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### Review Report

Date: 22-June-2024

Title: APPLYING MACHINE LEARNING ALGORITHMS TO DIAGNOSE BREAST CANCER: A COMPARATIVE STUDY

Authors: Harkesh Kumar and Kavish Tomar

Evaluation	Poor	Fair	Good	Very Good	Outstanding
Originality					√
Innovation					√
Technical merit					√
Applicability					√
Presentation and English				√	
Match to Journal Topic					√
<b>Recommendation to Chief Editors</b>					
	Strongly Reject	Reject	Marginally Accept	Accept	Strongly Accept
Recommendation					√
<p><b>Review Comments:</b> This study provides a comprehensive analysis of nine machine learning classification techniques for breast cancer detection, underscoring the significance of early diagnosis in improving patient outcomes. The use of diverse algorithms and two distinct data splits adds robustness to the evaluation process. The findings demonstrate that the Support Vector Machine (SVM) outperformed other classifiers, showing high accuracy, precision, recall, F1 score, and AUC values, while Classification and Regression Trees (CART) was the least effective. The study's results are statistically significant and offer valuable insights into the application of machine learning in medical diagnostics. Future research directions are well-articulated, emphasizing the need for larger and more varied datasets to enhance the clinical applicability of these findings. Overall, this research makes a significant contribution to the field of breast cancer detection through machine learning.</p> <p><b>Paper Accepted for publication in IJCET.</b></p>					