

The Impact of Artificial Intelligence on Contemporary Recruitment and Selection Practices

Abstract: *The rapidly increasing artificial intelligence market has significantly transformed various fields of business and the ways they do their everyday jobs, including human resource management. One of the most important segments of human resources, recruiting and selection, is mostly influenced by AI in the contemporary corporate world, where AI is used to increase efficiency and objectivity. This paper examines the impact of AI on modern hiring practices and procedures, focusing on its advantages, obstacles, and ethical implications. Analyzing the current hiring practices and AI implementations in the HR field, the paper examines how AI-powered tools – such as resume screening, predictive analysis, and data-driven decision-making software – contribute to faster and more efficient decision-making in the field of recruiting and hiring. Additionally, the paper also dives into the problems that come with the AI technologies, such as algorithm bias, lack of transparency, ethical questions, and the absence of the human element in this whole process. The research indicates that while AI has the potential to revolutionize recruitment, its effectiveness depends solely on responsible implementation, continuous human oversight, and adherence to ethical standards.*

Keywords: *algorithmic bias, resume screening, recruitment, selection, data-driven decision-making, job application.*

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INTRODUCTION

In the context of emerging technologies, companies face a crucial task to adapt in order to survive. Management and organizational methods are evolving as a result of these innovations, particularly artificial intelligence (AI), which has the potential to transform entire industries and society as a whole (29). In the modern corporate environment, AI has become integrated across various organizational functions, including finance and marketing (18,23). Human resources are no exception, as AI tools have enhanced efficiency and objectivity in human resources (HR)-related processes.

According to Koteczki et al. and their case study investigation, the implementation of AI in HR processes, especially recruitment and selection, could save thousands of man-hours per year and reduce expenses by approximately €17,000 annually (14). With comprehensive AI-driven solutions for resume screening, data analysis, and data-driven decision making, organizations can significantly improve the effectiveness of their recruitment and selection practices.

Despite growing attention to the positive impacts of AI on HR efficiency, there remains a lack of understanding of its ethical, social, and organizational implications. Most of the written studies focus primarily on the technical advantages of AI while underestimating issues such as algorithmic bias, data privacy, and transparency in automated decision-making (3,13). This gap in research calls for a balanced examination of both sides of AI, including the risks of its implementation in recruitment and selection practices.

This manuscript endeavors to provide new angles by objectively and critically analyzing the dual impact of AI, its potential to enhance efficiency and objectivity, as well as its limitations in terms of ethical challenges and bias. The main objective of this paper is to explore how artificial intelligence influences contemporary recruitment and selection practices, emphasizing both its transformative potential and the need for responsible and ethical implementation.

METHODOLOGY

This study uses a qualitative research design through a systematic review of the existing literature on the impact of artificial intelligence (AI) in recruitment and selection. The focus is on analyzing recent scholarly articles, scientific papers, and conference papers published in recent years. The selection criteria prioritized studies that addressed AI applications in human resource management, specifically recruitment and selection, while also examining the ethical, social, and organizational implications.

The collected sources were analyzed using a thematic approach, categorizing findings into: (1) Applications of AI in recruitment and selection; (2) Benefits of AI in human resource management; and (3) Challenges and ethical considerations. This approach allowed for a comprehensive synthesis of current knowledge, highlighting both the advantages and limitations of AI integration in recruitment processes.

LITERATURE REVIEW

Before diving into the detailed findings, it's important to set the stage for how the literature review is organized and what it aims to accomplish. The following section brings together a range of recent research and expert commentary on the use of artificial intelligence in recruitment and selection. By looking at the key trends, benefits, challenges, and ethical concerns identified in the literature, this review builds a foundation for understanding both the promises and pitfalls of AI-driven hiring practices.

Automation of Early Stages (sourcing, parsing, screening)

Organizations are increasingly embedding AI into Applicant Tracking Systems (ATS) to parse résumés, extract entities (such as skills, education, and experience), de-duplicate profiles, and produce ranked shortlists for human review, as showcased in Figure 1. According to systematic evidence, these automations can reduce recruiter workload and time-to-shortlist when models are trained on job-related features and validated on subsequent outcomes (13, 22). At the same time, reviews warn that screening systems may replicate historical discrimination if trained on biased data or proxies for protected attributes (13, 17). Recent audits of large language model (LLM)-assisted résumé screening documents have revealed measurable disparities for disability-related cues and propose mitigation steps (5). Accordingly, the literature converges on using AI-enabled screening as decision support, paired with bias audits, feature documentation, and periodic revalidation against structured interview or job-performance criteria (11, 24).

Candidate Experience and Engagement (chatbots, scheduling, interviews)

During and after the COVID-19 period, remote interviewing and asynchronous assessments became normalized to sustain hiring continuity (8). AI chatbots now handle FAQs, application status updates, and interview scheduling at scale; studies report faster response times and improved perceived responsiveness, though effects on perceived fairness depend on transparency and escalation to a human (3, 27). In atypical candidate–chatbot interactions, rigid dialogue flows can trigger unusual responses, underscoring the importance of conversation design and fallback to human agents (12). In short, AI augments the candidate journey best when it offers clarity (what is automated and why), accessibility accommodations, and a human-assisted path for edge cases.

Assessment and Prediction (validity, reliability, fairness)

Vendors increasingly market AI-enhanced assessments that infer competencies from text, audio, or video signals. Scholarly and policy analyses caution that some inferences—especially those relying on facial expression analysis—lack robust scientific consensus and

raise fairness concerns; several providers have discontinued controversial facial-analysis features while maintaining language and audio-based scoring (2, 27, 31). Recent vendor and independent studies report psychometric properties for automated video interview (AVI) competency assessments, but construct validity, subgroup differences, and transparency remain active debates (7, 15). For benchmarking, classic selection science provides reference points for predictive validity and multi-method combinations (26, 25). The prudent stance emerging in the literature is to validate AI-assisted assessments locally (job-relatedness, reliability) and to monitor adverse impact alongside performance outcomes over time (24, 11).

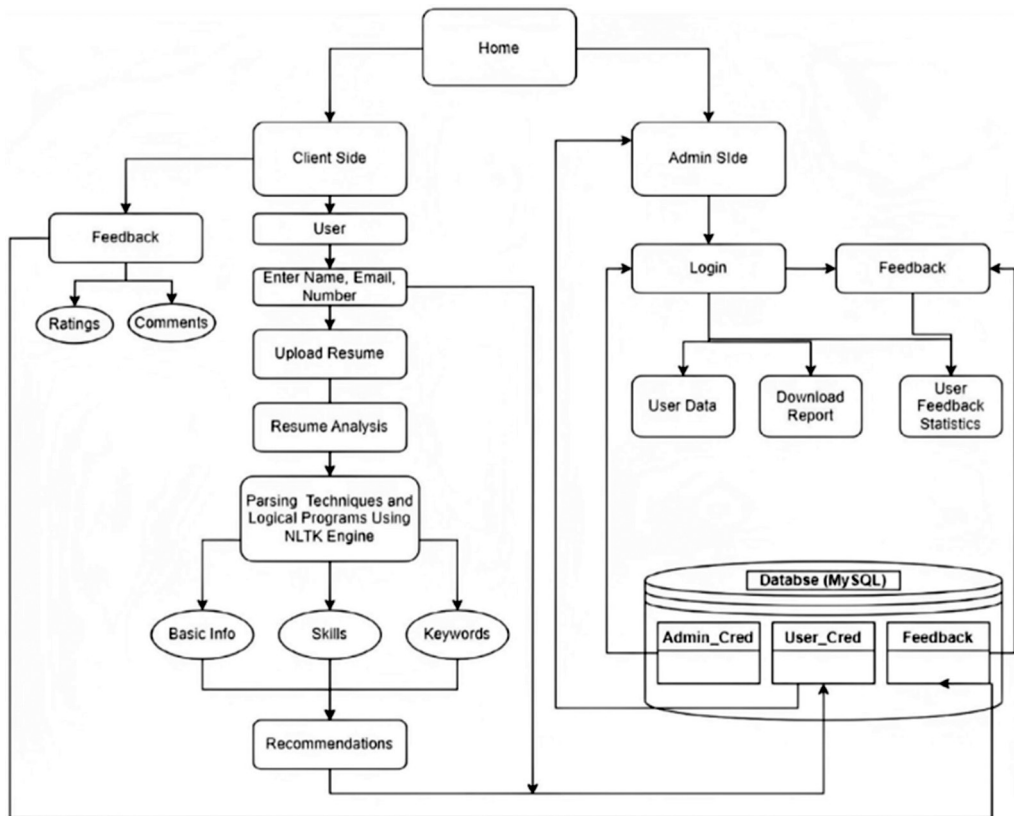
Governance, Ethics, and Regulation (obligations and audits)

The regulatory environment increasingly treats AI used for employment as high-stakes. In the European Union, the AI Act classifies AI systems used for employment, worker management, and access to self-employment as high-risk, triggering requirements for risk management, data governance, transparency, human oversight, and post-market monitoring (5). In New York City, Local Law 144 requires annual independent bias audits of automated employment decision tools (AEDTs), public posting of audit summaries, and advance candidate notices (20). U.S. federal civil rights agencies have also issued technical assistance clarifying disability protections in AI-mediated hiring (30). Scholarly reviews link these obligations to recurring risks noted above—proxy discrimination, opacity, and limited external validation (13, 10, 21). For organizations operating across jurisdictions, the literature increasingly recommends converging on a governance baseline: documented impact assessments, bias audits using representative data, candidate-facing notices, and a human-in-the-loop review for consequential decisions.

DISCUSSION

The findings of this study indicate that the application of contemporary technological solutions can significantly influence the improvement of processes within human resource management. The observed tendencies largely correspond with previous research, particularly regarding efficiency gains, cost reduction, and more accurate decision-making. This confirms that the development and integration of such technologies represent a stable direction in modern HRM practice. At the same time, several findings highlight specific characteristics typical of developing environments, suggesting that institutional and organizational contexts can shape the outcomes of technological implementation. Formal and informal factors—such as regulatory quality, organizational procedures, and the presence of practices that undermine meritocracy—emerge as particularly influential. These elements help explain the differences identified in comparison with more developed systems and point to several areas that require deeper analysis.

When compared with the existing theoretical framework, the outcomes of this study align with most established assumptions, while certain deviations indicate a need for more precise definitions of specific concepts and their interrelations. In this regard, the research contributes to the existing body of literature by identifying aspects where practical implementation diverges from theoretical expectations. It is important to consider the limitations of this study when interpreting the findings. These limitations primarily concern the characteristics of the sample, the availability of data, and the conditions under which the analysis was conducted, all of which may affect the generalizability of the results. Therefore, future research should employ broader and methodologically diverse samples, as well as examine context-specific factors that influence the functioning of the analyzed technologies. The results provide a reliable basis for further investigation of the topic and point to several directions for future research, including a more detailed evaluation of institutional conditions, the development of standardized assessment methodologies, and the analysis of long-term regulatory impacts.



Source: (Abhishek et al., 2025)

CONCLUSION

As the comprehensive qualitative research above demonstrates, AI and LLMs can simplify and enhance the effectiveness of recruitment and selection processes, but also make crucial mistakes and biased decisions that can harm organizations in the long run. The ability to automate everyday tasks and make decisions based on a large amount of analyzed data presents an enormous opportunity for the development of human resources. When applied correctly and within the boundaries, these tools can significantly improve the recruitment and selection process by making it consistent, structured, and transparent.

However, the results also demonstrate that these large machines and systems are not infallible: making biased decisions, limitations in human logic and understanding, and errors in automated tasks can lead to adverse outcomes if left unaddressed. Although they are designed to support objective decision-making, their opinion can be based on misinterpretation or errors embedded directly in the way they are trained. These mistakes and errors can have serious consequences, leading organizations to incur more losses than gains in the long run, making it unstable to rely solely on AI in these kinds of jobs.

For the reasons mentioned above, this study emphasizes the importance of a balanced approach that combines technology and human judgment to achieve the best possible results. Even the most advanced tools require constant human monitoring, periodic evaluation, and clear boundaries within which they can operate. HR officials are still the key part in making the final decision, which data-driven opinions from AI tools can inform, but they still rely solely on human, objective opinions.

To conclude the final discussion, AI tools in HR are not something that happens overnight, and should not be viewed as a quick fix but rather a continuously improving solution that can help speed up these processes and make them more efficient. They can make hiring faster and more organized, reduce the number of man-hours, and even make more objective decisions than humans sometimes, but it is important how they are used. When technology is paired with clear ethical guidelines and boundaries, it can genuinely improve every aspect of HR; however, when left unregulated and without limitations, it can simply destroy everything. Ultimately, it all comes down to how much people rely on AI and how much freedom it will have in making the decisions in the processes of recruitment and selection.

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Uticaj veštačke inteligencije na savremene prakse regrutacije i selekcije

Apstrakt: Brzo rastuće tržište veštačke inteligencije (VI) značajno je transformisalo različite oblasti poslovanja i načine na koje obavljaju svoje svakodnevne poslove, uključujući ljudske resurse. Jedan od najvažnijih segmenata ljudskih resursa (LJR), regrutovanje i selekcija, najviše je pod uticajem VI u savremenom korporativnom svetu, gde se VI koristi za povećanje efikasnosti i objektivnosti. Ovaj rad ispituje uticaj VI na moderne prakse i procedure zapošljavanja, fokusirajući se na njene prednosti, prepreke i etičke implikacije. Analizirajući trenutne prakse zapošljavanja i implementacije VI u oblasti HR-a, rad ispituje kako alati zasnovani na VI – kao što su pregled biografija, prediktivna analiza i softver za donošenje odluka zasnovan na podacima – doprinose bržem i efikasnijem donošenju odluka u oblasti regrutovanja i zapošljavanja. Pored toga, rad se bavi i problemima koji dolaze sa tehnologijama veštačke inteligencije, kao što su pristrasnost algoritama, nedostatak transparentnosti i etička pitanja, kao i odsustvo ljudskog elementa u celom ovom procesu. Istraživanje pokazuje da, iako VI ima potencijal da revolucionizuje regrutovanje, njena efikasnost zavisi isključivo od odgovorne implementacije, kontinuiranog ljudskog nadzora i poštovanja etičkih standarda.

Ključne reči: Algoritamska pristrasnost, skeniranje biografije, regrutovanje, selekcija, donošenje zaključaka na osnovu podataka, prijava za posao.

