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.

This paper proposes a hybrid method that leverages FLAML and XGBoost for Autism Diagnosis. Specifically, the medical dataset is imbalanced, and FLAML is used to tune the hyper-parameters of XGBoost.

Strengths:

- This paper is easy to follow.
- The experiment results seem good regarding various evaluation metrics.

Weaknesses:

- The motivation is questionable. Why use AutoML-based methods for imbalanced learning (IL) instead of using algorithms that are specifically designed for IL? Even if employing AutoML is reasonable, why use FLAML (since there are various AutoML methods and numerous hyper-parameter-tuning methods)? Also, why use XGBoost instead of other machine learning models, for example, LightGBM or CatBoost? The related analysis is missing in this article.
- Lack of novelty. The novelty of this article is weak since the author only employs FLAML for tuning the hyper-parameters of XGBoost. Moreover, how the imbalance problem is solved? This article seems unclear regarding this issue.
- No comparison algorithms. There should be comparison approaches in the experiment section to validate the effectiveness of your contribution and at least quantitively show that your model is superior in some aspects.
- Some details of the dataset are is missing. For example, how many features are there in the dataset? What is the imbalance ratio?