

*S. Davydovych, Senior Lecturer
N. Voznichenko, Bachelor Student
Zhytomyr Polytechnic State University*

THE IMPACT OF ARTIFICIAL INTELLIGENCE ON HR MANAGEMENT: AUTOMATION AND ANALYTICS OF THE FUTURE

In the modern world, personnel management is undergoing significant changes due to the rapid development of artificial intelligence. Process automation, big data analysis, and machine learning open up new opportunities to improve the efficiency of HR departments. The introduction of such technologies allows to optimize recruitment, reduce recruitment costs and improve the quality of decision-making. This article analyzes the impact of artificial intelligence on HR management, considering its potential benefits and challenges for companies.

The involvement of artificial intelligence begins at the stage of searching for candidates, in particular, with the creation of a structured request for a candidate and the search for the most relevant sources of vacancy distribution. Due to this, while maintaining the basic requirements and a set of qualities that are necessary for the enterprise, the recruiter can quickly and efficiently create a request that, with its clarity and ease, will allow only candidates who meet the requirements of the enterprise, which will subsequently facilitate the next stage of selection, directly from potential candidates to the list of the best of them.

At the next stage, when the HR manager receives potential candidates using their CV, it can attract AI to reduce the circle to those that the most meet the requirements, it can be software or hard skills, language proficiency, and level of proficiency in a particular language, previous jobs, individuals, education and any other specifications in general. AI reduces recruiter workload by filtering candidates early, cutting hiring time and costs [1].

It gives the recruiter more time for the next stage, when a small number of candidates must correspond to what the employer is looking for. For large companies that have a lot of employees and are also growing, increasing their staff and reducing the cost of finding these employees allows you to use the savings to develop their employees or new employees better and reduce your costs in general [2].

At the stage when the recruiter has a limited range of the most relevant candidates, he can consider them on his own, exploring aspects important to the company, but those that artificial intelligence cannot determine, in particular personal qualities, behavior, life views, or anything else that requires the human mind, this is important because modern companies are trying to create an ecosystem within themselves. Involvement of each employee not just as an executor of tasks, but as a participant in the life of the company, a member of corporate culture, where every person matters. However, if the recruiter cannot decide, he can use artificial intelligence as a third party without prejudice, comparing in great detail [3].

The use of AI in the early stages of a new employee's work is an important element of modern HR management. A 2024 study in the Journal of Applied Psychology showed that AI significantly reduces adaptation time. Automated training systems and chatbots help new employees quickly learn corporate rules and procedures, aiding faster integration. AI also enables personalized adaptation plans based on an employee's experience and skills, improving the focus of training [4].

In the HR management process, the use of artificial intelligence for analytics can significantly improve decision-making and personnel management. AI makes it possible to

process large amounts of employee data, allowing you to get deeper and more accurate insights about work efficiency, motivation, and potential risks.

In particular, data analysis using AI makes predicting the probability of staff turnover possible. Machine learning algorithms can detect patterns in employee behavior, such as analyzing their activity, level of job satisfaction, social interaction, and other factors. This allows HR professionals to identify risks in time, for example, for employees who may be planning a layoff or experiencing professional burnout.

Another aspect of using AI is evaluating the performance of workers. Instead of traditional assessment methods, which are often subjective, AI algorithms use data from different sources (results of completed projects, feedback from colleagues, and engagement metrics). This allows you to get an objective picture of performance and make more informed decisions about career development or compensation. AI also helps in analyzing the educational and developmental needs of employees. And also It allows you to create personalized development plans that consider employees' strengths and weaknesses. Thanks to this, HR managers can more accurately and effectively organize training and advanced training of employees [5].

Thus, using AI-based analytics in HR management opens up new opportunities for improving personnel management and productivity and reducing risks such as staff turnover and employee burnout.

REFERENCES

1. Pwc. Implementing AI and data analytics across the talent lifecycle [Электронный ресурс] / pwc, 2023. – URL: <https://workforce.pwc.com/blog/implementing-ai-and-data-analytics-across-the-talent-lifecycle>
2. Accenture. Solutions.AI for Talent & Skilling [Электронный ресурс] / Accenture, 2023. – URL: <https://www.accenture.com/us-en/services/applied-intelligence/solutions-ai-talent-skilling>
3. Deloitte. AI-Powered Employee Experience: How Organisations Can Unlock Value [Электронный ресурс] / Deloitte, 2024. – URL: <https://www.deloitte.com/uk/en/services/consulting/blogs/2024/ai-powered-employee-experience.html>
4. Fraga-Lamas P., Lopes S. I., Fernández-Caramés T. M. Green iot and edge AI as key technological enablers for a sustainable digital transition towards a smart circular economy: An industry 5.0 use case / P. Fraga-Lamas, S. I. Lopes, T. M. Fernández-Caramés // *Sensors*, 2021. – Vol. 21(17). – P. 5745. – DOI: 10.3390/s21175745.
5. Ghavami P. Big data analytics methods: analytics techniques in strategic management / P. Ghavami. – *Springer*, 2019. – 187 p.