

Reinvention of Human Resources: Artificial Intelligence Driving HR

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Abstract

Broader concept of Human Resource Management is changing these days. The administration Of HR system is changing from contemporary to technology based. Corporate have increased their usage of talent tools that contribute in remodulation of talent management landscape. The development of HR technology has transformed the working of workforce in the organizations. HR department of the organization should be aware of benefits and the limitations of the application of technology. The new age technology AI, Data Science and Cognitive Technologies face challenges in adopting these technologies due to lack of skills ,budget constraints, leadership buy-in, and capabilities in the HR team that organizations possesses. The current research paper throws light on and limitations of Artificial intelligence

Introduction

“Artificial Intelligence is a tool which use human intelligence in various fields and improve the performance, and it is an emerging technology which is used in all industries to improve productivity and performance” (Brouwer 2015).

Technology blast has paved different directions for Human Resource System prevailing in organizations in current scenario. Artificial intelligence (AI) is reinventing HR functions in the way companies recruit and select their workforce. Technology in today's scenario has encroached HR industry. The businesses now days are focusing on 'employee oriented' corporate culture. Recruitment and selection process in organizations these days are more technology driven .As per *India Report of Deloitte's 5th Annual Global Human Capital Trends*, “53% of companies are revamping their HR programmes to deploy digital tools, while 22% have already leveraged AI to deliver HR solutions”.

Employee engagement is beneficial for workplace and organizations and plays crucial role in employee productivity. Dependency of HR experts on the annual surveys to evaluate employee engagement more often generates erroneous result. Gone are the days when HR experts relied on burdensome annual surveys to evaluate employee engagement that often generated erroneous results. AI and machine learning (ML), significantly contribute to human resource management practices. AI transforms and breaks data in a format that can be analyzed easily; Machine Language is advanced form of Artificial Intelligence that identifies patterns through data scanning and modifies programme actions correspondingly.

The data generated by AIML help HR practitioners to motivate and retain the existing employees and recruit the new ones. Historical records are often used by AI and ML to recommend the best solutions to resolve expected problems, thus helping HR leaders develop HRM programmes based on smart data.

AI-powered HR chat bots

The artificial intelligence consist of programs that undergoes conversations are known as chat bots. The chat bots are responsible for numerous management functions like customer service, marketing and sales. The front end system of employee engagement is provided by HR bots. The HR chat bots integrate the information from numerous sources and the records. HR chat bots support workforce engagement, Reinforcement of employee relations is function played by HR chat bots. Flourishing startups are increasingly using HR chat bots which use accumulated data to make hiring process streamline .Hiring process is in automation and this help n increasing efficiency.AI/ML powered chat bots offer multiple advantages

- 1) Endless conversation with user
- 2) Strong cross channel integration
- 3) Easy accessibility
- 4) Strong cross channel integration
- 5) Round the clock availability

For example, if you are planning to take a day off without prior notice, you would simply leave a text stating that you were on leave that particular day. The bot will then ask your manager if the leave can be granted or not. The leave will be confirmed once your manager approves the same.

Advantages of implementing AI and ML in HR

Technology has changed the organizational environment and the way HR department functions. The advantages of implementing AI and ML in HR are:

1. **Simplifies recruitment procedure:** Recruitment workflow in maintained in number of stages when organizations offer AI recruitment solutions. The recruitment solutions of AI make use of sophisticated algorithm to monitor the skill sets of the candidates. HR leaders make use of personalized research tools to recruit the best talent. An applicant tracking software (ATS) can reduces the time taken and the errors in recruitment. Resumes in ATS system are analyzed on the basis of keywords, qualifications, expertise and location. The ATR highlights the suitable candidates on the basis job requirement of employer. The natural language processing an “Inbuilt specialized tool” of ATR drives predictive language analysis that accelerate recruitment by assisting HR experts in short listing candidates faster and with less pitfalls. For example, AI can turn a 15-minute video interview into a set of 20,000 data points on rise and fall of speech, word choice and the facial movements to select a candidate.
2. **Automated Messaging:** Template message can be created on HRM software the message is send to the candidates at different stages of recruitment process that makes candidate updated on application status.
3. **Transparency in performance appraisal:** The management responsibility is to remain transparent while judging the performance of employees of the organization.AI/ ML algorithms carry regular employee assessments through unprejudiced performance appraisals. These technologies similarly, are used to evaluate the career path of employees to prepare them for career advancement.

4. **Estimating workplace morale:** The performance pattern over time can be identified by leveraging AI/ML. The robotic technologies come with face-recognition technologies that are capable of identifying gender and measuring employees' psycho-emotional traits on a scale from very sad to euphoric. With the data accumulated by these technologies, organizations can develop a closer bond with their workforce by utilizing the derived insights to empower employees so that they can identify their true potential.
5. **Improved prediction models:** AI and ML have the potential to know your company better—whether it is forecasting your future ROI, increased or reduced engagement levels of employees, problems pertaining to completion of projects and other unforeseen glitches that would normally take years to come into sight
6. **Simplifies payroll:** Payroll and expenses can be efficiently managed through HR bots. Time spends in filling the forms for the purpose of documentation and transportation expenses can be reduced. Notification is sent to the bot and pending bills are approved by the manager.

The people matter studied “state of HR technology in India 2019” and revealed the shift of automation journey. The figure given by them clearly stated that more than half of the functions are automated

S.No	Human Resource Functions	2016(%)	2019(%)	Shift%
1	Strategic Workforce Planning	24	22	-2
2	HR Operations	68	70	+2
3	Succession Planning	35	34	+1
4	Communication and collaboration	29	50	+21
5	Recruitment	41	42	+1
6	Learning and Development	43	41	-2
7	Performance Management	69	58	-11

Source: People Matter, 2019

Literature Review

“The adoption of AI in HRM and in recruiting can be called as ‘the new age of HR’, since AI changes the recruitment industry by replacing routine tasks that have been conducted by human recruiters” (Upadhyay & Khandelwal, 2018). Tecuci (2012) mentions that “AI as a field is wide and a multidisciplinary domain, which can be exploited not only in computing disciplines but also in linguistics and philosophy. AI can take many different forms, such as robots, bots or software” (Tecuci, 2012)

Salin and Winston (1992) defined “AI as being a set of techniques that allow computers to accomplish tasks that would otherwise necessitate the reasoning skills that human intelligence brings”. According to Nilsson (2005) “machines should be able to do most of the jobs those

human intelligence demands, which he calls for human-level AI. This thesis will not focus on AI in terms of actual robots, but rather on the implementation of AI in different software which companies use within the recruitment process”.

“Artificial Intelligence (AI) has been around for a long time and have had a wide area of application throughout the years, but only during the later year has the technology been further developed and implemented within many different organizational settings” (Tecuci, 2012). Many researches that bring forward definitions focus to define the ‘I’ in AI, usually because this is harder to pinpoint. The definition of ‘A’, that is Artificial, is a universally agreed on term and therefore does not need as much defining (Bringsjord & Schimanski, 2003)

“To understand the concept of AI, the easiest way is to break down the words by themselves to look at each meaning. However, even though AI has been around for a longer period of time there is not one pre-determined definition of the concept” (Legg & Hutter, 2007). “Some would define the term of AI as the creation of robots, machines or programs which inhabits what could be seen as similar intelligent behavior as human have” (Tecuci, 2012; Kaplan, 2016).

According to Ved et al. (2016) “there is five different main areas of implementation of AI which are firstly interpretation of language, secondly machine perceptions, thirdly problem solving, fourth robotics and lastly games”. These implementation areas are also further supported by Tecuci (2012) who have knowledge acquisition, natural language and robotics as some key areas for AI.

“As per the study conducted by Bain and company, the results showed that nearly 87% Of the Hr-leaders agreed that digital-technologies will reshape the way of HR and 57% Opined that there will nearly 1-10%Budget hikes for AI in the next 2 years. If, we observe the scenario throughout the globe AI, in all its forms from RPA (robotic process automation) to machine learning to NLP (natural language processing) has shown remarkable results”.

Initiative Taken by Indian Government

Since the early 90s, the IT services sector in India has been of tremendous importance to its economy eventually growing to account for 7.7% of India's GDP in 2016. In an attempt to capitalize on this foundation, the current Indian administration announced in February 2018 that the government think-tank, National Institution for Transforming India (NITI) Aayog (*Hindi for Policy Commission*), will spearhead a national programme on AI focusing on research.

This development comes on the heels of the launch of a Task Force on Artificial Intelligence for India's Economic Transformation by the Commerce and Industry Department of the Government of India in 2017.

The industry experts we interviewed seemed to agree that artificial intelligence has certainly caught the attention of the Indian government and the tech community in recent years. According to Komal Sharma Talwar, Co-founder XLPAT Labs and member of India's AI Task Force:

Just as Google, Oracle, Microsoft, and Amazon are battling to serve the cloud computing and machine learning needs of the US government, the next three to five years may lead to a similar dynamic within India. As the Indian government pushes for digitization and enacts more AI initiatives, private firms will flock to win big contracts – adding to the pool of funds to develop new technologies and spin out new AI and data science-related startups.

Mayank Kapur, CTO of Indian AI startup Gramener, says that the government is still the largest potential customer for data science services in the country. Other experts we spoke with have enunciated that more and more Indian startups and established tech firms are beginning to implement AI in their products and services.

Mr. Avik Sarkar, the Head of the Data Analytics Cell for NITI Aayog explains that the think-tank – which has been tasked with spearheading India's AI strategy – is currently engaged in the following public sector initiatives:

Conclusion

As much as the HR technology landscape continues to be disrupted by AI their teams need to balance the technological advancements with transparency. HR leaders and practitioners need to have a clear understanding of how decisions are being made to mitigate unknowingly injecting bias into their programs. This transparency will be essential in making sure that employees trust the new technology. The paper revealed the importance of using AI technology for your human resources and catering to recruitment needs. The concern in using AI technology is that it lacks human interaction and empathy or the opportunity to pick a suitable candidate and to know them personally during the recruitment process which is not possible while using AI technology to do entire work for the organization. AI focuses on data while humans focus on emotion.

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