

REVIEWER'S REPORT

Manuscript No.: IJAR-54226

Title: An Expert System Generator Incorporating Machine Learning Techniques (EGIMLT)

Recommendation:

Accept as it is ...√...

Accept after minor revision.....

Accept after major revision

Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality	√			
Techn. Quality		√		
Clarity		√		
Significance		√		

Reviewer Name: Dr. Sudeep Saraswat

Date: 8-10-25

Detailed Reviewer's Report

The project to develop **Kambi Expert**, an iconic expert system generator incorporating machine learning for preserving and exploiting traditional African medical knowledge, represents a significant and highly relevant continuation of the **GExpert+** work. The core innovation lies in addressing the dual challenge of **knowledge preservation** and **accessibility** for users, particularly those who are illiterate.

Strengths : Concept of the Kambi Architecture is given very significantly. The user interface with diagram illustration is done beautifully. Some technical issues are mentioned as below:

- **Crucial Societal Relevance:** The primary goal of preserving traditional African medical knowledge, which is largely oral and at risk of disappearance, is highly valuable. This effort contributes to cultural heritage preservation and potentially uncovers overlooked medical remedies.
- **User Accessibility (Iconic Interface):** The decision to use an **iconic interface** is a key strength, directly addressing the barrier of illiteracy common among potential users, such as traditional healers and rural populations. Previous work on GExpert+ and other HCI4D (Human-Computer Interaction for Development) projects confirms that non-textual designs (icons, images, audio) are vital for low-literate users.

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Weaknesses :

While the objectives are strong, the project outline presents several areas that require greater detail to fully evaluate the prototype's success and future viability.

Methodology Detail

The described three-stage methodology (theoretical research, prototype design, future experimentation) is too high-level. A more detailed breakdown is needed, especially for the ML and experimentation stages:

Machine Learning Integration:

Data Acquisition and Quality: How will the initial data for the ML module be sourced from oral/traditional knowledge? The success of ML relies on high-quality, standardized data, which is often lacking for IKS. Details on data representation (e.g., converting symbolic/iconic input into ML features) and data labeling/verification by domain experts are essential.

Ethical and Cultural Sensitivity: Any work involving IKS, especially in medicine, must address **data sovereignty, intellectual property (IP), and benefit-sharing**. The project must detail how it secures **informed consent** from the knowledge holders and ensures the community retains ownership and control over their digitized and extended knowledge base.

The **Kambi Expert** project is a **highly commendable and essential effort** at the intersection of AI, cultural preservation, and accessibility. The objectives of creating an iconic interface for illiterate users and incorporating machine learning for continuous knowledge update are sound and build logically on the GExpert+ foundation.