Review of: "A Simple Preprocessing Method Enhances Machine Learning Application to EEG Data for Differential Diagnosis of Autism"

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Potential competing interests: No potential competing interests to declare.

The article is devoted to the actual task of identifying autism. The article has scientific novelty and great practical significance. The proposed approach is logical, and the results are obvious. However, it is not entirely clear from the text of the article which groups were selected (children/adults) - therefore, it would be worthwhile to outline at the beginning of the work the parameters of the selection of certain data, in particular the age of the patients, especially in the context of the title of the article. Also, it is not entirely clear from the publication why the data was divided 50/50 (and not, for example, 70/30 or 60/40). It would be interesting to conduct additional research on such distributions and show whether the size (in particular, increase/decrease) of training and validation datasets affects the prediction result. The authors should add all optimal parameters for all investigated preprocessing methods. Also, it would be good to present a visualization of the problem at the beginning of the article (for example, the percentage values of the correctness/falseness of the diagnosis or, again, the general distribution of diagnoses according to age or gender categories). Also, it is not clear what the initial prediction percentages were, and whether the preprocessing described in the article made it possible to increase them. The conclusion should be expanded using: 1) limitations of the proposed approach; 2) prospects for further research.