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

Ahmad Salim[1]

1 Middle Technical University

Thank you for your trust, and I hope that my contribution to this review supports the journal. With appreciation.

Through my review of the scientific paper, I would like to note the following observations:

1- In abstract

The first two lines must encompass the context of the study and the research problem, further two lines must be covered the objective of the papers with unfolding the description of the title. In the next 2 to 4 lines the methodology will be covered. Afterward, the next two lines are for result and performance. In these lines, the author must define how the results and performance are being achieved, for instance, by conducting either simulation or physical implementation. Please mention the name of the simulation or the physical method. The result statistics must be mentioned in the last two lines and either in percentage or with real-time values.

2- The introduction is very poor and does not provide a review of the basic concepts used in the paper.

3- The researcher focuses on the problem of data imbalance and the low number of negative autism cases compared to positive cases, but does not indicate the actual difference or ratio between the two.

4- The researcher did not review or analyze previous related works.

5- The research methodology and the use of machine learning in addressing the imbalance issue are not thoroughly discussed or explained, without any details about the model.

6- In this type of data, and due to the significant imbalance between certain cases, machine learning models tend to be more suitable in most cases. In this work, the results are not thoroughly reviewed and discussed, and the justification for these results and the impact of the proposed method on solving the problem are not explained.

7- The figures in the paper are not labeled.

Based on the aforementioned weaknesses and the poor scientific contribution of the paper, I recommend rejecting the research and not publishing it. The paper needs a complete reconsideration.

Thank you once again.

Best regards.