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 paper presents an alternative pre-processing approach to EEG data based on a novel algorithm applied to raw data to detect topological EEG features. The assumption is that brain connection abnormalities can be detected through a specific mathematical topological approach, which is able to compare the minimal structure of functional networks beneath scalp electrodes.

To enhance the manuscript's clarity and readiness for publication, the following major changes are suggested:

1- The Abstract looks more like an introduction. It does not provide a brief of the methodological details.

2- The contributions should be enumerated at the end of the introduction.

3- The related works must be better organized, and a more effective comparison highlighting the lack of each one, correlating with the main research problem emphasized in the current research.

4- A table comparing all research and specifying the main attributes could help, or the creation of a subsection Problem Statement.

5- The figure 1 represents a table, so it is preferred to change it to a table.

6- More recent approaches should be investigated and compared w.r.t. the proposed approach like Extreme Learning Machine, Kernel Principal Component Analysis (KPCA), Reduced Kernel Principal Component Analysis (RKPCA),...