

Bi-Weekly Report (2/9/22~2/22/22)

Accomplishments

- Researched the concept of subject dependency
- Developed from scratch CNN model for MRI Tumor dataset classification
- Developed a SVM model from scratch for MRI Tumor dataset classification

Upcoming Goal

- Develop classifiers (CNN and SVM) for the FER-2013 Facial Expression dataset and MNIST Fashion dataset

Issue & Barriers

- CNN model has inconsistencies in accuracy when running model multiple times, ranging from 76% to 67%
- When calculating accuracy of the model utilizing `model.evaluate()` method vs calculating utilizing `model.predict()` from the `tensorflow.keras` library, the accuracies differ largely. 75% given by `model.evaluate()` and 59% given by the `model.predict()`. The assumption is possibly due to when utilizing `model.evaluate()`, keras applies additional preprocessing to the images to be the proper input to the model, this preprocessing aspect is not present in the `model.predict()` method.