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TRANSFORMATION OF PERFORMANCE MANAGEMENT WITH ARTIFICIAL INTELLIGENCE: POTENTIALS AND CHALLENGES

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ABSTRACT

Artificial Intelligence (AI) has emerged as an innovative tool in performance management and employee development, offering significant benefits for companies. AI's ability to analyze large volumes of performance data provides an objective and continuous view of employee behavior, interactions, and outcomes, generating personalized insights to support human resource management decisions. This eliminates the reliance on subjective and infrequent evaluations, favoring a more accurate and dynamic approach. Moreover, AI facilitates the personalization of employee development by adjusting training plans according to individual needs, accelerating the learning process. As a result, companies are better prepared for the challenges of the labor market. AI is also crucial in eliminating biases in performance evaluations, ensuring that decisions are based on concrete data. However, AI implementation must be carefully planned, with transparency and human oversight, to avoid potential algorithmic failures. Studies such as those by Tong et al. (2021) and Rožman et al. (2022, 2023) demonstrate that when applied correctly, AI can enhance productivity, engagement, and organizational performance. The strategic integration of AI can transform management practices, strengthening the company's competitiveness and fostering a more efficient and fair work environment.

Keywords: Artificial Intelligence. Performance Management. Employee Development. Training Personalization. Evaluation Biases.

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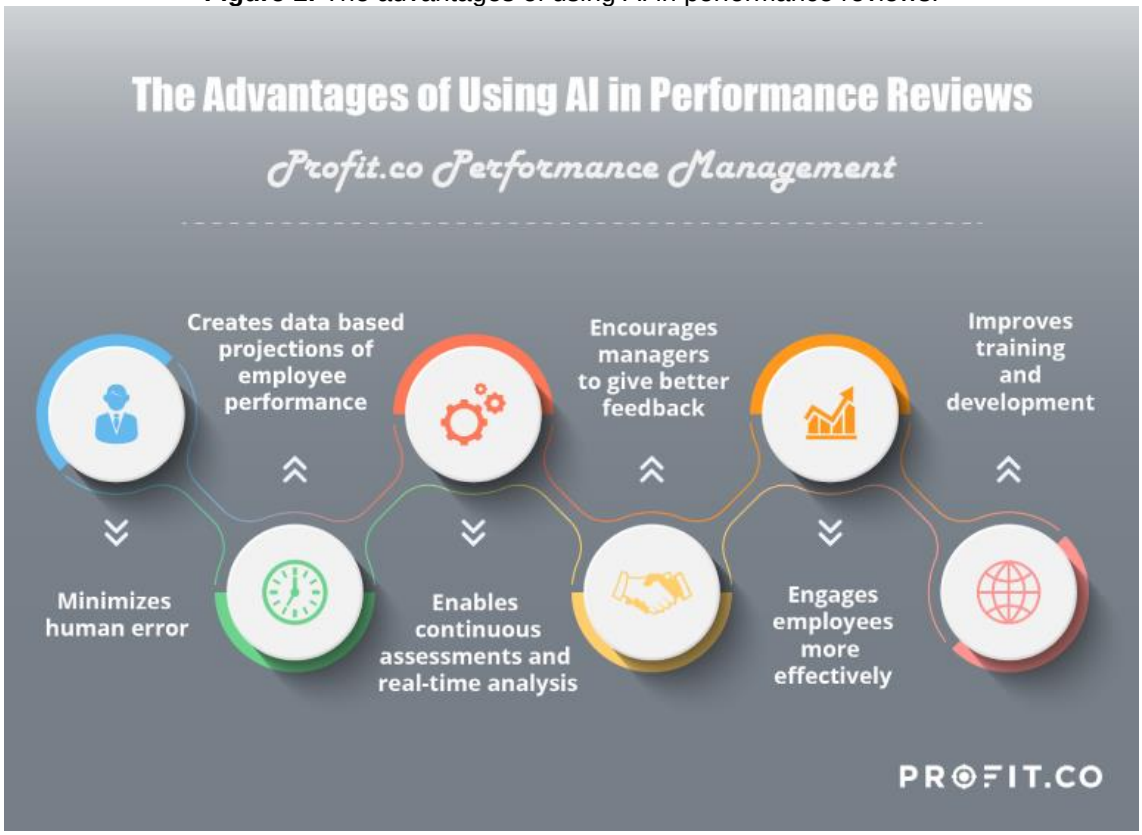
INTRODUCTION

Artificial Intelligence (AI) has become a powerful tool in performance management and employee development, bringing significant innovations that help companies maximize the potential of their teams. By applying machine learning algorithms, AI can analyze large volumes of performance data, providing accurate and personalized insights to support human resource management decisions. One of the main advantages of AI in performance management is its ability to continuously monitor and evaluate employee performance in an objective manner. Instead of relying on annual or semi-annual evaluations made by managers, AI can analyze employees' behavior, interactions, and results in real time, generating concrete data on productivity and engagement. This allows for a more precise and detailed view of individual performance, identifying areas for improvement and recognizing significant achievements.

Figure 1: The advantages of using AI in performance reviews.



Source: Profit.co.

Furthermore, AI can be used to personalize employee development by offering training and skill enhancement suggestions based on competencies that need to be

developed. Through adaptive learning systems, AI can create individualized development plans tailored to each employee's needs and learning pace, optimizing the training process. This accelerates employees' professional development and also prepares companies for future demands and changes in the job market. Another important aspect is the use of AI to eliminate biases in the performance evaluation process. Many traditional systems are influenced by subjective and biased evaluations stemming from factors such as personal relationships and unconscious perceptions. AI, designed to analyze data in an objective and impartial way, can help ensure that performance evaluations are based solely on real work metrics and not personal judgments.

However, while AI offers several advantages, its implementation must be carried out with care, ensuring that algorithms are transparent and monitored to avoid potential algorithmic biases. The combination of AI data analysis with human oversight is crucial for balanced and fair performance management. AI can provide powerful tools, but human judgment remains essential to ensure that the employee development process is ethical, fair, and aligned with organizational values. In summary, AI has the potential to transform performance management and employee development, creating a more efficient and dynamic work environment aligned with organizational goals. By incorporating these technologies responsibly, companies can foster the continuous growth of their teams, improve employee satisfaction and engagement, and consequently achieve better results in the competitive market.

Several recent studies investigate the impact of AI on performance management practices. For example, the study by Tong et al. (2021) explores how companies have used AI to provide feedback on employee performance, track their behavior at work, automate performance evaluations, and recommend improvements. The research reveals two distinct effects of AI application: the "deployment effect," where AI data analysis improves the quality of feedback and may increase employee productivity, and the "disclosure effect," where negative perceptions of employees regarding the use of AI in feedback may harm productivity. The study suggests that to mitigate the negative impacts of disclosure, companies should be more proactive in communicating the objectives, benefits, and scope of AI applications, recommending a differentiated approach to using AI for veteran employees and human managers for new ones.

Another important study by Rožman, Oreški, and Tominc (2022) aims to develop a multidimensional talent management model that integrates AI into human resource processes to increase employee engagement and organizational performance. The research, conducted with 317 managers and business owners in Slovenia, highlights various aspects of AI implementation in talent management, including recruitment and retention, training and development, organizational culture, leadership, workload reduction, and overall employee engagement. The results indicate that AI-supported processes in areas such as recruitment and retention, training and development, team formation, organizational culture, and leadership positively influence both company performance and employee engagement. These findings provide valuable insights for managers and business owners, offering a roadmap for successfully integrating AI into business practices and improving engagement, as well as strengthening the company's competitive advantage.

In the same vein, the study by Rožman, Oreški, and Tominc (2023) proposes an AI-supported multidimensional model to reduce employees' workload and enhance company performance in the VUCA (volatile, uncertain, complex, and ambiguous) environment. The research reveals that an organizational culture and leadership supported by AI, along with employee training and development, positively influence employees' perceptions of workload reduction, which, in turn, impacts employee engagement and company performance.

Furthermore, the study by Madhumita et al. (2024) analyzes the integration of AI into performance management practices as a transformative strategy to enhance employee success and drive organizational growth. The research highlights how AI technologies can optimize performance management processes by addressing common challenges in traditional systems, such as subjectivity, sporadic feedback, and reliance on past data. AI enables continuous monitoring, predictive analytics, and personalized recommendations, providing a deeper insight into employees' strengths, weaknesses, and development opportunities. This allows organizations to improve engagement, motivation, talent retention, and the attraction of new employees.

Finally, the study by Chin, Mohamad, and Lo (2024) investigates the relationship between AI integration, organizational digital culture, human resource management practices, and sustainable employee performance in luxury hotels in Malaysia. The research shows that AI adoption had a positive impact on sustainable employee

performance, highlighting its potential to increase productivity and job satisfaction. Although AI did not significantly influence organizational digital culture, the research suggests that digital fluency plays an important role in boosting workforce productivity. The findings provide an important foundation for future research, indicating that AI can be applied differently depending on the organizational context and sector.

In conclusion, the integration of Artificial Intelligence into performance management and employee development presents a transformative opportunity for organizations to enhance productivity, engagement, and overall business outcomes. AI's ability to analyze large data sets, offer personalized insights, and monitor performance in real time ensures a more objective, efficient, and effective management approach. By leveraging AI to tailor employee development plans and eliminate biases in performance evaluations, companies can foster a culture of continuous improvement while optimizing their workforce's potential.

However, to fully realize these benefits, organizations must approach AI implementation with caution, ensuring transparency and human oversight to prevent algorithmic biases. As the research highlights, a responsible integration of AI, supported by clear communication and strategic planning, can drive not only employee success but also contribute to long-term organizational growth and a competitive edge in the market. The combination of AI technologies with human judgment creates a balanced and ethical environment that aligns with organizational values, ensuring sustainable and equitable outcomes for both employees and businesses.

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