Review of: "An Improved Hybrid Transfer Learning-Based Deep Learning Model for Alzheimer's Disease Detection Using CT and MRI Scans"

Abdelouahab Moussaoui[1]

1 Université de Sétif

Potential competing interests: No potential competing interests to declare.

The authors propose a hybrid transfer learning-based deep learning model that utilizes various pre-trained networks, such as ResNet50, VGG16, and DenseNet121, in combination with convolutional neural networks (CNNs). This model is applied to a large dataset to classify Alzheimer's patients into various stages, including early mild cognitive impairment (EMCI), mild cognitive impairment (MCI), late mild cognitive impairment (LMCI), and final Alzheimer's stage.

Deep learning models, particularly in healthcare, face challenges regarding interpretability. Understanding why the model makes specific predictions is crucial for trust and reliability in medical diagnostics.

The use of patient data, even anonymized, for training machine learning models raises ethical considerations. The paper should address how patient privacy and data security are maintained.

The paper should provide sufficient technical details to allow for reproducibility. This includes specifics about the training process, model parameters, and any data preprocessing steps.