Data Mining: Practical Assignment #4 (pre-sheet)

Due on Thu & Fri, May 22-23 2014, 10:15am-13:15 & 14:15am-17:15

Pre-Task 1

This is a precursor for the upcoming practical courses, so that you can prepare the topics with the according literature at home. The assignment sheets will be handed out in the practical course to be solved there. The sheets will be uploaded in the Data Mining Commsy-room after the Friday group.

For the Data Mining Practical Course on Thursday (22.05.14) and Friday (23.05.14) inform yourself or, respectively, recapitulate the following topics:

1. Computations with Artificial Neural Networks, i.e. understanding the concept of perceptrons and (perceptron-) learning.

2. Extension of learning mechanisms in a Multi-Layer-Perceptron (MLP), especially the backpropagation algorithm.

In the next practical course we will propose the use of the python scripting language. Therefore, a short tutorial will be given in the beginning of the courses. However, we will offer Matlab code as usual.

Recommended literature:

1. Han J. & Kamber, M. Data mining: Concepts and techniques. Elsevier/Morgan Kaufmann, Amsterdam, 2006.

2. Rojas, R. Theorie der neuronalen Netze : eine systematische Einführung (also available in English). Springer, Berlin, 1996.

3. Haykin S. Neural networks and learning machines. Pearson, NJ, 2009.

Interested students are encouraged to also search for some initial tutorials on Python.