Adaptability of Artificial Intelligence in Human Resources Management in This Era

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Abstract

Artificial intelligence is defined as "an ideal 'intelligent' machine is a flexible rational agent that perceives its environment and takes actions that maximize its chance of success at some goal." It's a branch of computer science that uses machine learning algorithms that mimic cognitive functions; making. Big data analytics for HR is the process of looking at big data in search of trends, patterns, correlations and insights about human behavior. The goal is to uncover something that the business didn't know and to be predictive when it comes to certain HR functions like hiring, training and choosing between HR initiatives. Leaders are less risk tolerant than even ten years ago due to the wide spread implications of the recession. CEOs and other leaders no longer base decisions on previous experiences and their gut; leaders now want to see the facts and data that lend support to their particular position.

Keywords

Artificial intelligence (AI), HR functions, Human Resources Management, Big data analytics for HR.

1. Introduction

What is artificial intelligence (AI)? Artificial intelligence (AI) refers to technology used to do a task that requires some level of intelligence to accomplish—in other words, a tool trained to do what a human can do. Why is AI different than ordinary software? Three core components —high-speed computation, a huge amount of quality data and advanced algorithms differentiate AI from ordinary software. Core AI technologies provide better accuracy and stability to everyday processes using an algorithm that connects quality data with fast computation services. AI technologies offer significant opportunities to improve HR functions, such as self-service transactions, recruiting and talent acquisition, payroll, reporting, access policies and procedures. We are living in an era in which AI capabilities are reaching new heights and have a major impact on how we operate our business. Human resources executives have faith that merging AI into HR administration functions will benefit and improve the overall employee experience. This will provide more capacity, more time and budget, and more accurate information for decisive people management.

If organizations wish to remain competitive in today's global economy, they will need to look at ways to incorporate conversational AI for HR transactions in their decision-making process. Organizations should rely on AI to perform administrative duties so that HR departments may become more efficient. HR professionals will be able to focus more on strategic planning on an organizational level. AI processes data more quickly than the average human. It is also able to cast a wider net, bringing attention to people who employers might not have considered or who may not even be looking for work. Having more qualified candidates from the beginning shortens the process, enabling managers to dedicate more time to analyzing HR data and improving strategic planning.

Finding the right information, with lower costs, in less time and in a secure manner helps to build momentum step by step, beginning with the recruitment process. From there, AI can be effectively woven into an employee's onboarding program. New employees who may want to connect with others and get more institutional information may not know where to go. Conversational AI for the

HR system will answer new employees' most pressing questions to help get them up to speed fast. For example, an AI-powered program could provide the names, locations and contact information for people they should connect with during their first week. New employees could also be advised by AI engines to check out a new-hire web page containing useful information, including training modules and business-conduct guidelines.

In addition, conversational AI transactions can help to update personal information on behalf of the employee in a secure manner. A manager could access his or her direct report's information via a chat bot and perform HR business transactions without accessing the core HR application. Chat bots authenticate an employee and provide only authorized information with which the employee can access and transact. Conversational AI for HR transactions has a strong potential to perform certain transactions routed via an approval-chain process. For example, it can allow a manager to approve vacation requests via chat bot, or it can provide a list of items in need of approval by the manager or HR. Managers or HR professionals would not have to access the core HR system to get KPIs and analytical data. The conversational AI solution uses a machine-learning capability —natural language processing (NLP) —to know exactly what information the employee, manager or HR professional is seeking. Note that conversational AI requires customization; it is not easy to standardize. You can designate certain words as positive or negative, but the application works best when it can determine the correct context and the intentions of the user.

2. Problem statement

What are the barriers to adopting AI technologies? What is causing the slow adoption of AI in this field? Financial barriers can be blamed for the lack of wider tool implementation to assist in HR administrative tasks. Other key barriers to AI adoption include:

Talent gap: it can be expensive and hard to find properly educated or skilled people.

Concern over privacy: confidential HR data must be accessed securely and available only to the authorized person.

Ongoing maintenance: as with other innovative technologies, AI requires deep learning and regular review and updates.

Integration capabilities: data availability is limited, due to the HR trend toward SAAS (Software as a Service).

Limited proven applications: many products and services are feasible based on proof of concept only.

3. Objective of the study

However, the cost of using AI can be justified for the following human resource functions:

1)Reducing the amount of time HR professionals spend on administrative tasks.

2)Reducing the burden of shared service centers and help desks by performing HR transactions and providing answers for routine queries.

3)Recruiting and retention.

4)Measuring return on investments.

Reducing bias in HR decision-making.

4. Lecture review

The future of HR is both digital and human as HR leaders focus on optimizing the combination of human and automated work. This is driving a new priority for HR: one which requires leaders and teams to develop a fluency in artificial intelligence while they re-imagine HR to be more personal, human and intuitive.

As we enter 2019, it's the combination of AI and human intelligence that will transform work and workers. For many companies the first pilots of artificial intelligence are in talent acquisition, as this

is the area where companies see significant, measurable, and immediate results in reducing time to hire, increasing productivity for recruiters, and delivering an enhanced candidate experience that is seamless, simple, and intuitive. One company that has delivered on this is DBS Bank. The DBS Talent Acquisition team created JIM (Jobs Intelligence Maestro), a virtual recruitment bot powered by artificial intelligence used to conduct candidate screening for those applying to be wealth planning managers, a high volume job in the consumer bank.

Following the introduction of JIM in May 2018, DBS talent acquisition was able to: 1) shorten the screening time from 32 minutes per candidate to 8 minutes per candidate, 2) improve completion rate of job application from 85% to 97% and 3) respond to 96% of all candidate queries through JIM, allowing recruiters to spend more time sharing the culture and values of DBS with candidates. While these metrics are impressive, says James Loo, Head of Talent Acquisition Group, DBS Bank, the key learning is that the use of artificial intelligence provides benefits for the recruiters as well. Recruiters no longer need to spend hours to screen thousands of applicants, freeing them up to perform higher-value work such as sourcing, recruitment marketing, engaging with candidates, and hiring managers. In fact, DBS recruiters built a new skill: training the Chat-bot to assess candidates and answer candidates' queries. The future job of a recruiter may add that of a Chat-bot Coach.

The demand for uniquely human skills will grow, according to the Future of Jobs Report from the World Economic Forum. The World Economic Forum projects that 75 million current jobs will be displaced as artificial intelligence takes over more routine aspects of work. However, 133 million new jobs will be created, and skills in both emotional intelligence and technical intelligence, like technology design and programming, will be important. Some companies, like Bank of America, are building a national training program to teach empathy to the banks' front line client facing roles. John Jordan who leads The Academy and Advisor Development at Bank of America calls this a "life stage navigation curriculum," assisting Bank of America financial advisors in better understanding the priorities of their customers in various life stages from young parent, to widower, to retiree. Jordan says, "To date, almost 40,000 people.

Hilton is one company already on the journey useing AI for HR. Sarah Smart, Vice President of Global Recruiting says,"By using artificial intelligence to source, screen and interview candidates, we have increased our speed to hire by 85%. We have also experienced other business benefits; such as increasing the diversity of our talent pool and enabling our recruiters to identify a high performing candidate faster. Having started our journey using AI in 2014, we see future use cases for AI include improving new hire onboarding and providing internal talent mobility for Hilton employees." To date, Hilton has invested in upskilling the recruiter rather than making the role redundant. Think of artificial intelligence as a tool in the recruiter's tool belt to help them streamline the hiring process, while never making the final decision about hiring.

5. Study Hypothesis

In this regard following theory to be tried. They are: Free Variables.

1.Identify the business problem to solve using artificial intelligence and start collecting data on the current state of the problem and the key KPI you want to impact with AI.

2.Build a cross functional team of key stakeholders to educate them on the business benefits of using AI to solve key business problems.

3.Implement learning opportunities for key job roles impacted in HR by AI (such as those in Recruiting, New Hire On-Boarding and Corporate Learning).

4.Identify new jobs and skills needed as AI is leveraged in the workplace.

5.Change performance management and development skills needed in HR roles to include a fundamental understanding of how to use artificial intelligence across the employee life cycle..

6. Research Frameworks

As far as the theory is concern, the study will follow the descriptive research method.

The above theory formulated and one dependent variable supported by five other variables as independent variables were incorporated. One mediator is introduced for a unique model for the study to follow for a probable solution to the issue raised. On the above concept, at field level investigation will be carried out for finalizing the module.

The Quantitative research methods will be adopted for analysis with the SPSS spread sheet and Smart PLS till module found supportive.

The study may be conducted with (Explorative Research) methods. As in the said method, the module is defined as a specific line of inquiry, often for future research with the purpose of making recommendation.

7. Recommendation

For generations Artificial Intelligence has been a fantasy and science fiction authors have visualized the build out of intelligent machines which could carry out the tasks of human beings or even excel them in certain areas. In the era of digitization Artificial Intelligence is coloring the fantasy images and is proved to be the gist of technological excellence. It has not only simplified the human learning but also provided real growth to the business and has proved to be very useful in enhancing employee engagements as well as satisfaction level. It is a future game changer which is transforming our lives at home as well as at work. Artificial Intelligence is acting as a smart assistant for the populace in various forms like Amazon's Alexa which performs various functions like providing information, controlling lights, locking and unlocking the smart homes etc. Artificial Intelligence is enhancing the human resource by optimizing the internal business operations and by freeing up the task force to be more creative with the use of automated intelligence. Artificial Intelligence is the engine that is driving the new wave of digital transformation among the different resources by making use of several AI tools for HRM be it, recruitment, selection, training and development, performance management, compensation and reward management.

Better job descriptions. There's a clear disconnect between what's included in job descriptions and the realities of most jobs. In addition, the language used may inadvertently convey negative connotations about the job and the organizational environment or reflect bias. AI, writes Mather, can be used to "help flag terms that might project a culture that is unfriendly to certain people."

Résumé review. AI can be, and increasingly is being, used for résumé review, a natural application of the technology. It takes time to review résumés, especially for high-demand positions in top companies. AI can aid this review from both a time and a quality perspective, quickly identifying those résumés that are most closely aligned with the requirements of a position.

Can machines make better hiring decisions than people? Arguably, yes. According to Mather, "Research shows that algorithms can outperform humans in hiring the best talent by ignoring inconsequential information like the strength of a handshake that can sway a hiring manager."

Structuring an interview. Asking the right questions of candidates during interviews is clearly important in terms of ensuring alignment of knowledge, skills, and abilities with the requirements of the position. AI can be helpful in creating structured interviews that can both better determine how well a candidate will do while on the job and ease the burden on hiring and talent acquisition managers to structure effective interviews.

Today retaining the employees and transitioning them according to the requirements of an organization in order to get best out of them is a very big concern. AI, ML and Robotics are reshaping the talent management process. AI is used in checking employee turnover at initial stages. It predicts the exit of employees on the basis of various transactions generated by employees and ML and NLP help in anticipating the future.AI also helps in finding out the patterns and

reasons for employee stress by using chat bots and virtual assistants. Several AI software's are available to track the activities of employee such as browsing history and emails which act as information source for management to identify those who are heading out. Monometers are AI based platforms created to access the sentiments of workforce over a period of time which further help the HR managers top robe possible reasons of turnover and improve the employee retention strategies. Infect AI is helping with employee retention by eliminating monotonous tasks, understanding employee engagement factors thereby improving the overall performance of companies.

The benefits of AI and automation for HR and the workforce don't come instantly, however. It's a journey and one can see the short-term benefits of this journey in automation, the medium-term benefits in augmentation and finally the long-term benefits in the amplification of human activities or tasks. Short medium and long term effects of AI and automation in HR.

With the use of AI and ML performance appraisal will be much easier than ever. Vast amount of information shared by employees on social media in the form of tweets, posts and images can reveal a lot about employee engagement and organizational values that are favored or un-favored. A UK based company; Work Compass is already using AI to analyze the quality of goals of employees. Natural Language Processing makes it possible for managers to pinpoint the areas of dissatisfaction and suggestions for correct course of action. AI driven technology can help reduce certain biases that can impact efficacy of performance reviews.

8. Future scope

Customized learning and development is in rage as the workforce wish to learn what helps push their career in progressive direction. This is possible only with the application of AI. Everywhere learning is the culture prevalent in the new age of learning and development. AI has led to the development of content that is viable across all devices like smart phones, desktop, tablets etc. Now we can see the instances of employees completing online courses while on the treadmill. Conversational AI can help the human resource managers to track the learning and development progress of the employees. Furthermore AI algorithms offer suggestions about learning programs of the workforce. Gaming based programs are installed that help the employees to enhance their skills without any real time classroom or teacher

Augmented intelligence is of immense help in assisting the HR managers for finding the strong candidates amongst the giant pool of applicants. Manually screening resumes is a tedious task and often lacks standardization. Artificial intelligence auto screens thousands of resumes in minutes near perfect accuracy. AI software's are designed to screen resumes that integrate with ATS and learn the job qualifications based on its description, what good candidates should be considered based on past hiring decisions. The company uses machine learning to conduct video job interviews and check if there is any type of strange behavior going on. With the help of video conferencing an interview can be conducted with the candidates from all over the world. AI can make suggestions for additional training by gathering an understanding of learner needs through learning management systems.

Let's take a look at the various effects of AI and automation on HR and the workforce in more detail. First, let's find out what history was saying and how this shift towards AI and automation has been going on for a long time. After that, we'll explore how we can adopt this new technology and what the basic strategies are to move forward as an organization while turning potential threats into opportunities.

AI is everywhere today, and there are many aspects to consider as to how it will impact the future of work.

"It's now popping into almost every piece of software," said Josh Bersin, principal and founder of Bersin by Deloitte. Based on research by Bersin by Deloitte, nearly 40% of companies are using some form of AI in HR alone.

According to Personnel Today, 38% of enterprises are already using AI in their workplace with 62% expecting to start using it as early as this year. According to Bersin by Deloitte, 33% of employees expect that their jobs will become augmented by AI in the near future.

Artificial intelligence is present in virtually every major industry from healthcare to advertising, transportation, finance, legal, education, and now also inside our workplaces.

We are already increasingly using chat bots and virtual assistants in our personal lives and now we can expect to use them in the workplace as well. For example to assist us in finding new jobs, answer FAQs, or receive coaching and mentoring. The use of artificial intelligence in organizations could help us to create a more seamless, more flexible, and more user-driven employee experience.

9. Conclusion

While general-purpose AI is still a long shot in any domain of human activity, the speed of progress towards specialized AI systems in health care, automobile industry, social media, advertising and marketing is considerable. Far less progress has been made in issues around the management of employees even on the first step of the AI path, which is decisions guided by algorithms. We identify four reasons why: complexity of HR phenomena, data challenges from HR operations, fairness and legal constraints, and employee reactions to AI-management. Causal reasoning is the first principle relevant to addressing these challenges across the stages of the AI Life Cycle. Because the creation of algorithms relies on association rather than causation, an absence of notions of causation makes it much more difficult to create the datasets needed for analysis: we need more data because we do not know what to choose. Causal reasoning also helps greatly with issues of fairness and explain ability.

The benefits of causal reasoning do come with costs. Employers must first accept the greater costs (based on the need for more data) and lower predictive power from algorithms where we do not have causal models, and they must work to develop consensus about causal assumptions in advance of modeling. These challenges explain why the data science community is quite skeptical about causally reasoning AI systems.

Randomization is a second principle that can help with algorithmic-based decisions. First, randomizing the inputs into an algorithm is akin to experimentation and can help to establish causality. Second, randomly choosing an HR outcome with the probability predicted by an algorithm where we cannot predict outcomes with much accuracy acknowledges the inherently stochastic nature of HR outcomes and unavoidable inaccuracy of algorithms. Employees may perceive such randomization— such as flipping a coin—to produce fairer outcomes under uncertainty. Formalizing processes is also necessary to build reasonable algorithms. It ensures that the parties are aware of the assumptions built into any algorithms, the costs of building them, and the likely challenges from employees who are adversely affected by them. In the process, formalization can be enabling rather than coercive (Adler and Borys 1996).

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