Home Assignment 1 (10 points)

Due on: 5 pm, Feb. 8th, 2020

Late policy: late submission will **not** be marked (no matter what reason)!!!

# Description

1. To learn how to use the ELM to train a single-layer network
2. To learn how to use the BP algorithm to train a multi-layer network

# Requirement

* (5 points) Repeat the computer experiment mentioned in the class by using the BP algorithm. This time, however, students need to design a four layers network and carefully train the network with one classification dataset selected from the UCI dataset library. (<https://archive.ics.uci.edu/ml/datasets.php>). Provide your testing accuracy on the selected dataset.
* (3 points) Select the same classification dataset used in the above. Then design a single-layer network trained by a fixed ELM method. Provide your testing accuracy on the selected dataset.
* (2 points) Discuss how your training parameters have been set, including learning rate, learning momentum, number of hidden neurons, learning epoch, etc.
* If TAs find a high similarity rate, the assignment will be marked as zero. The instructor will also report it to the University for a further penalty. (<https://www.lakeheadu.ca/faculty-and-staff/departments/services/provost-vice-president-academic/academic-integrity-plans-policies/academic-dishonesty-regulations>)