**Artificial Intelligence**

**Fall 2020**

**Project #2**

**Grading Sheet**

Name: Allister Liu

Email: liu14@cooper.edu

Grade: 85

Notes:

I had to include a couple of additional header files to compile on my computer (<cstring> in one file and <iomanip>) in another. That's compiler-specific, no points off for this.

Your program's weights and results match mine exactly for my tests.

Next, I want to test my program on your dataset. You were supposed to include a short writeup about it, but I cannot find one. There is no separate email attachment, and no document or readme file in your dataset folder or other folder. By searching for a filename, I can find what I believe is the dataset online (I assume it is the "Oxford Parkinson's Disease Detection Dataset"). That's fine - it seems interesting although small; but you were supposed to explain how you converted it for use with our neural networks.

Next, I want to test my program. It is obvious which are your initial neural network, trained file, results, training and test sets, based on filenames. However, your trained file is called NNparkinsons.1.200.trained, and your results file is called NNparkinsons.1.300.results. I assume you used .1 as the learning rate, but did you train for 200 epochs or 300 epochs! This was also supposed to specified in the writeup.

I train for 200 epochs, and my results match yours exactly. Then my testing matches your results as well, so the filename for your results file is presumably wrong.

Looking at the results file, everything is predicted to belong in the 0 category! You may have thought results were OK because of the metric scores, but this is trivial; the program is not learning at all, and it is predicting that everything belongs in the same category (the larger of the two choices). You needed to do experimentation! You need to try different numbers of hidden nodes and experiment with hyperparameters. Looking at the values in the training and test set files, some columns have very large values and others very small; so you also need to do normalization (I discussed in class the sample method I used for the wdbc dataset).

I am giving you full points for correctness (80/80), but only 5 out of 20 for the dataset (5/20). You are getting some dataset points for sending files. However, you sent no writeup describing either the dataset or how you converted it; you sent no explanation of your hyperparameters, and one of the filenames was inconsistent so I had to guess; and your results are trivial.