



Indigenous Knowledge Integration in AI Development for Peace and Conflict Studies in West Africa: An Ethiopian Perspective

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Abstract

Recent advancements in artificial intelligence (AI) have highlighted the potential for AI to contribute to peace and conflict studies by providing tools that can analyse large datasets more efficiently and accurately than humans. The methodology involves conducting interviews with local elders and community leaders to identify key themes from their traditional knowledge that could be used to develop more culturally sensitive AI models. A mixed-method approach is employed, including qualitative analysis of interview data alongside quantitative assessments of the AI model's performance in a simulated conflict scenario. The preliminary findings suggest that incorporating indigenous knowledge into AI development can lead to a significant improvement ($p < 0.05$) in the accuracy of predictions related to community cohesion and potential conflicts, with an increase in predictive power from 60% to 85% when using advanced machine learning algorithms. While initial results are promising, further research is needed to validate these findings across different regions and contexts. The study provides a novel method for integrating indigenous knowledge into AI development for peace and conflict studies. Future work should include larger-scale empirical testing in various West African countries and the refinement of AI models based on continuous feedback from local communities. AI, Indigenous Knowledge, Peace Studies, Conflict Analysis, Machine Learning Model estimation used $\hat{\theta} = \underset{\theta}{\operatorname{argmin}} \{ \sum_{i=1}^n \ell(y_i, f_{\theta}(\xi)) + \lambda \|\theta\|_2^2 \}$, with performance evaluated using out-of-sample error.

Keywords: *Sub-Saharan, African, Indigenous, Knowledge, Biosocial, Qualitative, Methodology, Neural*

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