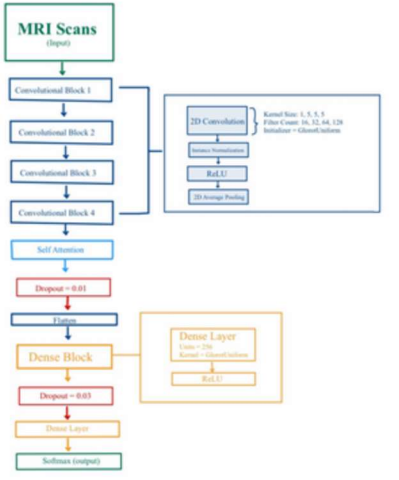
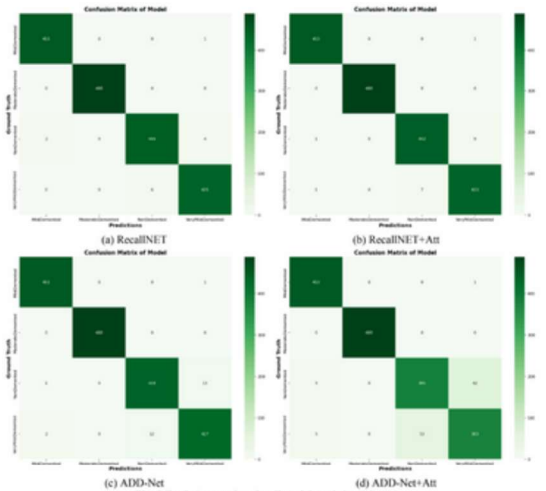
Introduction

Original plan	Roadblocks	New plan
Reduce kernel size in first convolutional layer Introduce instance normalization Implement attention layer Independent unbalanced dataset	Obtaining access to ADNI dataset Format of the MRIs in ADNI Implementing attention layer using parent paper's pre-existing syntax structure	Split the Kaggle dataset to use as an independent dataset Modify the syntax to implement the attention layer



RecallNET Novelty

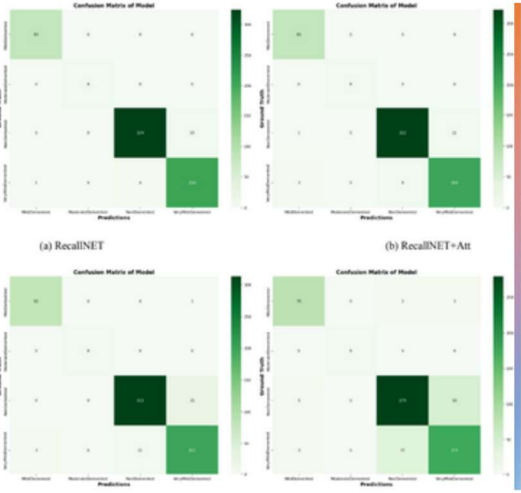
- Small kernel size within the first convolutional layer
- Instance normalization within the convolutional blocks
- Attention layer after the convolutional blocks
- Introduction of an independent, unbalanced dataset
- Ablation study to observe the impact of the attention layer



(a) RecallNET (b) RecallNET+Att

(c) ADD-Net (d) ADD-Net+Att

Fig. 5 Confusion matrices for all models on balanced test set



(a) RecallNET (b) RecallNET+Att

(c) ADD-Net (d) ADD-Net+Att

Fig. 6 Confusion matrices for all models on unbalanced dataset

Findings

- RecallNET represents the state-of-the-art model for AD classification focused on early detection
  - Performed better than baseline models on both unbalanced and balanced test data sets
- Ablation study on the addition of an attention layer
  - Found that it decreased evaluation metrics across both models