

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.

Authors provide an interesting technique on how to preprocess EEG data for the differential diagnosis of Autism. In detail, they used a minimum spanning tree on the electrodes' distance matrix, measured as the Manhattan distance (MD).

1. Authors did not describe how MD was calculated from the EEG signal timeseries. Providing the math behind this step is crucial in order to fully understand the paper and to ensure replicability.
2. Regarding the minimum spanning tree (MST), it is known that there may be more than one MST for a given graph. How a specific MST, over potentially many, was chosen to be further considered by the classifier is unclear.
3. Dataset splitting criterion is not up to par; use 70:30 or 80:20.
4. Validation technique is unclear in the training process.
5. The text indicates the utilization of an artificial neural network (ANN) during the training-testing stage; however, Table 1 displays results achieved with the k-nearest neighbor (KNN) algorithm. This inconsistency is noteworthy and requires clarification.