

Opportunities and Challenges of Artificial Intelligence to Human Resource Management

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ABSTRACT. Artificial intelligence technology is a scientific and technological project that is currently highly sought after. The application of artificial intelligence technology to human resource management can provide strong technical support for the development of enterprises. In today's new era of continuous development of information and intelligence, simple and repetitive work is increasingly replaced by intelligent robots. The extensive use of artificial intelligence has greatly improved production efficiency and management efficiency. Artificial intelligence technology brings both opportunities and challenges to human resource management and development of enterprises. Opportunities mainly include: reducing the cost of human resource management; improving the efficiency and quality of human resource management; and promoting the transformation of human resource management. The challenges include: impact on low-end jobs; increase equipment maintenance cost; urgently need a large number of highly qualified professionals who understand the core technology of artificial intelligence; the traditional human resource management model is affected; Put forward brand-new requirement to the ability structure of employee. Therefore, enterprises should scientifically and rationally apply artificial intelligence technology to the human resource management of enterprises, to promote the further flattening of organizational structure, to improve the human resource management capability and management efficiency of enterprises, and enable enterprises to develop and improve steadily.

KEYWORDS: artificial intelligence, human resource management, opportunities, challenges

1. Introduction

With the development of the Internet + and the advancement of science and technology, modern society has gradually moved toward the era of artificial intelligence. The informatization and intellectualization of enterprise human resource management not only enhance the core competitiveness of enterprises, but

also make enterprises human resources practitioners face more challenges. As the pace of artificial intelligence continues to accelerate, many jobs in HR may be replaced by artificial intelligence in the future. The emergence of AlphaGo has opened up a new era in robotics and the development of artificial intelligence. Machines have shown great advantages in more and more work, and even in some respects, machines far exceed human wisdom.

Artificial intelligence is the development trend of future science and technology, and it is also an unstoppable step in human evolution. Since the industrial revolution, machines have gradually replaced low-skilled, low-wage, highly repetitive jobs. In the era of sharing economy, people can work at any time and any place. With the adoption of artificial intelligence to communication, office, collaboration and other functions, people's workplaces are reshaped unconsciously. As the cutting-edge technology in the information age, the number and complexity of artificial intelligence applications are growing rapidly. Today, the world's top companies are actively deploying artificial intelligence, and artificial intelligence has penetrated into people's lives and work. For the time-consuming and labor-intensive work in traditional human resource management, such as attendance checking and resume searching, artificial intelligence technology can free human resource managers from trivial things, greatly improving the efficiency of human resource management. In addition, many high-tech companies have applied artificial intelligence and big data technologies to human resource management. For example, by using virtual reality (VR) and augmented reality (AR) technologies, companies can greatly improve recruitment and training. With the advent of the artificial intelligence era, the digitization and regularization of the six modules of human resource management will be replaced by artificial intelligence. The accelerated development of artificial intelligence has set off a wave of changes in enterprise human resource management.

Artificial intelligence is becoming more and more important in human resource management. In-depth study of the impact of artificial intelligence on human resource management and analysis of the opportunities and challenges it brings can help us better understand the way artificial intelligence works and use artificial intelligence to improve the efficiency of human resource management, promoting the transformation of human resource management model, to improve the effectiveness of human resource development.

2. Overview of artificial intelligence and human resource management

Artificial Intelligence (AI) is a discipline that studies computers to simulate certain thought processes and intelligent behaviors (such as learning, reasoning, thinking, planning, etc.). The Massachusetts institute of technology professor pointed out that artificial intelligence mainly studies how to use computers to solve the artificial intelligence work. The concept of artificial intelligence was first put forward abroad in 1956 and began to be studied. McCarthy first quoted the term artificial intelligence to create a theoretical precedent for the development of artificial intelligence. In the 1990s, Kasparov battled with the "deep blue" computer and "deep blue" won, which is an important milestone in the development of

artificial intelligence. In 2006, Varian Hinton proposed the concept of deep learning, and artificial intelligence has entered a stage of rapid development. Artificial intelligence covers many disciplines such as mathematics, management, computer, linguistics, etc., and has a strong comprehensiveness. With the continuous development of technology, artificial intelligence has made breakthroughs in image recognition, speech recognition and other fields. Although artificial intelligence is still in the continuous development stage, many companies have realized the development prospects and application value of artificial intelligence. Artificial intelligence technology can also help companies of all sizes to achieve their development goals.

Artificial intelligence belongs to computer science, but it is not just computer science. It often includes sociology, psychology, mathematics, etc., and even professional theoretical knowledge and skills in specific application fields, as well as human experience accumulation in related fields. From this point of view, artificial intelligence has considerable comprehensiveness and complexity in the theoretical knowledge level and will not belong to a certain subject area.

Human resource management mainly organizes and manages employees' behaviors through planning, organization, control and other means and methods, with the ultimate goal of helping enterprises to achieve maximum benefits. The core content of traditional human resource management is based on the maximization of enterprise interests and the management of personnel in the enterprise, while ignoring the development needs of talents as individuals and the relationship between individual development and enterprise development. In the era of Internet +, the human resource management of modern enterprises should pay more attention to the development needs of talents, from focusing on management to focusing on people. Human resource management is of great strategic significance to the development of enterprises. It is an important part of enterprise strategic resource management, and is also an important basis for enterprises to maintain healthy development. Therefore, scientific methods should be adopted to improve the efficiency and level of management and promote the healthy and sustainable development of enterprises. In the era of knowledge economy, human resources are the source of knowledge innovation and development. In order to improve the emphasis on employee training, enterprises need to invest more cost in human resource management, to improve the quality of employees, and at the same time realize the sustainability of employee and enterprise development.

3. The opportunity of artificial intelligence to human resource management

As a disruptive technology with a wide influence, the uncertainty of AI's development has brought a systematic and multi-level profound impact on human resource management of enterprises. Its positive impact on human resource management mainly includes the following aspects:

3.1 Reduce the cost of human resource management

In general, employee training is often costly and requires a large amount of training funding, while the application of artificial intelligence can significantly reduce training costs. On the one hand, artificial intelligence can replace repetitive mechanical work and reduce the use of labor force, thus indirectly reducing the cost of staff training. On the other hand, artificial intelligence can directly reduce training costs. At the same time, the training of artificial intelligence to employees is continuous and can be modified according to the behavior of employees and the needs of enterprises, so as to mobilize the enthusiasm of employees for learning. In terms of training technology, artificial intelligence uses virtual technology to improve simulation and security, which is conducive to improving learning efficiency and reducing training time cost.

The resignation of employees has always been a matter of great concern to the company. The reasons for departure may be that the employees are dissatisfied with remuneration of the enterprise, disapproval of the leadership style, or the work pressure is too large. It may also be the employee's personal career planning and personal achievement motivation and other factors. Employee turnover will lead to the instability of the enterprise staff, especially the loss of core employees will directly weaken the competitiveness of the enterprise, causing irreparable losses to the enterprise. Moreover, the departure of employees has forced the company to invest a lot of manpower, financial resources and material resources in recruitment and training. At this time, the powerful data mining function of artificial intelligence will show great advantages. Artificial intelligence can accurately calculate the employee retention rate based on the original internal employee data and then introduce external data. It can measure and analyze the reasons for employee turnover in time, and facilitate HR to take timely measures to retain talents and reduce employee turnover.

There are many high-risk jobs in our society. With the development of social economy and the improvement of the quality of workers, the number of people willing to engage in high-risk industries is decreasing year by year. Just right, the appearance of artificial intelligence will break the situation, and robots can replace man to work with high risk factors, and the efficiency of robots is far better than that of human beings. For the same workload, the robot can ensure the quality to complete in a shorter period of time. The wide use of artificial intelligence robots can greatly promote the degree of automation of enterprises.

3.2 Improving the efficiency and quality of human resource management

Firstly, on the one hand, the traditional recruitment has limited channels, which makes the required personnel unable to get to the job immediately. Therefore, the recruitment time is longer, and the difficulty of the resume screening increases with the increase of the number of resumes received, and limited human resources are difficult in screening out the best job matching in a short period of time. On the other hand, when some positions need to recruit a large number of employees, it is

difficult to carry out the interview work at the same time, the recruitment cost is huge, and the human resource manager's own factors will lead to the lack of ability in the recruitment of middle and high-level positions. Considering the limitations and shortcomings of traditional recruitment, artificial intelligence based on big data and cloud computing can give full play to its advantages. Artificial intelligence can cover a large number of talent information. In the screening of resumes, artificial intelligence can rely on its calculation function to select resumes that meet the needs of the unit from a large number of job resumes, or to match the recommendations based on job requirements. It can well solve the problem of mismatch between the needs of enterprise talents and the supply of talents in the market. At the same time, artificial intelligence is not limited by time and place. It can conduct structured interviews for different candidates at the same time, or conduct voice interviews through voice robots, which greatly reduce the burden of HR.

Secondly, employee training is an important means to realize the increment of human capital. Employees can better understand the company through training and have a clearer understanding of the company's operation and their own work. However, HR's energy is limited. Many companies do not have a perfect staff training system. Many companies often outsource employee training to professional institutions. Due to the uneven quality of training institutions and the fact that the training institutions do not fully understand the actual situation of the enterprises, the training results are often not good and lack of pertinence. Artificial intelligence can solve this problem well and improve the effectiveness of training. The big data and forecasting function in artificial intelligence can tailor the perfect training system according to the needs of enterprises, and carry out personalized recommendation of training courses. In addition artificial intelligence can simulate the learning scene through AR simulation to improve the learning effect of trainees. What's more, artificial intelligence can also provide personalized learning feedback, greatly improving the efficiency of employee training and ensuring the quality of training.

Thirdly, performance management and compensation issues are two extremely important aspects of human resource management. On the one hand, many enterprises lack a reasonable and effective evaluation system, and there is a misunderstanding of performance evaluation between managers and employees at all levels, resulting in low reliability and validity of performance evaluation. The expert system based on artificial intelligence can acquire knowledge from the user side and establish its own knowledge base and database, so that the performance evaluation indicators are more data-oriented and more closely match the actual situation. In the performance appraisal, artificial intelligence can avoid the randomness of subjective evaluation, and it is more objective and fair, so the assessment results are more accurate and persuasive. On the other hand, the issue of compensation involves the vital interests of all stakeholders in the enterprise. Whether the compensation system formulated by HR is objective and fair, and whether it is scientific and reasonable will affect the performance and job satisfaction of employees. Artificial intelligence based on big data can cover the salary level of a large number of equal positions, fully consider the market industry

salary data, and based on the actual needs of business management, establish a mathematical model to analyze the correlation between salary and position level, so that more scientific and reasonable salary can be set. And under the calculation and comparison of big data, salary standards can achieve real fairness, and fundamentally solve the problem of current equal pay for equal work.

3.3 Promoting the transformation of human resource management

Firstly, artificial intelligence includes several core technologies such as machine learning and natural language processing. Among them, robot technology is an important manifestation of many technologies such as integrated visual processing, auditory processing, data processing, and machine learning and so on. It is also the support of these technologies that enables artificial intelligence to well imitate the working mode of human beings in many scenarios, so that it can replace humans to a certain extent and perform related work more efficiently and with high quality. For example, the administrative work of enterprises, some of which have repetitive and mechanical, artificial intelligence technology can easily learn its internal associations or trends through related technologies, and then realize automatic imitation and carry out the work in place of human beings. Similarly, for many manufacturing companies, workshop management has such characteristics, so it is also a place where artificial intelligence can play a huge role at the present stage. Artificial intelligence shares the work of human beings. In general, it can promote the completion of work in a more efficient and high-quality way, and enable human wisdom to focus more on innovation and creation, as well as thinking and exploration.

Secondly, many human resource managers in enterprises have to spend time dealing with transactional work in response to deal with tedious daily human resource management tasks, ignoring human resource development and human resource strategic management. The application of artificial intelligence can improve the efficiency of the human resource department and free staff from the transactional work, so that managers have more time to think deeply and implement human resource development work. At the same time, the application of artificial intelligence also provides more advanced methods and means for the development of human resource, which is conducive to the accurate development, real-time development and effective development of human resources, so as to fully tap the potential of employees and mobilize the enthusiasm of employees. The company cultivates all kinds of talents needed for development. The effective use of artificial intelligence can promote human resource managers to engage in more effective work.

Thirdly, traditional human resource management always revolves around six modules, and lacks the emphasis on strategic human resource management. The application of artificial intelligence will make the whole enterprise work closely around the strategic goals. Through real-time analysis of data and intelligent command center, the work of human resource management can be closely related to the enterprise strategy. Human resource managers will put more energy into

strategic human resource management, so that human resource management can better serve the business, serve customers and serve the strategy, and can truly implement strategic human resource management.

4. The challenge of artificial intelligence to human resource management

Firstly, the use of artificial intelligence will lead to a large number of employees to be replaced, the organizational structure will be flattened, and artificial intelligence will be used to handle a large number of transactional management tasks, such as data analysis, employee relations, primary recruitment post, compensation, training, etc., making the enterprise managers redundant. The application of artificial intelligence will reduce the number of labor force, and the number of unemployed people will increase year by year. For example, Foxconn's massive use of robots to replace production line workers, as well as unmanned stores and driverless cars, will have a large impact on a large number of low-end jobs. Due to the rapid progress of new technologies such as artificial intelligence, the demand for labor will fluctuate.

Secondly, although artificial intelligence technology has reduced the number of employees of low-end jobs, it also forced companies to pay more for equipment maintenance cost. At the same time, it also puts higher demands on the quantity and quality of artificial intelligence professionals. At present, there is an obvious shortage of professional talents in the field of artificial intelligence, especially the senior talents who master the core technology of artificial intelligence, which will undoubtedly increase the cost for enterprises to maintain artificial intelligence products. Only by properly solving the problem of AI talent shortage can we set a good foundation for its large-scale application. In the future, we should focus on the establishment of artificial intelligence professional personnel training system from the aspects of mechanism and mode.

Thirdly, the deep integration of artificial intelligence technology and management is an inevitable development trend. The wide application of artificial intelligence brings a subversive challenge to human resource management. Traditional human resource management is mainly used as a bridge between enterprises and employees. Now it has begun to integrate with technology such as machine learning, decision analysis, big data, cloud computing, etc., which makes the nature of the work of human resource managers begin to change. The deep integration of artificial intelligence technology and human resource management has become an inevitable development trend. The traditional human resource management model will no longer be applicable. The human resource management model will gradually become strategic, intelligent and digital. Enterprises will eliminate a lot of traditional human resource practitioners. Therefore, the combination of artificial intelligence technology and human resource management is a general trend, and enterprises and human resource managers should have a clear understanding.

Fourthly, artificial intelligence puts new demands on the ability structure of employees. Artificial intelligence excels at the acquisition, recording, retrieval and

processing of information, but it cannot make decisions that balance long-term and short-term interests and involve human emotional experience. For example, in marketing, artificial intelligence can accurately analyze and judge the merits of different marketing cases, but it is difficult to consider the long-term value of the enterprise. Artificial intelligence can assess the job seeker's competency for the position, but cannot evaluate his teamwork or compatibility with corporate culture. In the process of human-computer cooperation, the original ability model of employees will undergo subversive changes. The value judgment, decision-making ability, and innovation ability of employees will become more and more important. "Doing the right thing" will be more important than "doing things right".

5. Conclusion

The era of artificial intelligence has arrived, and human-machine cooperation has become a new mode of production. The machine is good at rational recording and analysis. While human beings are good at social interaction and innovation. The mutual complementation of the two will create more value. The wide application of artificial intelligence brings not only opportunities but also challenges to the practice of human resource management. Therefore, human resource managers should combine human resources with science and technology, use artificial intelligence to improve management efficiency and decision-making quality, and make corresponding strategic planning.

At first, reposition human resource management and staff and staff competency requirements. Artificial intelligence expands the connotation and extension of employees. Both humans and machines will become employees of the enterprise. The division of labor between human and machine will also become an important human resource management work. Artificial intelligence frees human employees from low-end repetitive positions, but it also imposes higher requirements on human employees' collaborative capabilities (including human-computer cooperation), empathy, decision-making, and creativity. Enterprises need not only technical talents, but also talents who can use relevant technologies and are outstanding in leadership, communication and management skills. Human resource managers should do more judgmental work.

Second, change the thinking and develop a new human resource plan. In the future, when developing a human resource plan, enterprises need to reorganize their structural changes and capacity models based on new employee capabilities and values. Under the premise of man-machine cooperation, a brand new working mode and process should be designed to promote the reform of enterprise human resource management. Moreover, enterprises should make full use of artificial intelligence, learn from outstanding benchmark enterprises, and enable the overall workforce to adapt to the latest needs of the new era.

Third, with an open mind, actively embrace artificial intelligence, and try to dissolve the "Lude consciousness" of employees. "Lude consciousness" comes from the social movement of British workers against textile industrialization in the 19th

century. It refers to the opposition to industrialization, automation, digitization or all subversive technology. Nowadays, there are many people who are worried about whether artificial intelligence will become "the biggest threat to mankind" as Stephen Hawking said. And these people take an attitude against or even hostile to artificial intelligence. In a word, Enterprises should take the initiative to track and study the development trend of artificial intelligence, dissolve hostility through human-machine contact and human-computer interaction, and we must learn to properly control artificial intelligence and dance with artificial intelligence.

Artificial intelligence technology is another important technological breakthrough after the Internet, big data and cloud computing technologies. It has an important impact on the future development of human society. As HR, you don't have to worry too much about the impact and change brought by artificial intelligence. Instead, you should proceed ahead of artificial intelligence, strive to be free from transactional work, and make full use of the opportunity of artificial intelligence technology development, and strive to explore the effective combination of human resource management and artificial intelligence, and embrace the arrival of harmonious and beautiful man-machine coexistence era with a positive and optimistic attitude.

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