

**BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI
HYDERABAD CAMPUS**

CS F407/EA C461: Artificial Intelligence

Assignment No: 3 Marks: 6 Date of Sub.: 21/11/2015

Problem 1: Build a Back Propagation Neural Network (BPN) to solve the exclusive OR problem as given in Section 10.3.3 (Luger). The second artificial neural network you should build is a Multilayer Perceptron (MLP) Network for the same XOR problem. You can decide upon an appropriate number of hidden layers and an appropriate number of neurons in these hidden layers for this MLP design. Although it is not a good idea to solve non-linearly separable problems using Perceptron, the second ANN will give you exposure to Perceptron networks. Compare the convergence speeds of both the ANNs that you have built in this problem. You are free to use any tool or language of your choice which should have an inbuilt API or implementations of these types of ANNs such as WEKA, Rapidminer, R etc.

Submission Instructions:

- Pl keep the same grouping/team as that in Assignment no. 2
- Pl submit through Course management system (CMS)
- For any queries related to this assignment you may mail to h2014103023@hyderabad.bits-pilani.ac.in
- Demos for Assignment 2 and Assignment 3 will be combined (will be conducted at onetime) and will start from 22/11/2015.
- This is the last assignment for the course.



Instructor In-Charge

(CMS and CSIS N/B, Posted on 13.11.2015)