

Review of: "FLAML-Boosted XGBoost Model for Autism Diagnosis: A Comprehensive Performance Evaluation"

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Potential competing interests: No potential competing interests to declare.

The paper lacks substantial contributions. Simply applying XGBoost without comparing it to other baseline algorithms is insufficient for a comprehensive analysis. The performance evaluation is very basic, lacking a comparison between XGBoost baseline (without hyperparameter tuning) and XGBoost with hyperparameter tuning.

The paper suffers from poor writing quality, with several examples of unclear explanations. For instance, there should be a discussion on why FLAML was chosen, and the imbalanced data ratio has not been indicated by the authors. Furthermore, the potential negative effects of generating synthetic examples have not been addressed, which could lead to overfitting.

The dataset and processing section require more detailed explanation. For instance, the implications of A1_Score to A10_Score and the main differences between A1 and A10 need to be clarified. Moreover, the insights provided by A5 in the presence of severity should be elaborated.

The figure captions are missing, and the text explanations for the figures are poorly articulated. For example, Figure 1 briefly describes the ROC curve but lacks interpretation. The same issue persists with Figure 2 and Figure 3.

Based on these shortcomings, it is my opinion that the paper is not ready for publication and should be rejected.