

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.

There is no innovation in the work. FLAML and XGBoost had been developed before. But work can be published if the author addresses the following Observations:

1. In the introduction section, brief information about Autism should be provided.
2. What motivates the use of FLAML? Why not another approach? kindly justify.
3. Kindly provide a brief review of previous works on ML for Autism diagnosis.
4. Section 2 discussed the dataset should be separated from the Method used for data preprocessing.
5. There should be a section for methodology where all the methods used will be discussed in detail. Their procedures and algorithms will be well presented.
6. In section 3, you claimed FLAML was used to solve the class imbalance in the dataset, what of the RandomOverSampler technique you explained in section 2? There is a need for clarification.
7. There is a lot of Tautology in the write-up. Please kindly rework it.
8. The last paragraph of section 3 needs re-work. "In this improved version, **the text is rephrased to enhance readability and maintain a consistent writing style.** The use of "Furthermore" strengthens the connection between FLAML's ability to handle imbalanced classification tasks and the improved model's performance. **The addition of the sentence regarding interpretability highlights the value of the combined FLAML-XGBoost approach in providing insights into the underlying features influencing the classification process.**"

What did you intend to express in those highlighted sentences?

9. Figure 1, 2 and 3 should be labelled.
10. You did not compare the result of this research with previous work in literature, to ascertain whether there is improvement.
11. Remove the code in the write-up. You can create a GitHub link for the code and present the link as an appendix.

With the above observations, the work needs major review.

