Possible homework questions

Do a test/train split where the dataset

Translate a pytorch network to Lightning.

Load an existing network and display its architecture in Tensorboard.

Derive the learning step for ReLUs , as was done for sigmoid and linear.

List and describe at least N different activation functions that were not discussed in class

Give a description of momentum and how Adam works.

Show the embedding space of the last layer of a network that does well on MNIST or FashionMNIST . Points need to be labeled. Which projection (TSNE or PCA) is better for this?

Run a network that is recurrent and see if it can handle that task in the LSTM paper (add two things together, separated by an unknown length sequence)

Make a convolutional network to do a speech recognition task like YES/NO.

Make an ADVERSARIAL EXAMPLE for some network…note, this would mean they’d have to understand how to do gradient descent on the input, rather than the network.