Algorithmic Bias in Recruitment Platforms: Gendered Career Trajectories in South Africa's Tech Sector,

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Abstract

Background: The integration of algorithmic recruitment platforms into South Africa's technology sector from 2021 has prompted scrutiny of encoded bias and its implications for gendered career pathways. This issue is situated within African Studies discussions on digital inequality in post-colonial economies.

Purpose and objectives: This paper examines how algorithmic bias in these platforms shaped the career trajectories of women in South Africa's tech sector between 2021 and 2026. It seeks to delineate specific bias mechanisms and evaluate their cumulative impact on women's hiring, initial role allocation, and early career progression.

Methodology: The study used a mixed-methods approach, combining quantitative analysis of anonymised recruitment data from three major platforms with qualitative, semi-structured interviews conducted in 2024 with 42 women professionals and eight HR managers in Cape Town and Johannesburg.

Findings/Key insights: The analysis found that algorithms systematically deprioritised female candidates for senior technical roles, often correlating leadership keywords with masculine profiles. A key insight was that women considered for mid-level positions were frequently steered towards project management roles over core engineering tracks, entrenching horizontal segregation.

Conclusion: Algorithmic recruitment tools operational between 2021 and 2026 were not gender-neutral but actively replicated existing sectoral biases, creating a digital barrier to equitable career advancement for women in South Africa's tech industry.

Recommendations: Recommendations propose mandatory algorithmic audits for gender bias, the development of inclusive training datasets that reflect South Africa's diversity, and enforced transparency requirements for platform operators.

Key words: algorithmic bias, recruitment, gender, technology sector, career trajectories, South Africa, digital inequality.

Contribution statement: This paper provides empirical evidence from the South African context, contributing a critical African perspective to global debates on technology and labour by examining the concrete operation of algorithmic systems in a specific emerging market.