

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.

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

- The authors should provide a more comprehensive description of the dataset used for autism diagnosis, including information on the number of samples, the distribution of positive and negative instances, and any preprocessing steps applied to handle the class imbalance. This will improve the readers' understanding of the dataset's characteristics and the specific challenges faced in imbalanced classification.
- The authors should compare the performance of the XGBoost model with other existing approaches or benchmark results in the field of autism diagnosis. This comparative analysis will provide a clearer assessment of the proposed AutoML technique's efficacy and its advantages over alternative methods.
- Given the importance of interpretability in medical diagnosis, the authors should discuss the interpretability and explainability of the XGBoost model. Explaining how the model's decisions are derived and providing insights into the features contributing to the classification results will enhance the paper's practical relevance and applicability.
- Enrich your work by citing recent published work such as

<https://doi.org/10.58496/MJBD/2021/001>

<https://doi.org/10.58496/MJBD/2021/005>

In addition to the above comments, I need the authors working on these comments:

1. Reorganize the abstract to conclude:

- Background and Context of the study
- the research problems you investigated
- The overall purpose of the study.
- The basic design of the methodology.
- Major findings or trends found as a result of the study.

- A summary of your interpretations and conclusions.
- 2. All abbreviations must be introduced at first mention. Consider the abstract independently. Only recheck it, please.
- 3. The Introduction should have valuable aspects such as motivation, problem, challenges, the significance of the study... etc. All these are disappearing. Therefore, the introduction needs to clarify the (1) motivation, (2) challenges, (3) contribution, (4) objectives, and (5) significance/implication of this systematic. All the information (should be) presented in sequence idea.
- 4. I can see that the presented tables lack analysis. The authors should add a brief description and provide an analysis of the results in these tables to be clear for the readers.
- 5. What are the limitations of the presented study? I missed this part.
- 6. Double-check for grammar, typos, and abbreviations.
- 7. Improve the English language by profession. Improve Your Style in Academic Writing
- 8. A Lot of studies have been published in the literature. What is new in this work? The authors should prove the novelty and originality of the presented work.
- 9. Rewrite the Conclusion and consider the following comments:
 - Highlight your analysis and reflect only the essential points for the paper.
 - Mention the benefits
 - Mention the implication in the last of this section.
- 10. Remove the duplication between abstract and Conclusion.