



EDITORIAL

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Artificial intelligence: Effective HR assistant or invisible dictator?

Industrial revolutions have continuously shaped the labour market and affected the lives of millions of people. The first shaping factor was the mechanisation and the use of steam engines, the second was electrification and mass production, the third influence was recognised by automation and computerisation. Each industrial revolution affected workers, but the introduction of AI is unique in terms that it is changing the very nature of work. For the first time in human history, it can replace not only routine manual tasks, but also activities that require analytical thinking, decision-making and creativity. Intelligent algorithms can already diagnose health problems, draft legal documents, compose music, create visual art, or program. With the ability to process vast amounts of data in a short time, AI can reduce the need for traditional professions such as finance, law, medicine and journalism (Piotrowski & Orzeszko, 2023; Balcerzak & Valaskova, 2024).

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In the past, each industrial revolution not only resulted in the disappearance of certain professions, but also the emergence of entirely new ones that previous generations could not even imagine. Similarly, today we are witnessing a growing in demand for new professions such as AI specialists, AI ethicists, digital designers and cybersecurity experts. However, the question remains whether these new jobs can fully compensate for the decline of traditional occupations, as they often require specific skills and high levels of digital literacy (Cramarenco *et al.*, 2023). In addition, the pace of technological change may outstrip the adaptability of the workforce, leading to imbalances in the labour market and widening social inequalities.

While artificial intelligence has the potential to fundamentally change the labour market, it also offers numerous opportunities (Lazaroiu & Rogalska, 2023; Dabija & Vătămănescu, 2023). When implemented correctly, it can increase efficiency, relieve people from monotonous and routine tasks and allowing them to focus on creative, strategic and innovative activities (Lazaroiu *et al.*, 2024; Kliestik *et al.*, 2024). AI can thus foster the development of new skills, improve job satisfaction and open doors to careers that would otherwise be impossible. Society will need to find ways to manage the transition to the use of AI in a way that benefits everyone. This will require investment in education, new employment models, and the ethical management of AI to make the future an opportunity rather than a threat (Moravec *et al.*, 2024; Bui & Duong, 2024).

There are two main options AI can be implemented in the workplace. The first involves companies using AI to recruit employees, track their performance and predict turnover. AI helps companies select candidates more efficiently, optimise work processes and identify factors that can lead to employee turnover. The second option of AI implementation, much less explored, focuses on the employees who apply for job vacancies, work and their performance will be monitored by AI. This raises challenges related to transparency, the fairness of assessments, and the impact of algorithmic monitoring on an individual's well-being at work and motivation. AI is therefore changing the labour market not only from an employer's perspective, but also from a worker's perspective, with the balance between the efficiency of the technology and the protection of human rights remaining a crucial factor.

Recruiting and selecting the right candidates is inextricably linked to the survival and prosperity of any organisation (Rigotti & Fosch-Villaronga,

2024; Szostek *et al.*, 2022a; 2022b; 2023; 2024). The introduction of AI into recruitment is just one example of how this technology is transforming the labour market. Recruitment had been a demanding process has historically – requiring manual screening of CVs, lengthy interviews and subjective decision-making. AI is revolutionising these tasks too.

Albert (2019) examines the current use of artificial intelligence (AI) in candidate recruitment and selection. Specifically, the study investigates the level, scope, and potential areas where AI tools are being integrated into the recruitment process. Albassam (2023) provides a detailed analytical overview of AI-driven recruitment strategies, referencing both academic research and industry reports. The paper critically evaluates the advantages and disadvantages of using AI in recruitment, as well as the effectiveness of various AI-based recruitment techniques. The findings suggest that AI tools such as CV screening, candidate matching, video interviews, chatbots, predictive analytics, gamification, virtual reality assessments, and social media screening offer substantial benefits to organizations, including enhanced efficiency, cost reduction, and the recruitment of higher-quality employees.

Applicant Tracking Systems (ATS) are software solutions designed to automate and manage the recruitment process. These systems help organisations sort, filter and evaluate candidate resumes based on predefined criteria. Advanced ATS systems are integrated with AI and use machine learning to predict candidate suitability based on qualifications, work experience and relevant keywords to automatically identify the most suitable candidates.

One of the most effective tools in recruitment are AI-powered chatbots. These AI assistants can automate and speed up the first stages of the recruitment process, reducing the workload of HR departments and providing candidates with quicker responses. Chatbots use natural language processing (NLP) to interact with candidates through text or voice conversations. Their main role is to answer frequently asked questions. Candidates often have the same questions about the job, benefits, working hours or the selection process. A chatbot can provide instant answers, saving recruiters time and improving the candidate experience. During the communication, the chatbot gathers basic information about the candidate (experience, education, availability) and can automatically feed this data into recruitment systems. Based on the responses, the chatbot can assess whether the candidate meets the basic requirements for the job and either recommend

them for the next step or politely decline them. Advanced chatbots can simulate the first round of an interview by asking pre-defined questions and analysing the answers. Some even use sentiment analysis to assess tone of voice and mannerisms.

AI can assess not only experience and qualifications, but also language, facial expressions or emotional stability through video analysis of interviews. Emotion recognition systems (affective AI), which are increasingly used not only in the recruitment process but also in the workplace, aim to detect a person's internal states. Stark and Hoey (2021) raise critical questions how emotions are conceptualised, perceived, measured and transformed into data shape the ethical and social implications of these AI systems. The article by Häuselmann *et al.* (2023) highlights the legal implications and challenges associated with the processing of emotion data in the EU legal framework. Despite the sensitive nature of emotion data, it is not classified as special data in the GDPR, resulting in a lack of comprehensive protection.

The findings indicate that leveraging technologies like applicant tracking systems (ATS), artificial intelligence (AI), and digital platforms can enhance candidate reach, streamline the hiring process, lower costs, and improve both the accuracy of candidate selection and the overall candidate experience (Susanto & Hamzali, 2024). While artificial intelligence significantly streamlines the recruitment process, there are some positions for which it cannot be used as the sole decision-making tool. Although AI can help analyse candidate data — comparing their experience, performance or management skills — it cannot fully assess the factors that make a successful leader, for example, who must not only have analytical and strategic skills, but also be able to inspire employees, handle crisis situations and create a corporate culture. These qualities are often based on intuition, charisma and interpersonal skills, aspects that artificial intelligence cannot yet reliably assess. Hiring to leadership positions must involve multiple evaluation stages. The aim is not only to assess a candidate's abilities based on past performance, but also to predict how they will behave in unexpected situations and how they will influence those around them.

Human involvement remains essential, with recruiters responsible for using and overseeing the technology to ensure it operates within set parameters, with the recruitment and selection process facilitated by machines (Raisch & Krakowski, 2021).

AI is transforming the labour market by optimising recruitment, tracking employee performance and predicting employee turnover. It brings efficiency and accuracy to organisations, but also raises questions about transparency, bias and human impact. While AI is revolutionising HR, its use is not without risk. Key challenges include the transparency of decision-making algorithms, fairness and issues of bias in AI. AI can help remove some human biases by evaluating candidates based on objective criteria, such as qualifications and experience. On the one hand, AI removes human bias and subjectivity, thereby increasing the fairness of decision-making. On the other hand, it can unintentionally reproduce discriminatory patterns if it learns from historical data that contained biases.

Perhaps, one of the most well-known cases is that of Amazon (Dastin, 2022), which in 2014 implemented an AI-based automated recruitment system designed to speed up the selection of candidates. However, it was subsequently discovered that the algorithm exhibited gender bias due to its training on historical data reflecting the predominance of men in technical positions, resulting in discrimination against women. In an attempt to mitigate these issues, Amazon decided to modify the algorithm to ignore gender-specific terms. However, it was found to be impossible to guarantee that the bias would not manifest in other ways. Consequently, the company decided to abandon the system in 2018, ceasing to utilise it for recruitment purposes. This incident serves as a cautionary example, underscoring the potential risks of bias in AI and emphasising the necessity for human oversight when implementing automated recruitment systems.

The study by Njoto *et al.* (2022) examines the extent to which the introduction of automation in recruitment processes can lead to gender bias. The authors point out that when recruitment algorithms are trained on biased data sets from the past, i.e. historical biases regarding recruitment creep into the system, which affects how selection process will work in the future. This phenomenon is a consequence of the general principle that the quality of AI depends on the quality and impartiality of the training data.

While rapid advancement of artificial intelligence (AI) recruitment tools promises to transform the workplace, these algorithms risk reinforcing existing biases against marginalised groups. Considering these ethical concerns, AI vendors have struggled to translate normative concepts such as fairness into measurable, mathematical criteria for which they can optimize.

However, the use of AI in recruitment raises ethical and legal concerns, including the potential for algorithmic bias and discrimination, according to Albassama (2023). An article by Mujtaba Mahapatra (2019) presents an overview of the recruitment process and the implications of bias are also addressed. The authors state that bias mitigation in recruitment tools will need to be applied to each step of the recruitment process depending on the model used.

AI is only as objective as the data it is trained on. If the input data is biased, the algorithm will pick up these biases and may discriminate against certain groups of candidates. It is necessary to ensure that historical inequalities are not reflected in AI models.

Another main concern with the use of AI in recruitment is the lack of transparency. Many models operate as 'black boxes', meaning that their decision-making processes are not easily understood even by their developers. When AI recommends or discards a candidate, employers may not know the reasons behind. There is a risk that AI may unfairly favour or eliminate candidates based on factors that are not relevant to job performance. Without sufficient transparency, candidates are not provided an explanation why they have been rejected and cannot learn from the experience.

Fairness has become a key issue in AI recruitment discussions due to the potential reproduction of bias and discrimination that can disproportionately affect certain vulnerable groups. Conceptualizing fairness is critical, because it can provide a clear criterion for evaluating and mitigating bias and ensuring that AI systems do not perpetuate existing inequalities but instead promote fair opportunities for all candidates in the job market (Rigotti & Fosch-Villaronga, 2024). The authors provide a comprehensive overview of approaches to defining fairness of AI applications in the recruitment and selection process. Defining the notion of fairness of AI applications is a multifaceted challenge that involves broader and sometimes competing considerations from ethical, legal, and technical perspectives.

The ethics of Artificial Intelligence (AI) is a highly debated topic. There are a number of initiatives that aim to develop principles and guidelines to ensure that the development, deployment and use of AI are ethically acceptable (Stahl *et al.*, 2022).

A review article by Gupta *et al.* (2024) explores the potential impact of ethical concerns related to AI usage. Huang *et al.* (2022) provide a comprehensive analysis of the ethical risks and challenges posed by AI, along with

an overview of ethical guidelines and principles established by various organizations. They also discuss approaches to addressing these ethical concerns and methods for evaluating AI ethics. Wu *et al.* (2020) outline techniques with significant potential to support effective AI management in alignment with ethical principles. The authors collectively conclude that the rapid advancement and deployment of AI signal a fundamental transformation of society. While this transformation presents an opportunity to foster a global community with a shared future and promote sustainable development both socially and environmentally insufficient governance and regulation could lead to unforeseen and potentially harmful consequences.

Although AI can process vast amounts of data and support decision-making, it often lacks the contextual understanding and ethical sensitivity that are essential for recruiting and managing people. This is where the concept of Human-Centered AI (HCAI) comes into play — that is, artificial intelligence designed to complement human capabilities instead of replacing them.

Human-Centred AI (HCAI) prioritizes ethics, transparency, and collaboration between artificial intelligence and humans. Its primary goal is to enhance human capabilities and support decision-making rather than replace human involvement. HCAI aims to shift the focus of AI development from purely technological advancements to a more human-centric approach (Bingley *et al.*, 2023).

Shneiderman (2020) focuses on bridging the gap between widely discussed ethical principles of Human-Centred AI (HCAI) and practical steps for effectively managing such systems. The author proposes a framework that integrates AI algorithms with a human-centred approach to develop reliable, safe, and trustworthy AI systems. This framework highlights the importance of design principles that enhance human control and accountability, thereby mitigating risks associated with autonomous systems. The paper provides well-defined guidelines for creating HCAI systems, emphasizing transparency, explainability, security, and accountability. Transparency ensures that AI operations are understandable to users, while explainability guarantees that AI decisions remain interpretable and accessible. Security is crucial for designing AI systems capable of withstanding errors and cyber threats, and accountability establishes clear mechanisms for monitoring and responsibility in AI system operations.

These guidelines seek to foster AI technologies that are not only technically advanced, but also ethically and socially responsible. The European Union outlines seven key requirements for trustworthy AI, including transparency, accountability, and the promotion of social and environmental well-being (European Commission, 2019). Similarly, Australia's AI ethical framework emphasizes principles such as fairness, human-centred values, and accountability (Australian Government, 2021). Meanwhile, China's "Beijing AI Principles" highlight the importance of ethical AI development through principles of doing good, responsibility, and inclusivity (Zhang *et al.*, 2021).

Mittelstadt (2019) criticized AI ethics for consisting of vague principles and high-level value statements that lack the detail and precision needed to formulate concrete recommendations to improve practice. Therefore, it is unclear whether HCAI is reflected in principle in the practices of AI development.

An article by Akram (2023) discusses the integration of Human-Centred Artificial Intelligence (HCAI) principles into recruitment processes, with an emphasis on personalized dialogue structure in chatbots. The aim is to bridge the existing gap in the design of recruitment chatbots and their personalised communication styles, while exploring their potential impact on the user experience of job seekers and recruiters. The author highlights the need to consider human factors in the development of AI systems in recruitment to strike a balance between system autonomy and user control.

HCAI combines the benefits of automation with human oversight and values, ensuring that AI systems remain fair, explainable and ethical. An example is a recruitment software, which is pre-selecting the candidates but leaves the final decision to the recruiter. This approach minimises the risk of discrimination and ensures better understanding of candidates.

This approach makes it possible to move from purely algorithmic solutions to human-AI collaboration, where technology supports decision-making, but at the same time respects human values and individual differences.

Human-Centred AI (HCAI) emphasizes collaboration between humans and AI, ensuring that technology serves human values and ethical principles. However, for this approach to be effective, AI systems must be trustworthy, transparent and explainable. One of the main ethical issues in AI is precisely the "black box" of algorithms — models can provide accurate predictions, but it is often unclear how they conclude to particular decision.

This is particularly critical in areas such as recruitment, employee evaluation or turnover prediction, where unclear decision-making can lead to discrimination or unfair outcomes.

This is where Explainable AI (XAI) — explainable artificial intelligence — comes into play, enabling AI models to analyse and understand decision-making processes. XAI provides clear and interpretable outputs, which not only increases user confidence but also helps identify potential biases and biases in algorithms. HCAI and XAI thus complement each other — while HCAI ensures that AI systems reflect human values, XAI guarantees that these systems are transparent and auditable in practice. Together, they thus contribute to a more ethical and responsible use of AI in the work environment.

Regarding the confidence of AI-assisted job seekers in the recruitment and application process, there is limited data on the extent to which candidates trust or distrust AI-driven job application systems (Van Esch *et al.*, 2021).

Rejected job seekers rarely receive any explanation why they were rejected (Olckers *et al.*, 2022). The authors have found that applicants are frustrated by the current practice of providing only general feedback. Job seekers want to know why they were unsuccessful and how to improve. XAI techniques could provide the provision of an explanation.

According to Kaplan and Haenlein (2020), the novelty of AI-enabled technology and tools in recruitment may have raised concerns about the technology and tools for some candidates.

A study by Pyle *et al.* (2024) investigated the perception of asynchronous virtual interviews supported by emotional AI. The authors have found that while participants saw potential benefits for employers, they also identified significant risks for candidates. The perceived negative aspects were specifically tied to emotional AI.

In his study, Andalibi (2025) reports that job seekers expressed concerns about AI-generated emotion knowledge. They expressed concerns about selling and sharing them to third parties. They also had concerns about the need to express emotions in ways that seemed unnatural but were viewed positively by the system.

The implementation of AI in workforce management represents a significant advancement in the way organisations interact with their workforce, which can lead to better outcomes for both organisations and individuals. The work of Lane and Williams (2023) can serve as a practical

guide for stakeholders to identify and classify AI systems, which is key to understanding their impact in workplace environment and making informed decisions about implementing AI technologies.

AI analyses work results, feedback and goal achievement. It helps to automate performance evaluation and provides a more objective assessment. The adoption of artificial intelligence in organisations has introduced several phenomena that affect employee motivation. One of the important areas of interest is the perception of AI principles by employees (Adityaksa & Suyoso, 2025). Their research shows that AI adoption is able to moderate the influence of work engagement on employee trust.

Gowda *et al.* (2025) report that the integration of AI into workforce management will enable companies to communicate more effectively with their employees and identify their needs and preferences, leading to better engagement and satisfaction.

AI provides tools for optimising work processes, leading to higher efficiency and employee productivity. The study of Nurlia *et al.* (2023) examines the impact of AI implementation on workforce productivity, focusing on the mediating roles of organisational adaptation and AI training. Gusti *et al.* (2024) find significant and positive relationships between AI adoption, AI training, organisational adaptation and employee productivity. The results show that AI has a direct positive and significant impact on employee engagement and employee productivity in the banking sector. Kas-sa and Worku (2025) also provide valuable insights into the impact of AI on employee productivity and organisational performance.

AI creates personalised, tailored training programmes. It recommends trainings based on employee weaknesses. Virtual assistants and chatbots interactively guide through training modules. AI can predict future skills and will recommend trainings accordingly.

The findings of Kumar and Mittal (2024) suggest that as trust in AI is growing, employees in technology companies are becoming more interested in learning and understanding AI-driven work and improving their AI skills.

According to Fragiadakis *et al.* (2024), the use of artificial intelligence (AI) in working environments with humans, known as Human-AI Collaboration (HAIC), has become essential in various fields, supporting decision-making, efficiency and innovation. Despite the broad potential of HAIC, assessing its effectiveness remains challenging due to the complex interac-

tion of the components involved. A detailed analysis of existing approaches to assessing HAIC is also provided in the article by Kassa and Worku (2025).

AI analyses feedback and satisfaction surveys. Parasa (2024) states that when it comes to employee engagement, AI-powered analytics provide deep insights into employee behaviour and preferences, enabling proactive measures to increase engagement, such as targeted interventions for at-risk employees, personalised recognition programs, and data-driven decisions that reflect employees' real needs and wants.

AI can also help prevent employee dissatisfaction and turnover. AI analytics models can identify employee behaviour patterns and predict which employees are likely to leave. Companies can intervene early, offer better terms or adjust the work environment. Reduced turnover means lower costs for recruiting and training new employees. By predicting employee turnover, organisations can plan their workforce and employee career development more effectively. Artificial intelligence can analyse historical data, employee behaviour and various external factors to predict the likelihood of an employee leaving the organisation (Marín Díaz *et al.*, 2023). By identifying early warning signs, organisations can proactively intervene and implement personalised retention efforts. The authors also present XAIs that increase the transparency and interpretability of AI models. By incorporating these methods into AI-based predictive systems, organisations can gain deeper insight into the factors that influence employee turnover.

AI is revolutionising employee training and performance assessment, from personalised learning plans to automated performance feedback. These technologies enable organisations to better understand their employees' strengths and weaknesses, and to target their professional development.

However, the same monitoring technologies that help optimise processes and measure productivity can also pose risks to employee privacy. Systems deployed in the workplace can discretely collect detailed data on individual activities and group interactions, raising concerns about unethical tracking and excessive surveillance.

According to Chowdhary *et al.* (2023), a promising application of AI monitoring technologies is that they can help companies and workers optimise productivity. This paper highlights the challenges that workers face when expressing consent to use of workplace technologies ensuring their

workplace well-being. Focus groups revealed how workers are vulnerable to 'meaningless' consent — as they may be subject to power dynamics that minimise their ability to withhold consent and thus experience a loss of autonomy at work, which also undermines the value of data collected in terms of 'well-being'.

Boyd and Andalibi (2023) highlight that despite criticisms regarding bias, validity, and privacy violations, emotion recognition technologies are still being developed and deployed across various settings, including critical environments like the workplace. Failures in emotion recognition can be subtle but may disproportionately impact important workplace decisions, potentially reinforcing inequality. The authors explore the implications of making emotions and emotional data visible in the workplace, offering insights for emotion recognition designers, employers utilizing these technologies, and policymakers who oversee their implementation.

Participants in Roemmich *et al.*'s (2023) study considered AI-driven emotion recognition as a significant violation of workers' emotional privacy. The results underscore the importance of recognizing and defining an individual's right to emotional privacy, while also raising crucial research and policy questions about how to safeguard and maintain emotional privacy both within and outside the workplace.

The widespread adoption of artificial intelligence (AI) technologies is having profound effects on individuals and society, with many of these impacts still not fully understood. Among the many unintended consequences, we have to list the deepening of social inequalities and divisions through algorithmic decision-making, according to Ozmen Garibay *et al.* (2023). The authors outline six key challenges that require a multidisciplinary approach combining technical, social and human sciences. This approach is essential for the development of AI technologies that not only enhance human capabilities, but are also consistent with human values and ethical principles.

Conclusions

Artificial intelligence undoubtedly has enormous potential to transform HR processes, making them more efficient and fairer, but it also carries significant risks if not used correctly. This 'story' is not really black and white, as it involves complex issues of technology, ethics and humanity. AI itself has

neither morals nor intentions. How AI is used in HR depends on the people who design, set it up and manage it. If we focus only on the numbers (efficiency, speed, cost), we can forget about the emotional, social and ethical aspects that are essential in the field of work. If AI is used solely on the basis of numbers and algorithms, the HR process can become an anonymous, mechanical system where humans become mere data points. This could lead to loss of empathy and trust between employees and the organisation. The way we choose to implement AI in HR now could have a long-term impact on work culture and societal values. If AI is used without sufficient transparency or scrutiny, it could gradually undermine the fundamental principles of equality, trust and respect in the work environment.

The AI systems have to be designed in a manner that their decision-making processes are both monitorable and comprehensible. Employees must be entitled to comprehend the manner in which AI is impacting their professional career. This encompasses the right to understand the rationale behind decisions such as the rejection of their CV or the evaluation of their performance. AI should always serve as a complement and support, and cannot replace the HR professionals. Key HR decisions, including hiring, promotions, and terminations should always remain the responsibility of human decision-makers, who possess the capacity to consider factors that may not be recognised by AI systems. Organisations must implement clear ethical guidelines for the use of AI in HR. These principles should encompass privacy, equal opportunity and respect for employees.

HR professionals of companies have to be trained to understand the capabilities and limitations of AI. This will allow them to make effective use of the technology and critically assess its outcomes. Organisations have to prioritise the human dimension when implementing AI, with a focus on fostering trust, satisfaction and employee engagement. It is necessary to recognise that AI should not be regarded as a threat to these goals, but rather as a tool to support and enhance them.

The question is not whether AI has a role in HR — it undoubtedly does and will continue to. It's about how we use it to benefit people and not only the business. If we can strike a balance between technological capabilities and human values, AI can be a truly transformative tool. If we fail to maintain this balance, there is a genuine risk of it turning into an 'invisible dictator'.

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Compliance with ethical standards

This article does not contain any studies with human participants or animals performed by the authors. Extracting and inspecting publicly accessible files (scholarly sources) as evidence, before the research began no institutional ethics approval was required.

Data availability statement

All data generated or analyzed are included in the published article. The raw data supporting the conclusion of this article will be made available by the authors, without undue reservation. The raw anonymized data can be provided by emailing the primary author.

Author contributions

All listed authors have made a substantial, direct and intellectual contribution to the work, and approved it for publication. The authors take full responsibility for the accuracy and the integrity of the source analysis.

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The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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