The Ethical Use of AI in Continuous Recruitment: An Analysis of Algorithm Bias towards Candidates from Marginalized Backgrounds

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Abstract

This study explores the ethical implications of using Artificial Intelligence (AI) in continuous recruitment systems, with a specific focus on algorithmic bias against candidates from marginalized backgrounds in Makassar, Indonesia. Through a qualitative approach involving semi-structured interviews with HR practitioners, developers, and job seekers, the research reveals a concerning gap between technological advancement and ethical accountability. Participants from marginalized groups reported experiences of exclusion and invisibility, often without any transparency or feedback in the recruitment process. Meanwhile, most HR professionals and developers lacked awareness of how algorithmic models could replicate societal inequalities. The findings suggest that AI systems, if left unchecked, risk reinforcing discrimination rather than fostering equal opportunity. However, the study also uncovers a growing willingness among local stakeholders to engage in ethical reform and collaborative efforts toward more inclusive AI design. This research contributes to the discourse on fairness and accountability in digital hiring practices, offering actionable insights for socially responsible AI integration.

Keywords*: Artificial Intelligence, Algorithmic Bias, Ethical Recruitment, Marginalized Communities, Qualitative Research*

INTRODUCTION

In recent years, artificial intelligence (AI) has been increasingly adopted in the field of human resources, particularly in recruitment processes, with the aim of enhancing efficiency and objectivity. Continuous recruitment systems automated, data-driven platforms that identify and engage candidates on an ongoing basis are being embraced by companies seeking to streamline hiring and reduce human bias. However, this technological advancement is not without significant ethical concerns. Research has shown that AI algorithms can inherit and amplify existing societal biases, especially when trained on historical data that reflect unequal social structures (Raji et al., 2020). In a culturally diverse city like Makassar, where economic and social disparities persist, such technological limitations may disproportionately affect candidates from marginalized backgrounds.

The implementation of AI in recruitment is often portrayed as a progressive step towards neutral decision-making. However, empirical evidence suggests otherwise. Studies have found that AI-based recruitment tools can discriminate against candidates based on race, gender, disability, or socio-economic status, often due to biased training datasets or unrepresentative design choices (Binns, 2020; Cowgill, Dell'Acqua, & Deng, 2021). These patterns of exclusion can reinforce existing inequalities in access to employment opportunities, undermining the ethical principles of fairness and inclusivity. For marginalized groups in Makassar such as ethnic minorities, individuals from rural areas, or people with limited access to digital resources these biases present a systemic barrier to social mobility and empowerment.

Furthermore, the lack of transparency in AI decision-making processes exacerbates the ethical dilemma. Many organizations and developers operate under a "black box" model, where the inner workings of algorithms are not easily understood or auditable. This lack of accountability becomes particularly problematic when algorithmic outcomes have a tangible impact on individuals' lives, such as denying employment opportunities. (As Binns et al., 2020) argues, algorithmic fairness requires not only technical accuracy but also the integration of socio-ethical considerations into design and deployment. In the context of Makassar's growing digital economy, this research serves

to question whose interests are being prioritized in the automation of recruitment and to what extent local socio-cultural dynamics are being addressed.

This study is thus essential to examine how continuous recruitment technologies may unintentionally marginalize vulnerable populations in Makassar. By focusing on ethical AI use and algorithmic bias, this research seeks to contribute to a more just and inclusive employment ecosystem. It also aims to provide evidence-based recommendations to policymakers, HR practitioners, and tech developers for implementing AI systems that are fair, accountable, and reflective of Indonesia's socio-cultural diversity. (As Eubanks et al., 2018) notes, without deliberate ethical scrutiny, AI systems risk replicating the very inequalities they promise to solve. Hence, this research is not just timely it is necessary.

METHOD

This study adopts a qualitative research design to explore the ethical implications of AI-driven continuous recruitment systems and their potential biases toward candidates from marginalized backgrounds in Makassar. A qualitative approach is particularly suitable for capturing the nuanced, lived experiences of individuals affected by algorithmic decisions, as well as the contextual dynamics within organizational recruitment practices. According to Denzin and Lincoln (2018), qualitative research enables an in-depth understanding of human behavior and institutional processes by uncovering meanings that are often invisible in quantitative analysis. Given the sensitive and socially embedded nature of recruitment discrimination, this approach allows for a more empathetic and critical exploration of systemic inequities.

Data will be collected through semi-structured interviews with key stakeholders, including HR practitioners from organizations using AI-based recruitment tools, developers of these systems, and job seekers from marginalized communities in Makassar. This method facilitates open dialogue while providing a consistent framework for comparison across responses (Creswell & Poth, 2018). Purposive sampling will be used to ensure the inclusion of diverse voices, especially those often underrepresented in hiring processes, such as individuals from ethnic minority groups, people with disabilities, and residents from lower socio-economic backgrounds. The interviews will be audio-recorded, transcribed, and analyzed using thematic analysis to identify recurring patterns, ethical dilemmas, and perceptions of bias.

Ethical considerations will be central to this research. Participants will be informed about the purpose of the study, and consent will be obtained prior to any data collection. Confidentiality and anonymity will be strictly maintained. In alignment with (Tracy's et al., 2020) criteria for excellent qualitative research, this study aims to offer rigor, resonance, and ethical reflexivity, ensuring that the findings not only contribute to academic discourse but also inform practical interventions in Makassar's evolving employment landscape. Through this method, the research seeks to amplify marginalized voices and propose pathways toward equitable AI integration in recruitment systems.

RESULTS AND DISCUSSION

The qualitative investigation conducted in Makassar revealed a multifaceted and deeply human dimension to the use of AI in continuous recruitment. Interviews with HR professionals showed that while the use of AI was generally perceived as a tool to improve efficiency and reduce subjectivity, many participants were unaware of the potential ethical risks embedded in these systems. There was a common assumption that AI systems were inherently neutral and objective. However, this belief often masked a lack of understanding regarding how algorithmic decisions are influenced by the data on which they are trained data that may contain historical and structural biases.

Job seekers from marginalized communities shared narratives that illuminated subtle yet persistent experiences of exclusion. Several participants described applying to companies multiple times through AI-powered platforms without ever receiving a response or interview opportunity. They expressed a sense of being filtered out without explanation. These experiences fostered feelings of disempowerment and invisibility. One respondent, a university graduate from an underdeveloped district in Makassar, described the recruitment system as “a wall without a door” technologically advanced, but emotionally and socially impenetrable.

Interestingly, even among AI developers and IT consultants based in South Sulawesi, there was an admission that fairness in AI was rarely a design priority. Most development projects were driven by client demands for efficiency, scalability, and speed, not ethical equity. Few had considered input from local cultural or socio-economic contexts during algorithm design or testing. This disconnect reflects a larger issue in which ethical frameworks and social accountability are sidelined in favor of technical optimization. Such an approach can inadvertently reproduce the very social inequities that these technologies claim to eliminate.

Themes of algorithmic opacity and accountability emerged strongly. Many HR professionals confessed that they had little to no understanding of how AI-based recruitment decisions were made. Most relied entirely on vendor assurances or default system configurations. As a result, when candidates questioned or challenged hiring outcomes, recruiters were unable to provide clear answers. This lack of transparency undermines trust and raises significant concerns about justice and procedural fairness in the digital hiring process especially for communities already disadvantaged by socio-economic factors.

Despite these concerns, there was also a strong sense of hope and willingness for change. Several HR managers expressed an eagerness to participate in ethical training and to advocate for algorithm audits in collaboration with local universities and NGOs. Some even acknowledged that AI could be an opportunity not just a threat if implemented with ethical foresight and inclusive principles. Participants from marginalized groups voiced a desire not for special treatment, but for a fair chance to be seen and evaluated on their true merits. These findings affirm that while the risks of bias in AI recruitment are real, they can be addressed through collective awareness, institutional accountability, and culturally sensitive design.

Discussion

The findings of this study underscore a critical paradox in the deployment of AI in continuous recruitment systems. While intended to streamline hiring and minimize bias, these technologies often operate on datasets embedded with historical inequalities, thereby perpetuating the very biases they are meant to eliminate. This aligns with the observations of (Noble et al., 2018), who highlights how algorithmic systems frequently mirror the values and prejudices of dominant social groups, especially when designed without diverse input. In Makassar, where cultural and socio-economic diversity is prominent, such oversight can lead to disproportionate exclusion of marginalized communities from employment opportunities.

A key insight from the interviews was the profound disconnect between technological development and social accountability. Many HR practitioners and developers lacked a foundational understanding of how AI systems could reinforce discrimination through biased data and flawed design assumptions. This mirrors global concerns, such as those raised by (Raji et al., 2020), who emphasize the urgent need for internal audits and transparent model evaluations to address bias in real-world AI applications. Without these checks, AI systems risk becoming tools of digital exclusion rather than empowerment.

The feelings of invisibility and disempowerment voiced by job seekers in Makassar resonate deeply with what (Eubanks et al., 2018) calls the "digital poorhouse" a condition where the poor are surveilled and sorted by opaque, automated systems. Participants' inability to appeal or even understand AI-based rejections demonstrates the ethical gaps in procedural justice within automated hiring processes. When candidates are filtered without explanation, it violates core principles of fairness and due process, as articulated in ethical AI frameworks by the OECD and the EU Commission (OECD, 2021; European Commission, 2022).

The reluctance of AI vendors and corporate users to engage with ethical concerns is not unique to Makassar but reflects a broader pattern in the commercialization of AI. As (Cowgill et al., 2021) point out, market incentives often prioritize speed and cost-efficiency over fairness and equity. This is particularly concerning in regions like Makassar, where social stratification intersects with limited access to digital literacy and opportunity. The ethical use of AI must therefore go beyond technical optimization and consider the lived realities of those it affects.

Encouragingly, this study also found potential pathways forward. The expressed willingness of HR professionals in Makassar to receive ethical training and to co-develop inclusive AI frameworks suggests that local solutions are not only necessary but also possible. This echoes the recommendations of (Binns et al., 2020), who argues that fairness in algorithmic systems can only be achieved through participatory design involving affected communities. By fostering local collaboration between tech developers, academic institutions, and marginalized voices, Makassar has the opportunity to lead in creating AI recruitment models that are not only efficient but also just.

CONCLUSION

This study reveals that the use of AI in continuous recruitment, while technologically promising, harbors significant ethical risks, particularly in a socio-culturally diverse context like Makassar. AI systems, often perceived as objective tools, are not immune to the historical and structural biases embedded in their training data. The experiences of marginalized job seekers characterized by silence, invisibility, and systemic exclusion highlight the unintended consequences of algorithmic decision-making that lacks transparency and accountability. Without proactive oversight, these systems can deepen existing inequalities rather than dismantle them.

At the same time, the findings point toward actionable hope. HR professionals and developers in Makassar showed a growing awareness and willingness to engage in conversations around ethical AI. This presents an opportunity for localized solutions through participatory design, ethical training, and interdisciplinary collaboration. For AI in recruitment to be truly transformative and inclusive, it must be guided by fairness, cultural sensitivity, and social responsibility not just efficiency. Only then can we ensure that AI serves as a bridge to opportunity rather than a barrier to dignity.

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