Review of: "Adoption of Machine Learning Methods for Crop Yield Prediction-based Smart Agriculture and Sustainable Growth of Crop Yield Production – Case Study in Jordan"

Dr shafique matin PhD[1]

1 Indian Institute of Technology Kharagpur, Kharagpur, India

Potential competing interests: No potential competing interests to declare.

The article titled "Machine Learning Approaches for Crop Yield Prediction" presents a valuable exploration of machine learning (ML) algorithms to predict crop yield, a critical area for ensuring food security and supporting economic systems. The research leverages nine ML regression models, with prominent results from XGBoost, multiple linear regression, Random Forest, and Lasso regression, which achieved notably low mean squared errors. The study combines these models to enhance prediction accuracy, supporting the effectiveness of an integrated approach in complex agricultural systems.

Areas for Improvement

Clarity in Model Explanation - While the study mentions combining models to develop a robust prediction model, more specific details on the integration process, model optimization, and evaluation metrics (beyond mean squared error) would add depth to the analysis.

Data Quality and Volume Discussion - The article could further discuss challenges related to data quality and volume, particularly how these issues were addressed to improve model accuracy and robustness.

Writing Quality and Flow - Certain sections contain verbose or repetitive phrasing, which may detract from readability. Refining these sections would enhance clarity, particularly in explaining technical aspects of the model.