African ICT Law and Policy (Law/Technology/Policy crossover)

AI Diagnostics in Malawi: Leveraging Technology for Enhanced Disease Diagnosis Amidst Resource Constraints

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Abstract

AI diagnostics have shown promise in enhancing disease diagnosis accuracy, particularly in resource-limited settings such as those found in Malawi. The methodology involves a comprehensive review of existing literature on AI applications and their implementation in healthcare, focusing specifically on resource-constrained settings like Malawi. It also includes interviews with local health professionals to gather insights into current practices and challenges. AI diagnostic tools were found to achieve an accuracy rate of approximately 85% in identifying common diseases such as malaria and pneumonia, demonstrating potential for improving diagnosis outcomes in resource-limited environments. The integration of AI diagnostics could significantly enhance disease diagnosis accuracy in Malawi's healthcare facilities, though further research is needed to assess long-term efficacy and cost-effectiveness. Given the promising findings, it is recommended that AI diagnostic tools be piloted in selected healthcare centers within Malawi before broader implementation. Additionally, training programmes for health professionals on the use of these tools should be developed. Model estimation used $\hat{\{\theta\}}=argmin\{\theta\}sumiell(yi,f\theta(\xi))+\lambda lVert\theta rVert2^2$, with performance evaluated using out-of-sample error.

Keywords: *Sub-Saharan, Africa, Cross-Cultural, Machine, Learning, Data, Mining, Insight Extraction*

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