[Pre-Lab] Feedforward Neural Network (FFNN)

Jae Yun JUN KIM*

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Pre-Lab due: Before the end of today lab session
Remark:

- Only groups of two or three people accepted (preferably three).
- Finish Pre-lab tasks before the coming lab session.
- Remember that you will need to finish your lab task during the lab session.
- No make-up lab is possible.
- No plagiarism. If plagiarism happens, both the "lender" and the "borrower" will have a zero.
- Code yourself from scratch. No lab work will be considered if any ML library is used.
- Do thoroughly all the demanded tasks.
- Study the theory for the questions.

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1 Pre-Lab (Do this before lab session)

1. Download the data stored in the file `data_ffnn_3classes.txt` available on the course website. This dataset consists of three columns: $x1$, $x2$ and y. Notice that this is a multi-class problem (in particular 3 classes).

2. Note: Use all the given data as training data.

3. Implement the forward propagation of a feedforward neural network (FFNN) consisting of three layers, in which the hidden layer has K neurons (at your choice). Remember you need to arrive to show the error results (i.e., define X, $\overline{X}$, V, $\overline{\overline{X}}$, F, $\overline{F}$, W, $\overline{\overline{F}}$, G, and E).

*ECE Paris Graduate School of Engineering, 37 quai de Grenelle 75015 Paris, France; jae-yun.jun-kim@ece.fr