Review of: "Prediction and Analysis of Structural Brain Health Indicators Using Deep Learning Models with Functional Brain Images as Input"

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This article addresses a novel problem of identifying biomarkers associated with aging by investigating the relationship between brain function and structure using deep learning models. The study introduces a model that expands the functions of a GNN from discrimination to regression in the field of neuroimaging. However, the model shows limited promise in predicting data at the base of the GM-BHQ distribution, achieving only a moderate positive correlation ($r > 0.6$) between the predicted and correct values. Overall, the idea presented in this paper is novel and interesting, and the article is well-written, easy to follow, and well-suited for undergraduate researchers. For instance, the thorough explanation of how the 5-fold CV was implemented in this study is clean.

Regarding the linear regression equation, it may be helpful to use more commonly used terminology used in machine learning for the response variable instead of referring to it as the "objective variable".

In the results section, it is unclear whether the order of the polynomial regression was determined solely based on the Akaike information criterion (AIC) or if other methods available in the literature were also compared."