

THE ROLE OF AI IN MODERN HR

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Abstract: Artificial intelligence can help in the human resources sector by automating a large part of the repetitive processes in business organizations. Basically, artificial intelligence can contribute to better efficiency and effectiveness in terms of the organization of daily work, in terms of monitoring employee payments, in terms of their efficiency and effectiveness and the volume of work performed. Artificial intelligence has the ability to help in the quantitative part of monitoring employees, while other aspects of monitoring still need to be performed by specialized persons. Artificial intelligence can help in creating certain tasks for employees and structured plans that can help in terms of creating a better working atmosphere and more realistic goals in companies. Companies can use artificial intelligence to create conditions for generating quantitative data about employees that can later be used to evaluate them as individuals, but also as groups. It is essential to analyze employee performance both individually and at a group level to assess how they perform their work and how they contribute to the company's goals. Artificial intelligence can also generate certain knowledge tests that specialized companies in a certain field can use to check the knowledge of employees regarding the work they perform. What is essential in the use of artificial intelligence is the ability to create certain models that can serve as a benchmark for the desired efficiency and effectiveness of employees. The predictive aspect of artificial intelligence is very important, because companies can use it to model the work of the entire organization, including the human factor in the work environment. The use of artificial intelligence in relation to human resource management mainly refers to quantitative data about employees, but it can also be used to create models of organizational behavior. These models can be used to create a better working atmosphere and to use artificial intelligence to generate behavioral plans in companies. In this way, all the advantages of artificial intelligence can be used and not limit its use only to quantitative and repetitive factors. The patterns used by artificial intelligence depend on the data it has regarding employees, which is why the task of human resources employees would also be to input information about employees into the artificial intelligence system that is used. It must be noted that this is a reflective process that can be used to analyze employee performance, but also to make plans for what strategies and tactics HR managers should use to achieve the desired results. It is essential to understand that artificial intelligence can be used to extract context from data, which is a much more significant aspect than performing repetitive tasks that companies can leave to the AI system. It is necessary to create good synergy and use these two aspects to multiply the impact on human resources in the company and create conditions for more efficient and effective work. Companies must direct their technological resources towards achieving goals aimed at human resources, but also towards creating models for creating a better working atmosphere and better working conditions. At the end of this process, this will mean more motivated and loyal employees, as well as better efficiency and effectiveness of the company.

Keywords: artificial intelligence, human resources, management

1. INTRODUCTION

Artificial intelligence has led to a number of changes in the behavior of companies, but also their customers. Therefore, companies have decided to implement it in all sectors of their operations, of which the human resources sector is a part. This sector, which is often misunderstood by non-academic observers, has its own functions that are essential for the achievement of company goals, which is why efforts must be made to research ways to implement artificial intelligence within this sector. A large number of companies have decided to reassign the repetitive tasks of the human resources sector, which are dedicated to repetitive tasks such as monitoring employee performance, employee selection, evaluation of employee characteristics, determining compensation for work completed, etc.

However, what human teams in human resources departments can do better is to devote themselves to establishing quality interpersonal relationships in work teams and resolving potential conflict situations. By using artificial intelligence for repetitive tasks in daily work, it is possible for human resources teams in companies to focus on the real tasks that can help them create a better, more efficient and effective work environment. This is also the goal of the human resources sector, creating an improved work environment that in the near future could create better working conditions and improve the company's performance.

It is crucial to investigate in this paper in which domains artificial intelligence has been implemented in companies so far, and in which it has not, which are the repetitive tasks that artificial intelligence could best respond to, how it will help in the impartiality of the selection of human resources in companies, etc. This paper will try to do this through an analysis of the available literature in the field that will help us analyze the situation in the industry. We

will focus on four areas: candidate selection, compensation decisions, work organization and employee performance analysis.

2. MATERIAL AND METHODS

This paper will use the most modern materials in the field and qualitative methods of literature analysis will be used. The impacts of artificial intelligence on modern human resource management and its aspects that will be considered will be examined.

3. RESULTS

As we mentioned in the introduction to this paper, we will analyze four key domains in which the use of artificial intelligence in human resource management dominates. First, we will start with the domain of candidate selection. This domain can be said to be the most prominent in terms of digital transformation compared to other domains of human resource management. The process of digitalization of this sector began in the mid-1990s and achieved significant results in terms of finding ways to reduce costs for companies. However, this contributed to the growth of the number of applications, which made the candidate selection process much more complex. This has created a need to utilize technological solutions in order to reduce this gap and simplify the decision-making process.

According to experts, the use of technology in the recruitment process has helped reduce the costs allocated to the selection process, but has contributed to a larger number of applications and the need to change the system for deciding which candidates are suitable for the job positions. And this is where artificial intelligence has filled this gap. With the enormous computing power that artificial intelligence has, it has been possible to simplify this process and establish parameters that the systems recognize in an automated manner, generating efficient and effective strategies for selecting the right candidates for the positions.

Next, we will explore the implementation of artificial intelligence in terms of determining the compensation system of companies. A large number of companies have problems with developing compensation systems that will allow them to have a constant presence of high-quality employees who can help the companies achieve their goals. This can also help companies at a strategic level, as they can generate a system where they would reward employee behaviors that are complementary to their goals.

But they would also punish employee behaviors that are not complementary to their goals. Companies can develop multiple compensation systems that have different characteristics. The first system is a fixed payment system, calculated per hour or day, but they can also have a liberal payment that refers to a fixed part and a part that refers to a certain incentive if they are performed.

What companies must do in more liberal systems where there are bonuses for achieving goals and exceeding them, and in order to achieve real pay, is to make the system foolproof. They must establish a reward system that depends entirely on employee performance, and not on other interpersonal factors. Therefore, artificial intelligence systems can make this process more efficient and effective for companies.

First, through the availability of a large amount of information not only about the company and its competitors, but also on a global level, they can analyze which model would be best based on the industry in which the company operates, its goals, its financial situation, but also the profile of the employees. Then, artificial intelligence systems can make these processes correctly implemented through their complete automation, which also includes the calculation of salaries and benefits. A large number of companies are already doing this around the world. The goal is to provide a transparent system that is under the supervision of the company's employees and that allows the implementation of the process of calculating and paying compensation to the company's employees.

One of the oldest examples of using quantitative models to utilize computing power for the business processes of companies is the work allocation process. As early as the 1950s, quantitative methods were used in order to determine the most efficient and effective ways to allocate work when working on capital projects. According to researchers, there are two aspects that are most significant in terms of determining the distribution of work. The first aspect is which business functions are most vital in terms of their effect on the time required to complete a particular project or order, and the other aspect is what is the best way to optimize the work so that we can ensure that the work would be completed on the scheduled date and with minimal cost.

Artificial intelligence systems in this sector analyze the quantitative results that exist for projects, orders and other plans of companies, make a quantitative analysis of the company's resources and when they compare the results, they manage to make comprehensive work plans.

The last field where artificial intelligence is used is the field of employee performance analysis. For artificial intelligence systems, with all the internal information they receive from companies, it is very easy to make a comparative analysis of the performance of individual employees, but also of work teams and compare them with the goals set for individual employees, but also teams.

4. DISCUSSION

In order for the human resources sector to fully explore the risks and opportunities offered by artificial intelligence systems, it is necessary to consider the position that numerical data is always the most relevant data. As we know when it comes to interpersonal problems and ways to resolve conflict situations. One of the most important topics in the process of managing human resources in companies is certainly the process of resolving employee dissatisfaction.

In every company, certain employees may be dissatisfied with certain aspects of the company's operations or the company's attitude towards them. In this domain, it is a huge risk to give the task of finding a solution to artificial intelligence, because in this domain there is no quantitatively acceptable solution.

Here, a solution can only be found by members of the company's human resources team who can talk to these people, identify their problems and challenges, identify the source of dissatisfaction and try to solve the problems related to it. This is exactly how much better results can be achieved and significant advantages can be gained compared to the quantitative approach.

5. CONCLUSION

Artificial intelligence in the domain of human resources refers to the implementation of artificial intelligence technologies on the processes of the human resources sector in companies. This process involves designing and using algorithms, processes related to machine learning and intelligent systems that are intended to replace certain repetitive tasks in companies, as well as gaining deeper knowledge about human resources in companies. These technologies are designed to improve the efficiency and effectiveness of human resources in companies, but also the human resources experience in companies by reducing conflict situations in companies and enabling professionals in this field to focus on interpersonal relationships in companies.

Today's leaders in the human resources sector in companies are faced with several challenges. The first challenge is to overcome the shortage of labor in the world, and the second is to use the technology to overcome the challenges of the labor and consumer markets.

REFERENCES

- Ara, A. (2025). Human Resource Management in the Age of Generative AI. IGI Global
- Denisi, A. S., & Griffin, R. W. (2020). HR: human resources (5th ed.). Boston, Ma Cengage
- Edwards, M. R., & Edwards, K. (2019). Predictive HR analytics: mastering the HR metric. Kogan Page Ltd
- Holbeche, L. (2010). HR Leadership. Butterworth-Heinemann
- Kearns, P. (2015). HR strategy creating business strategy with human capital. Routledge
- Mer, A. (2023). Artificial Intelligence in Human Resource Management: Recent Trends and Research Agenda. In: Grima, S., et al. (Ed.). Digital Transformation, Strategic Resilience, Cyber Security and Risk Management. Contemporary Studies in Economic and Financial Analysis Vol. 111B. <https://doi.org/10.1108/S1569-37592023000111B003>
- Pandey, A., Balusamy, B., & Chilamkurti, N. (2023). Disruptive Artificial Intelligence and Sustainable Human Resource Management. CRC Press
- Rafiq, M., Farrukh, M., Mushtaq, R., & Dastane, O. (2023). Exploring the Intersection of AI and Human Resources Management. IGI Global
- Stewart, G. L., & Brown, K. G. (2019). Human resource management: Linking strategy to practice (4th ed.). John Wiley & Sons, Inc
- Tyagi, P., Chilamkurti, N., Grima, S., Sood, K., & Balusamy, B. (2023). The Adoption and Effect of Artificial Intelligence on Human Resources Management. Emerald Group Publishing