence through secondary data. The paper generates insights on the utilization of technology for conversion of effective HR into sustainable HR.

Keywords: *Artificial Intelligence, Human Resource Management, Potential benefits, HRM Process.*

Introduction

“We are witnessing a change in the nature of jobs. Muscle jobs are disappearing, finger and brain jobs are growing or, to put it more formally, labor-based industries have been displaced by skill-based industries and these in turn will have to be replaced by knowledge-based industries.” (Charles Handy, 1984)

Charles Handy mentioned the radical changes long back in 1984 but India is encountering with these changes recently. In this highly competitive environment, where everyone is connecting via internet and technology is upgrading very fast making world as a global village. Artificial Intelligence is helping organization in performing any function. With the increasing pressure to involve the HR managers into the strategic decisions, the organizations have understood the importance of using new technology in leveraging their Human Resource System. Rapid changes in business environment require quick response. To compete in the market, the organizations invest in R&D to bring some new technologies. Artificial intelligence is the new technology which enables the prompt analysis of data by people that do not have special skills in data analysis. Artificial Intelligence is helping them in integrating different system and also provide a platform which can support all functions of Human Resource from recruitment, selection, training, development, compensation and performance management is not a single unit to work for the organization.

“Artificial Intelligence” is defined as “an ideal ‘intelligent’ machine that is a flexible rational agent that perceives its environment and takes actions that maximize its chance of success at some goal.” Artificial intelligence can reduce the work pressure on the employees, for smoothening of the process, for data analysis etc. AI technology connects people to machines and machines to other machines. AI system can work for candidate screening, employee engagement, re – engagement, career development etc.

Artificial Intelligence by using comprehensive skills repository and machine learning algorithms create sharp job descriptions armed with pertinent marker resulting perfect resume match. The organizations are able to match the right candidates for the vacancy occurred in the other departments of organizations. It thinks and acts rationally to avoid the biasness for the candidate. It can give competitive edge over competitors.

The modern organizations face several challenges which bring the new opportunities along side. The challenges faced by the modern organizations can be tackling with the help of artificial intelligence.

Big Data analytics for HR is the process of looking at big data in search of trends, patterns, correlations and insights about human behavior. Today’s global economy requires increased attention to the issue off business competitiveness. Artificial Intelligence raise the competitiveness of enterprises in the global market.



Literature Review

Kapoor B. (2010) examines leading business intelligence vendors to look into the business intelligence and data analytics features incorporated in human resource management modules. The author examined that the human resources can position itself as essential value-adding department of the organization by taking the advantage of business intelligence.

Dianna L. et. al (2015) review the current effects of technology on HR processes and discuss the advantages and potential limitations of using information systems. The authors suggested that the movement towards her is expected to grow in the future but many of the traditional HR research findings also apply to eHR.

Ulrich and Dulebon (2015) described the emergence of HR and propose the future of HR for increased and sustainable value. The authors have studied the HR's transformation waves from administrative to HR strategy waves.

Hussein et. al (2016) reviews the history of artificial intelligence in auditing and analyze the components of conceptualization of AI for auditing: sensing, achieving and predictive technologies, meta-controls/meta –processes, exogenous measurement, rapid detection of phenomenon, integration of evidence and the data for deep learning in auditing. The authors concludes that AI will potentially replace auditors in various automated tasks, and is capable of of automatically designing the entire audit plan based on the situation of the client and the existing evidences, self correcting mistakes, and continuously improving the audit process.

Buzko et al. (2016) found that the main factor for influencing the amount of training in the company is the net income of the company for the previous year and the transition from discrete paradigm of information processing to continuous paradigm allow faster and more accurate adapting to environment requirements. The authors have concluded that in the modern business conditions, it becomes more relevant to use artificial intelligence technologies for decision making.

Kolbjornsrud et al. (2016) reviewed the fact that artificial intelligence will soon be able to do the administrative tasks that consume much of managers' time faster, better and at lower cost.

Rob May (Jan 2017) in HR Examiner has given his views that artificial intelligence is a term which is misunderstood as human resource. In his article he has explained that Artificial intelligence is a combination of machine learning and natural language processing and it is very useful in the workplace setting. AI software technology will be applied in a number of common repetitive administrative function in next three to five years.

As per report on “**Amplifying human-potential towards purposeful AI**” by CEO Infosys use of artificial intelligence in organization by explaining it in terms of computer science to develop strategic plan and also discuss the use of AI by dealing with ethical issues and discuss the future generations workforce in terms of skills and flexibility to successes in the world of AI.

Shweta Jain (2017), in this paper author discuss about how artificial intelligence bring out total digital transformation when the organization well coordinate with the different units like HR, marketing ,Finance ,Manufacturing or process.

Tripathi et al (2012), this study discussed the impact of an expert system which is used in evaluating the job.they also evaluate how expert system in hr context in teaching and learning system.

Barnett(2016), In his article he focused that role of data has become less of a competitive differentiate and more of competitive necessity in today business world,as AI is required in every field of management but HR leaders are giving more importance to the data driven insight as it is helping in reducing risk and driving success in decision making in talent management and organizational performance.

Research Objectives

Following are the objectives of the study:

1. To find out the benefit or importance of using the artificial intelligence in Human Resource Management.
2. To evaluate how artificial intelligence can revolutionize the HR Process.

Research Methodology

This study is using the descriptive research design to describe the scope of artificial intelligence in human resource management processes. Secondary data collection method is used for the study. The data has been collected through the articles published in newspaper, magazine, HR Blogs, research journals, survey reports published by various research organizations, books and online sources also.



Benefit of Using Artificial Intelligence in Human Resource

Technology has revolutionized the way companies are doing their business, computers have now simplified the task of processing and analyzing large data sets, and have proven to be invaluable aid to the HR managers from the payrolls to employees self service. Over the last the 15 years at least 8,00,000 jobs in U.K .alone have been lost due to automation, not only in manufacturing but also in front office and back office which were including routine tasks. HR department have embraced the continuous advances to deliver a more tangible and strategic value to organization. Artificial intelligence will be able to provide valuable prediction and recommendations that will improve company productivity and culture. There are some of the ways that will improve and simplify the use of AI is automated hiring process, recommended training methods, data-driven performance reviews and predictable turnover and attrition. HR managers will be using AI functionality such as machine learning and natural language processing.

The artificial intelligence offers much great opportunity to elevate the HR world. It will help the organizations to achieve their goal in less time. With the increasing technology, the organization will be requiring high skilled professionals which can make the machine to perform the task as per the requirement. Artificial Intelligence will help the employees to manage their work life balance effectively. Employee will be able to complete their task before the deadline. The dependency on employees will reduce in the organization.

AI helps the managers to automate the complex task such as data collection, gathering information, segregate employees. It resolves the HR problem by using the data to the fullest potential.

The organization will enjoy the benefits of using AI in long term. Although investment for AI system will be very much expensive but it will be worthwhile investment for the organizations. Artificial Intelligence is about designing machines that can think and understand like a man.

The HR Benefits of Artificial Intelligence include,

1. Empowering virtual assistants through data collection and distribution
2. Increasing employee skills for maximum efficiency in assignments requiring cross-training abilities
3. Organising statistics based on different stakeholder needs
4. Managing workflows through automation, regulation and conditional situations
5. Less time consuming
6. The chance of error will be less and accuracy in task can be achieved.
7. Organizations will be able to focus more on strategic decision
8. Accuracy of work will be increased.
9. It can overcome the limitations that human may have.
10. It can handle responsibilities and can be programmed to manage them.
11. Frauds can be detected through smart card based systems.
12. Organizations may install the face recognition techniques for the highly risk zone.
13. Organizations use avatars which digitally assist to the employees, saving the need of human resource.
14. Sometimes manager's start thinking emotionally which create a hindrance in making decisions. Sentiments and emotions are not lacking in the AI system that's why they will able to think logically and take the right decision.

How Artificial Intelligence Can Revolutionize HRM Process

AI make certain predictions like which type of employee will be most successful, the population that are most at risk for turnover or any issue on performance or any kinds of teams that are developing the innovations or creative solution. It is done by gathering data on levels of employee's engagement, why people leave and their performance information and the culture feedback. AI system will identify the patterns and make connections that would be difficult and time consuming for the individual to uncover. It will help Hr professional to become more proactive and strategic with their programme and planning. Artificial intelligence is proving to be a game changer to revolutionize any industry. Artificial intelligence can process a high amount of data with the greater level of accuracy in less time by following the AI tools. Cognitive computing system is used in many artificial intelligence (AI) applications, including expert system, natural language programming, neural networks and virtual reality. By leveraging the use of number of AI tools, the company can engage the candidate more effectively both before and after they enter the organization. Fast paced digitization helps in integrating different systems and can provide unified platform that can support full range of HR function starting from recruitment, selection, training, development, compensation and performance management.

Following process can be improved and simplified with the use of artificial intelligence:



1.1 Candidate Screening: AI can help the recruitment managers to examine the applicant quickly and effectively. Organisations encourage applicants by interacting them in chat box or AI tool, answering common questions about the job descriptions and specifications. It may also provide information in terms of feedback about the candidates.

1.2 Candidate Engagement: After submitting the job application by the applicant, the applicant not receives any type of communication or interaction from the employer. With the help of AI, the organization could easily engage the applicants using Hubspot or Marketo- like systems. Certainly, AI can be integrated into these types of candidate automation, however, these messages, responses and engagements can, with AI, be real-time and unique to the individual candidate and not just driven by a tags, positions, locations or categories.

1.3 Re-Engagement: Artificial intelligence helps the organization to re-engage a very targeted group of candidates to determine their interest level in a position or role, while also using that engagement opportunity to update their candidate record to reflect new positions, work experiences or skills that might have acquired since the last time they were engaged.

1.4 Post-Offer Acceptance: Once a candidate accepts a job offer, a gray area exists — normally two weeks from when a candidate gives notice to when they starts working at your organization. AI could fill that gap by engaging and following up with the candidate to increase the acceptance-to-start rates of your candidates.

1.5 New Hire On boarding: Induction program plays very important role for the new joinee. It helps to understand the company culture, processes & policies. AI can answer other common questions, information and resources that may help the new join to understand better.

1.6 Career Development: AI offers the ability to scale a career development program or company coaching for each and every employee.

1.7 Employee Relations: Employees must have some queries related to benefit coverage, FMLA, vacation time and how they are paid which require in depth conversation with HR manager or coordinator. Once data feed in the AI system, AI can answer all queries in chat form. Artificial intelligence technology can be used in chat form, email or a virtual meeting room, handing over and even booking a meeting between your HR generalist and the employee.

1.8 Scheduling: Whether it's booking interviews or work meetings, spending time to coordinate schedules and availability is an unproductive activity that not only wastes everyone's time but keeps our email inboxes full and overflowing. Imagine a world where a machine books meetings, schedules and even orders food without you having to do a single thing.

Conclusion

Machine can surpass the human level of intelligence and ability. HR software will become software that learns from experiences. The data processor in the AI system finds the effective way to achieve the objective of any task. This technical innovation can help the HR managers to manage the HR process, policies, and employees effectively. It is beneficial for both employee and employer. Employers are no more dependent on the manpower; they can get their work done through the machine effectively. Although it may reduce the dependency on the manpower but still employers will be requiring efficient manager, skilled workers, and professional to tackle with the system. It will help the employees to reduce the paper work; lengthy process will no long be lengthier. It will reduce the stress of the employees because, employees can feed the data in the system and analysis can easily be done. There may be internal and external forces which may affect the new technological AI systems. Internal factors such as employees' resistance to learn something new, unskilled workers, unavailability of resources etc. External factor which may affect the system such as change in government could have different political ideologies, with direct influences on business, the economy of country, legal aspects, new legislations, trade agreement etc. The technology has changed the way of working system. The credit goes to the programmers, processors, computers and internet. The world has become smaller and future generation will use advance technologies for the human resource management purpose.

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