

Designing a Governance Blueprint for Sovereign AI in Ghana's Public Institutions

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Abstract

This research examines Ghana's pathway to Artificial Intelligence sovereignty. AI sovereignty refers to a nation's ability to shape, deploy, and govern its AI ecosystems according to its own values, while maintaining strategic and operational control. The study addresses two questions: the gap between Ghana's current AI readiness and the threshold required for genuine sovereignty, and whether an AI embassy model, drawing on the precedent of Estonia's data embassy, could serve as a viable path to sovereign AI delivery. The study targets stakeholders across government, academia, the private sector, civil society, and international organisations, and aims to inform a strategic blueprint relevant to Ghana and to AI governance in the Global South more broadly.

Research Questions

1. What is the gap between Ghana's current AI readiness index score and the threshold required for AI sovereignty?
2. What is the relationship between the perceived viability of the AI embassy model and stakeholders' willingness to adopt it for Ghana's sovereign AI delivery?

Approach

The study combines qualitative literature review with primary data collected through the Delphi method, a structured technique for gathering expert forecasting insight. Structured questionnaires were administered to domain experts in Ghana's private technology sector. Responses were analysed inductively, allowing themes to emerge directly from the data rather than being imposed by a predetermined framework.

Emerging Themes

Early findings point to four recurring areas of concern. Infrastructure limitations, including local compute capacity and cloud reliability, constrain Ghana's ability to train and host AI systems domestically. Regulatory ambiguity remains significant, particularly around cross-border data protocols under existing legislation. Geopolitical trust is a live concern, with experts questioning whether international hosting partners would prioritise Ghana's interests during a crisis. Adoption is further shaped by commercial and resource constraints, including calls for tax incentives and clearer legal codification before capital is committed.

Contribution

This research aims to produce a governance blueprint that Ghana, and comparable economies in the Global South, can evaluate and adapt. It contributes to a still-emerging body of literature on AI sovereignty by grounding the concept in the practical realities of infrastructure, regulation, and stakeholder trust, rather than treating it as a purely strategic or economic construct.

Note: This is a summary of research in progress. Findings and recommendations may be refined as the study progresses toward completion.