

Comments and Suggestions for Authors

This is an interesting topic for the PEnsemble 4 model, a sophisticated machine learning framework 1 that integrates IoT-based environmental data to accurately forecast maize yield. Also, the PEnsemble 4 model establishes a new standard in maize yield prediction, revolutionizing crop management and protection through the synergistic utilization of IoT and machine learning technologies. For the benefit of the reader, I think the following improvements could be made:

1. The author emphasizes their innovation and contribution in the introduction section.

However, in reality, the innovative work mentioned by the author has already been related to long-term monitoring in the “Environment Remote Sensing”, and it is recommended to refer to it

2. Line666-754, to my knowledge, generally speaking, deep learning models may outperform common combinations of machine learning models. We suggest the author conduct a comparative study, such as comparing graph neural networks with current ensemble machine learning methods. Currently, there are many machine learning methods and deep learning methods that discuss influencing factors, which can be referred to for comparison.

3. Line834-854. The method proposed in this article needs to be further clarified in what kind of environment it is applicable to, and there may be complex nonlinear dependencies between actual environmental factors, so deep learning methods may

be better. Some relevant content explanation should be added in Limitations and Challenges.

4. Possible Future Works may be added in Limitations and Challenges, which is more appropriate.
5. Line 399-402, The author's overall analysis is good, however, some writing skills need to be strengthened. Some formulas should be referenced.
6. The Conclusion content is too long and not concise enough. It is recommended to simplify it.
7. In the Abstract section, “Ultimately , the PEnsemble 4 model establishes a new standard in maize yield prediction, revolutionizing crop management and protection through the synergistic utilization of IoT and machine learning technologies” , which is recommended to modify the “ propose a new solution”.
8. The innovation of the paper is relatively insufficient.