Literature Review in IEEE Format

Author last name and year

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Algorithmic Bias And Decision-Making In Automated Systems

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Introduction paragraph

Automated decision-making systems increasingly shape outcomes in areas such as hiring, credit scoring, and risk assessment. Researchers examine how algorithmic bias emerges through training data, model design, and implementation context.

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Studies show that biased datasets lead to unequal outcomes even when models follow neutral optimization rules [1]. Experimental evaluations demonstrate that skewed input data can amplify existing social patterns rather than correct them [2].

Numbered citations in square brackets

Other research focuses on mitigation strategies. Methods such as dataset auditing and model transparency reduce bias under controlled conditions, though results vary across domains [3]. These findings indicate that technical solutions must align with contextual oversight.

Conclusion paragraph

The literature identifies algorithmic bias as a structural challenge rather than a coding error. Ongoing research emphasizes accountability frameworks that combine technical design with policy-level safeguards.

References

References – numbered in order of appearance

[1] S. Barocas and A. Selbst, "Big data's disparate impact," California Law Review, vol. 104, no. 3, pp. 671–732, 2016.

[2] J. Buolamwini and T. Gebru, "Gender shades," Proceedings of the Conference on Fairness, Accountability, and Transparency, pp. 77–91, 2018.

[3] M. Mitchell et al., "Model cards for model reporting," Proceedings of the Conference on Fairness, Accountability, and Transparency, pp. 220–229, 2019.