Mohammed U, Jason A. Charles

CISC 3440

Check-In II

We are using the [Brain Tumor MRI Dataset](https://www.kaggle.com/datasets/masoudnickparvar/brain-tumor-mri-dataset). We haven’t written any code yet for the preprocessing part but we have an idea of some general steps that we need to take to prepare the training, validation, and test set.

1. We need 2 arrays for each dataset, one containing the image, and the other containing the label for that image.
2. We need to separate some of the training data into a validation set. We will leave the testing folder alone.
3. Then we should use data augmentation to slightly change the image (maybe its brightness and orientation)so that the model can account for potentially strange orientation and dark MRI images in the test set.
4. After obtaining a randomized image, the image should pass through a convolutional network, then into some fully connected dense layers, and finally into an outer layer with as many neurons as there are types of brain tumors (three and no tumor) which should use the softmax function.