

REVIEWER'S REPORT

Manuscript No.: IJAR-54226

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

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

Recommendation:

Accept as it is
 Accept after minor revision.....
 Accept after major revisionX.....
 Do not accept (Reasons below)

Reviewer Name: Vijay Saravana Jaishanker

Date: 7/10/2025

Detailed Reviewer's Report

Clarity:

- There are a lot of grammatical and spelling errors. For example, the diagram in page 5 has a component called "Tracer" but it is called "Tracker" in the text. It is confusing about what is correct and what is wrong. There are too many to mention.
- Font is not consistent throughout the paper.
- There are non-english words like 'Nombre de cas' in the mathematical model section and in the diagram in page 5.

Methodology:

- The paper mentions an expert system will be build using expert knowledge of practitioners with knowledge in indigenous medicine in the '3- Knowledge extraction' section. But, nowhere in the paper does it explain how the knowledge is acquired from the illiterate practitioners.
 - It simply says "To extractknowledge, you first need to have data. This isprecisely the role of data extraction. Its job is to gather all the information, whereveritmaybe, and consolidate and convertitinto a single format." but does not explain how it is done in the paper or even the malaria example.
 - Please try to explain in detail how this is done so that this knowledge from old and illiterate practitioners can be preserved.
- The paper starts of as using the tool to suggest traditional medicine which is different from allopathic medicine based on patient needs. But, in the end it becomes a malaria detection tool. This detection can be trivially done by lab tests. There is no novelty there. It would be novel if the authors decide to suggest medicines based on user symptoms which are not regular english medicine but african traditional medicine.

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Scientific Rigor:

- There is a mathematical model where the authors say the prediction of the model would be a cumulation of $\alpha\text{MEX} + \beta\text{MU} + \gamma\text{MML}$ with $\alpha+\beta+\gamma=1$.
 - But there is no scientific or mathematical reason for using this model and it is oversimplified. It would be helpful if the authors give solid reasoning for choosing this mathematical model and the reason why they use the weightage of 50/30/20 as shown in page 7.
- Using african medicine is not always good and could be detrimental compared to OTC medicines. This [paper](#) is an example. The author could consider this and add that section to challenges if possible.
- Building an ML model to detect malaria with simple features like Fever and Chills etc is a very simple machine learning [project](#) in high schools which is very common. The author could come up with better novel solutions which are worthy enough to be published in a scientific journal like IJAR. The type of ML model is also not mentioned like KNN or Regression?
- The paper claims the expert systems like MYCIN are state of the art but it is almost 40 years old. In fact, all the papers and references used are atleast 10 years older. There are lot of advancements in this field like this [paper](#). Please use these latest references and enhance your paper.

Overall Contribution:

- There is no real world use-case since this is only a prototype as mentioned in the paper. Even if it is a prototype, some scientific data to back it up would be helpful.
- Using traditional african medicine could be helpful by exposing such rare techniques to the world to cure diseases. But, coming up with a novel way to collect information from such experts in the field who do not know how to use computers and a way to validate your diagnosis and treatment for patients would make this paper worthy enough to be published.