Computational Intelligence and Applications / NCTU Spring 2017
Program Assignment #1 (due: 4/9/2017)

You can use any programming language and platform of your choice: C++, C#, Matlab, Java, python, ... I will not actually run your code.

The goal of this program assignment is to let you implement multi-layer perceptrons and experiment with them as classifiers.

Simple datasets are provided with the assignment. You can also look for or build your own datasets for experiments. I may add some new datasets during the period of this assignment. You are not required to use every dataset provided.

You need to do experiments with your MLPs. Try to change things and see what happens. You can also experiment with the various techniques discussed in the class (data normalization, learning rate adjustment, momentum, etc.) and see their effects on the learning process.

You need to submit a report (limited to 10 pages) describing

- Methods you have implemented.
- Experiments you have done, and the results.
- Analysis - Are the results what you expect? Why?

Include your code listing as an appendix of your report. The code should be well documented. The code listing is not included in the 10-page limit.

Submit your report electronically through e3.

The grading is based on the following:

- Correctness of your implementation
- Quality of your experiments and analysis
- Quality of your presentation
- Quality of your code and documentation

Late submission policy: 10% credit deduction for each day late; up to 7 days late accepted.

Note: You are only required to submit 3 of the 4 programming assignments that will be posted. So you can choose not to do this one, which means that you will need to do all the other three.