

# 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.

Dear Dr. Dheiver Santos,

I have completed the review of your manuscript. The subject is very interesting however, several items are missing:

Abstract: it lacks structure

Materials and Methods

1. The origin of the data is unclear. Therefore, ethical clearance is required in studies dealing with human/ patients data.
2. The description of the data set is inadequate. The overall sample size, the degree of imbalance, number of features and their nature.
3. As a medical doctor, the variables described in this section may introduce bias such as results of previous tests and the grading of the autism spectrum diagnosis. On the other hand, ethnic group and country, age
4. Comparison with benchmark and simple algorithms is desired in similar studies.

Results

1. Why didn't you present the feature ranking according to their importance?
2. The calibration curve indicates bias as a significant number of predictions are around the 0.5 cutoff (like a coin toss) whereas there is a large number of predictions with probabilities <0.95
3. The Medical datasets are truly imbalanced but the results displayed in the confusion matrix indicate that the validation test sample (20%) used from the original data was nearly balanced 107 vs 99
4. You said that you used precision-recall curve but it is missing from the results.
5. Figures lack description

Best regards,