Project 14 Peer Review

This project is interesting and very relevant. Your introduction really set the foundation for everything, in such a way that someone who may not know much about Alzheimer's Disease could still follow along. You established the relevance of your analysis – it's a solid introduction.

Your Analysis Report section was concise and easy to understand. Glad you provided sample images for us to look at. Your data handling explanations were also good. For example, how you handled the CDR levels – straight to the point and easy to follow.

Here are a few suggestions that I think will enhance your project:

- You did not get the results you hoped for, which is fine. It's a process. But I would suggest further exploration of more powerful neural network models. I have not worked with your kind of problem so I don't have specific suggestions, but I know there's tonnes of information out there on image processing. Strongly consider using python for this, if you haven't already.
- Consider having subsections for your Methodology section to help break up the paragraphs and make it clear what the overview of approaches is.
- I am curious about this part:

  "The CAE used 3 encoding layers, with 32, 16 and 4 filters. The kernel was 3x3 for the first 2 layers and 2x2 for the third layer. Max pooling was used between each filter. The third max pooling layer was used as the bottleneck and was decoded using the same structure as before. The activation functions 3 were linear for the 32 filter layers and Relu for the rest."

  How did you determine which activation functions, number of filters, etc. to use? Did you go through a hyperparameter tuning process or is there someone's work you referenced?

  The question crossed my mind because maybe CAE "underperformed" because its parameters did not go through an extensive tuning process – or maybe they did and you just left that part out.

Great project overall! I trust that the final results will be very informative.