

Review of: "Enhancing Cocoa Crop Resilience in Ghana: The Application of Convolutional Neural Networks for Early Detection of Disease and Pest Infestations"

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Potential competing interests: No potential competing interests to declare.

The author introduced the importance of cocoa farming in Ghana and then aimed to review AI applications for cocoa disease/pest recognition. The title is fascinating; however, a large part of the contents did not cover the manuscript title. From the manuscript title, as well as the abstract, I understand the author is aiming to review AI applications in Ghana; however, a large part of the contents explains the general knowledge of CNNs. I recommend that the author write more about the situation in Ghana in the manuscript.

- Please consider changing the structure of the manuscript, e.g., merge "Introduction" and "Literature Review" as both introduce previous studies and background knowledge. If "Literature Review" is a part of the review results, please consider merging it into the "Results" section.
- Please add detailed information about "Methods," e.g., keywords used for database search; are conventional machine learning algorithms included?; are remote sensing technologies included? ... etc. Additionally, please add the related results, e.g., how many literatures were found in each database? the publication year of these literatures, ... etc.
- The author introduced the application of CNNs at "2. Literature Review" but introduces CNNs at "4.1. Understanding Convolutional Neural Networks". Please consider reconstructing the manuscript, e.g., introducing CNNs at first and then showing some applications of CNNs.
- "4.2. Application in Cocoa Disease and Pest Detection", although the title is about cocoa, most of the contents are general things. The author listed some citations to assist the discussion, however, these citations are not about cocoa. For example, Pesapane et al. (2018) is about medical imaging, Miracle (2023a) is about walnut fungi disease, Bahroun (2023a) is about the immense potential of GAI in reshaping education across various disciplines. I suggest the author change the section title or add more information about cocoa.
- ... etc

Throughout, I would recommend adding more content on the economic situation in Ghana, the state of cocoa cultivation, the demand potential for AI, and the current state of AI applications. I hope that this manuscript will be a valuable source of information on the current state of cocoa cultivation in Ghana and the AI applications used in Ghana.