CS472 Final Project

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Files

alexnet.py: Contains two implementations of AlexNet and one implementation of LeNet.

demo.ipynb: Jupyter notebook populated with the hyperparameters we tested. Imports all functions from the other files and will train and evaluate the models specified in main.py and generate loss and accuracy graphs. Use this file to run the models.

main.py: Creates the dataloaders used for training and contains the argument class used to adjust hyperparameters used in training. Models are initialized and the argument class is passed along with the model to run_model.py for testing.

make_dataset.py: Goes through the image and annotation directories to create a dataset which is used to randomly populate three dataloaders. The images are processed with torchvision and the chart type is extracted from the annotations and turned into an int.

resnet.py: Contains the implementations of ResNet. ResNet18, 34, and 50 are implemented.

run_model.py: Contains graphing and training code. Called by the main file for each model being tested.

Files not included:

For the code to run, the images must be stored in a folder called “data” with a subfolder called “train.” The “train” subfolder should have a folder called “annotations” with the json files, and an “images” folder for the jpg files. These files can be found at this link on the Kaggle website.