

This paper is related to reviewing the manuscript titled "**Joint Classification and Regression with Deep multi task learning model using Conventional based patch extraction for brain disease diagnosis**"

This work offers DMTCNN, a revolutionary deep learning model that can detect the existence of brain illnesses while also quantifying disease-related variables like tumor volume or disease severity. DMTCNN successfully recovers shared information from picture patches using multi-task learning, improving its generalization and diagnostic accuracy. The model includes a clever edge detector for pre-processing and use convolutional neural networks to extract useful characteristics. This novel technique shows great promise for improving the early diagnosis and measurement of brain disorders.

Firstly, Although the proposed study is successful in terms of organization, presentation, content and results, major revision given in the following items need to be performed.

- 1) Improve the conclusion section, enhance the manuscript to convey the purpose, objectives, method and major findings (In abstract section, too).
- 2) Use abbreviations after the first use in the text, in the abstract and throughout the paper.
- 3) Complete the introduction and literature sections of the article by providing more similar studies from the years 2023-2024 and/or new and current studies that will attract the attention of the readers.
- 4) It would be better if it were explained a little bit which of the brain MRI images in Figure 2 reflects what and what it means.
- 5) The x and y axes of all figures between Figure 4 and Figure 10 are not clear. Therefore, it is not understood what results the deep learning architectures compared produce. The same situation applies to Figure 12.
- 6) 1-Fold or Fold-1? Let this situation be made consistent.
- 7) Why is the reference in Table 9 (Reference 21)? Were the results in this table not obtained by the authors?
- 8) The resolution of the figures giving the analysis results should be increased.
- 9) Clean the paper of English spelling and punctuation errors

My decision is major revision. I do not see any harm in publishing the manuscript once the above revisions are made.

Best regards.