CS 51 Checkpoint 2

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Progress:

We finished writing the neural network code, and it is functional. We are currently training (using 100 epochs as recommended by the 181 pset), and are at ~99.95% with the training set and 100% with the validation set.
We ended up creating our own training and validation sets by generating images containing the alphabet typed in a wide variety of Microsoft Word fonts. The training set has 9000 characters and the validation set has 1000, just like the sets used in the pset. Preprocessing is completely done and functional with almost all fonts (besides those that overlap letters).

Problems:

We are concerned that we may have overtrained the neural network, because the performance percentages are so high.
What would the ideal percentages be, because we're up to 97% performance by the 7th epoch and 100% by the 51st, but are still running 100 epochs (per the pset). What's ideal?
Our other issue is with how to actually run the neural network after we train it. Should we just be changing the neural_net_main file to include functions for taking in a file name? Or should we be making a new file that has those functions in it?

Teamwork:

We've been meeting every week in pairs and with all four of us to discuss progress and figure out any issues. Kim and Lisa mainly worked on implementing the neural network and Diane and Amna worked mainly on the pre-processing. We've all been working together to prepare the training/validation sets. We've been using git to work on the project together. There haven't really been any problems as we work pretty well together.

Plan:

Now that the preprocessing and neural network are both functional, we need to connect the two. We need to write the function to run the neural network without training, and to output a text file.

We’re adding lowercase letters to the neural network, since the only additional work this would entail is making another training set