Using AI in Recruiting: Ethical and Practical Considerations

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Abstract

The allure of using artificial intelligence (AI) to streamline the recruiting process for organizations has become increasingly compelling. Identifying ways to make recruiting more efficient and effective provides an organization with a competitive advantage (Hunkenschroer & Luetge, 2022). The capacity for AI to review massive amounts of information in a short timeframe helps close the gap between recruiters and top-quality candidates (Gray, 2024). However, as an imperfect science, the AI algorithms that undergird recruiting tools may lead to discrimination and bias with unintended yet impactful consequences (Bansal et al., 2023). Biases already existing in the data that fuels AI may skew outcomes from recruiting tools, and AI may introduce new types of biases not yet studied (Ntoutsi et al., 2020). The following conceptual study seeks to examine where in the recruitment process AI adds value, where AI adds risk, and where AI should not replace human effort and interaction.

Keywords: artificial intelligence, AI, recruiting, unconscious bias, intuition, human intelligence.

Introduction

The allure of using artificial intelligence (AI) to streamline organizations' recruiting efforts continues to increase (Kochan, 2021). Companies are competing to find and hire talent for over 8 million job openings (U.S. Bureau of Labor Statistics, 2024); therefore, finding ways to make the recruitment process more efficient and effective provides an organization with a competitive advantage (Hunkenschroer & Luetge, 2022). The capacity for applied and generative AI to quickly review vast information closes some of the gaps between recruiters and candidates (Gray, 2024). The following conceptual study reviews the impact of AI in the recruiting space, with broader organizational impacts also examined.

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Impact of AI in Recruiting

AI collects, analyzes, and interprets large volumes of data based on the instructions and suppositions programmed into its machine-learning algorithms (Bansal et al., 2023; Ntoutsi et al., 2020). As an imperfect science, AI algorithms sometimes lead to discrimination and bias with unintended yet impactful consequences (Bansal et al., 2023). The data leveraged by AI originates from humans; thus, the bias that exists in humans exists in the data, which AI then perpetuates and amplifies (Hurlburt, 2024; Lee et al., 2019; Ntoutsi et al., 2020). Data sets that are incomplete or do not contain enough information about underrepresented groups add another source of bias to AI (Lee et al., 2019). Generative AI learns over time; thus, even if discriminatory attributes are not noticeable in an algorithm, AI can learn to discriminate on a protected attribute or highly correlated inputs if trained to do so during iterative interactions with users.

Organizations hold responsibility for ensuring equitable, unbiased recruiting processes and outcomes; in previous eras, such decisions were made by humans and governed by fairness and equity laws (Lee et al., 2019). However, as companies now weave AI tools into their recruitment processes, biases on race, age, sex, and other protected qualities infiltrate decision-making (Ntoutsi et al., 2020). Biases already existing may skew outcomes even more, and AI may introduce new types of biases not yet studied.

Additionally, AI technologists retain responsibility for understanding bias issues in candidate screening and selection, ensuring their programs do not create or perpetuate discrimination (Ntoutsi et al., 2020). Testing AI algorithms for over- or under-representing specific protected characteristics requires intentionality and an ethical focus. Ntoutsi et al. called for ethical principles to be integrated into AI algorithms to mitigate such bias, because error-laden algorithms cause unfair and illegally discriminatory recruitment outcomes (Mittelstadt et al., 2016). However, the feasibility of defining the ethical requirements of AI algorithms remains laden with complexity, subjectivity, and uncertainty.

Practical Application

Recruiters can leverage AI to scan databases for candidate sourcing, provide answers or interview scheduling with candidates through chatbots, and review large volumes of résumés in a fraction of the time (Wolford & GPT-4, 2023). Using AI for high-volume administrative tasks frees up bandwidth for recruiters to perform more strategic-level duties, including building relationships with the candidates. The candidates also benefit through potentially experiencing up to 75% improvement in time to hire. Compelling reasons to use AI technologies in the recruitment process abound (Kochan, 2021); however, cases of AI bias leading to systemic discrimination and legal recourse continue to occur, as shown in the following examples.

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A credit card provider used AI to facilitate different credit limits based on the applicant's gender (Knight, 2019). Vincent (2016) reported that Microsoft's *Tay* AI program issued racist and misogynistic content after only one day of interacting with users. Using AI for loan decisions was shown to increase discrimination against females to increase lenders' profits (University of Bath, 2024). Dastin (2018) shared that Amazon's recruitment AI assessed female candidates less favorably than male candidates for technical roles (Lee et al., 2019). These examples illustrate the industry-agnostic impact of AI-facilitated bias and discrimination.

AI can be programmed for simple tasks, such as sorting and filtering lists, or complex tasks, such as running predictive models (Koshiyama et al., 2022). Recent research on the use of AI in healthcare applications suggests that AI can find patterns and correlations in large data sets better and faster than humans can and have the potential to make predictions from those patterns; such findings could prove relevant in the recruiting space as well (Roa & Biller-Andorno, 2023). This information may prove especially beneficial at aggregated levels to identify trends. However, consideration should be given to validating the information before basing actions on predictions; humans' critical thinking skills are paramount in validating AI-generated information and filtering out fallacies (Hurlburt, 2024).

Some applicant tracking systems (ATS) do not yet integrate seamlessly with AI tools, so the additional cost of adding AI solutions prevents some organizations from implementing such programs (J. Hill, personal communication, September 16, 2024). Other recruiters have experimented with AI in enhancing job descriptions or building interview questions but have observed lackluster results so far (M. Edge, personal communication, September 16, 2024). Ultimately, the hope is for AI tools to make the recruiting process more streamlined and efficient, but that goal will only become reality when the tool verifiably improves workflow time while providing ethical, reliable, and transparent outputs (Kochan, 2021).

One approach to controlling AI algorithms includes locking them rather than permitting AI to continuously learn (Youssef et al., 2023). Locked algorithms can be vetted for ethical and quality outputs. However, adding updated information into locked algorithms negates the previously vetted versions, necessitating the time and effort of completing a new reliability assessment (Roa & Biller-Andorno, 2023; Youssef et al., 2023). In an era of informational urgency, one wonders if organizations or their workers will tolerate the time required to continually reaffirm locked algorithms (Hurlburt, 2024).

Broader societal expectations have emerged to form a backdrop for organizations' ethical use of AI. For example, the European Union defined seven requirements for trustworthy AI systems, including human oversight, non-discrimination, and fairness

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(European Commission High-Level Expert Group on AI, 2019). President Joseph Biden issued Executive Order 14110 in October of 2023 to provide the United States government with the responsibility to ensure AI is safely and responsibly used (U.S. Department of Labor, 2024). The U.S. Equal Employment Opportunity Commission requires the use of AI in hiring decisions to comply with federal civil rights laws and provides guidelines on how organizations should monitor AI in recruiting to prevent "disproportionately large negative effects" based on protected characteristics (U.S. Department of Labor, 2024, Other Federal Agencies, para. 3). AI technology will continue to develop rapidly; therefore, societies must revisit the legal expectations regularly and provide clear guidelines for users and organizations.

Recommendation

Using AI to help write job posts and provide data-driven scans of résumés can reduce subjectivity and produce a more diverse candidate pool (Hunkenschroer & Luetge, 2022). Organizations attempt to reduce subjectivity in the recruiting process, but thus far, AI has not proven to be a perfect solution (Dastin, 2018). Technologists who understand recruitment bias and work to build nondiscriminatory algorithms could build valuable AI tools that enhance recruitment processes (Bird et al., 2020; Kroll et al., 2017); however, human intelligence will still be needed, and the impacts of AI tools on the workforce cannot be overlooked (Kochan, 2021).

Nobel Prize-winning psychologist Daniel Kahneman's recruiting process example highlighted the importance of human intuition in hiring (Grant, 2023). In a podcast, Kahneman explained a study whereby he intentionally delayed the process step where intuition was applied; he provided the data and relevant assessments of a candidate first and then allowed hiring decision-makers to reflect on that data using their intuition, ultimately deciding whether a candidate would be hired The outcome of Kahneman's study showed that when decision-makers consumed the data first and then had time to apply their intuition, a technique specifically called "delayed intuition," their judgment call became highly predictive of a great hire.

Kahneman's study provided an example of the value that systems and data, as well as human intelligence and intuition bring to the recruiting decision-making process (Grant, 2023). Adding the topic of AI to this context suggests that a practical approach to recruiting may be: (1) AI-driven sourcing and screening, (2) additional data, if possible, such as work style tests, (3) the human-to-human interview, and lastly, (4) time for the hiring decision-makers to decide through delayed intuition. In that order, those steps blend AI and human components so the result should be the best-fit hires. AI tools, in this scenario, support and complement the human aspects of recruiting rather than replacing them (Lee et al., 2019).

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At each step in the process, AI interventions should be developed with a focus on removing bias and proactively analyzed to ensure that candidate bias, discrimination, and other such adverse outcomes are identified and mitigated (Bird et al., 2020). Organizations cannot implement AI to gain efficiency in their recruiting processes and assume a passive stance on outcomes; instead, both technical and legal experts should review recruiting algorithms before use and continually audit the outcomes (Knight, 2019; Kroll et al., 2017; Lee et al., 2019). Adding in reporting and auditing proves cost-effective only if AI provides efficiencies and improvements that outweigh the cost of AI oversight (Youssef et al., 2023).

Further Research Considerations

The ethical and fair use of AI requires intentionality, oversight, and trust from society (Bird et al., 2020). AI brings unprecedented opportunities, many of which have the potential impact of harming certain person groups. Governance remains vital to ensure accountable and socially just use of AI. Further research on how governance should be applied merits investigation. Perhaps a new industry will surface for quality, reliability, transparency, and ethical checking of AI algorithms and outputs (Koshiyama et al., 2022). AI possesses no conscience, empathy, or inherent morality, so the onus is on society, developers, and users to address the ethical issues AI creates (Hurlburt, 2024).

Lastly, the responsibility of AI developers and purveyors should be researched and defined robustly, with ethics, accountability, transparency, and bias mitigation as critical factors. "A massive investment in continuous (life-long learning) education and training" will be required to equip technical developers and workforce users (Kochan, 2021, p. 20). Accountability only works well if the developers and users understand the AI tools' ethical considerations and potential impacts. Therefore, upskilling purveyors and users of AI holds critical importance, and as the technology accelerates at unprecedented rates, ongoing learning will become instrumental to organizations' successful use of AI (Hurlburt, 2024).

About the Author

Jennifer A. Cole possesses over 20 years of corporate business experience, including leadership roles in the human resources (HR) discipline. Currently, she is an independent consultant partnering with high-growth organizations to build and scale HR programs. Jennifer is pursuing her Ph.D. in Organizational Leadership at Indiana Wesleyan University and holds adjunct instructor roles at multiple universities.

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References

Bansal, C., Pandey, K. K., Goel, R., Sharma, A., & Srinivas, J. (2023). Artificial intelligence (AI) bias impacts: Classification framework for effective mitigation. *Issues in Information Systems*, *24*(4), 367–389. https://doi.org/10.48009/4_iis_2023_128

Bird, E., Fox-Skelly, J., Jenner, N., Larbey, R., Weitkamp, E., & Winfield, A. (2020). *The ethics of artificial intelligence: Issues and initiatives.* European Parliament. https://doi.org/10.2861/6644

Dastin, J. (2018, October 11). *Amazon scraps secret AI recruiting tool that showed bias against women*. Reuters US. https://www.reuters.com/article/world/insight-amazon-scraps-secret-ai-recruiting-tool-that-showed-bias-against-women-idUSKCN1MK0AG/

European Commission High-Level Expert Group on AI. (2019, April 8). *Ethics guidelines for trustworthy AI.* https://digital-strategy.ec.europa.eu/en/library/ethics-guidelines-trustworthy-ai

Grant, A. (Host). (2023). *Daniel Kahneman doesn't trust your intuition (re-release)* [Audio podcast]. WorkLife with Adam Grant. https://podcasts.apple.com/us/podcast/worklife-with-adam-grant/id1346314086?i=1000639736559

Gray, A. (2024, June). AI: Supporting organisations to be more human-centered. *NZ Business,* 22–23.

Hunkenschroer, A. L., & Luetge, C. (2022). Ethics of AI-enabled recruiting and selection: A review and research agenda. *Journal of Business Ethics*, *178*, 977–1007. https://doi.org/10.1007/s10551-022-05049-6

Hurlburt, G. F. (2024, October). Artificial intelligence, the workforce and educational realities. *Computer Magazine, 57(10), 94–98*. https://doi.org/10.1109/MC.2024.3428034

Knight, W. (2019, November 19). *The Apple card didn't 'see' gender—and that's the problem*. WIRED. https://www.wired.com/story/the-apple-card-didnt-see-genderand-thats-the-problem/

Kochan, T. A. (2021). Artificial intelligence and the future of work: A proactive strategy. *AI Magazine*, *42*(1), 16–24. https://doi.org/10.1002/j.2371-9621.2021.tb00006.x

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Koshiyama, A., Kazim, E., & Treleaven, P. (2022, April 11). Algorithm auditing: Managing the legal, ethical, and technological risks of artificial intelligence, machine learning, and associated algorithms. *Computer Magazine*, *55*(4), 40–50. https://doi.org/10.1109/MC.2021.3067225

Kroll, J. A., Huey, J., Barocas, S., Felten, E. W., Reidenberg, J. R., Robinson, D. G., & Yu, H. (2017). Accountable algorithms. *University of Pennsylvania Law Review*, *165*(3), 633–705. https://www.jstor.org/stable/26600576

Lee, N. T., Resnick, P., & Barton, G. (2019, May 22). *Algorithmic bias detection and mitigation: Best practices and policies to reduce consumer harms.* Brookings Institution. https://www.brookings.edu/articles/algorithmic-bias-detection-and-mitigation-best-practices-and-policies-to-reduce-consumer-harms/

Mittelstadt, B. D., Allo, P., Taddeo, M., Wachter, S., & Floridi, L. (2016). The ethics of algorithms: Mapping the debate. *Big Data and Society*, *3*(2), 1–21. https://doi.org/10.1177/2053951716679679

Ntoutsi, E., Fafalios, P., Gadiraju, U., Iosifidis, V., Nejdl, W., Vidal, M., Ruggieri, S., Turini, F., Papadopoulos, S., Krasanakis, E., Kompatsiaris, I., Kinder-Kurlanda, K., Wagner, C., Karimi, F., Fernandez, M., Alani, H., Berendt, B., Kruegel, T., Heinze, C., … Staab, S. (2020). Bias in data-driven artificial intelligence systems—An introductory survey. *WIREs Data Mining and Knowledge Discovery*, *10*(3), 1–14. https://doi.org/10.1002/widm.1356

Roa, T. M., & Biller-Andorno, N. (2023). Black box algorithms in mental health apps: An ethical reflection. *Bioethics*, *37*(8), 790–797. https://doi.org/10.1111/bioe.13215

University of Bath. (2024, August 30). *AI can mitigate bias against women in loan decisions and boost lenders' profits and reputations: New research points way to using AI for ethical lending* [Press release]. https://www.bath.ac.uk/announcements/ai-can-mitigate-bias-against-women-in-loan-decisions-and-boost-lenders-profits-and-reputations/

U.S. Bureau of Labor Statistics. (2024, October 29). *Job openings and labor turnover summary* [Press release]. https://www.bls.gov/news.release/jolts.htm

U.S. Department of Labor. (2024, April 29). *Artificial intelligence and equal employment opportunity for federal contractors.* https://www.dol.gov/agencies/ofccp/ai/ai-eeo-guide

2024 Regent Research Roundtables Proceedings pp. 21-28

ISSN 2993-589X

Vincent, J. (2016, March 24). *Twitter taught Microsoft's AI chatbot to be racist in less than a day*. TheVerge. https://www.theverge.com/2016/3/24/11297050/tay-microsoft-chatbot-racist

Wolford, M., & GPT-4. (2023). *The AI recruiter: Revolutionizing hiring with advanced GPT-powered prompts*. Krish Publishing.

Youssef, A., Abramoff, M., & Char, D. (2023). Is the algorithm good in a bad world, or has it learned to be bad? The ethical challenges of "locked" versus "continuously learning" and "autonomous" versus "assistive" AI tools in healthcare. *American Journal of Bioethics*, *23*(4), 43–45. https://doi.org/10.1080/15265161.2023.2191052

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