

Multilayer Perceptron

Ilja Livenson

16.10.2006

Multilayer perceptron (MLP) is considered to be a classical example of neural network. From the design perspective it consists of a single input layer, one or more hidden layers and a single output layer. The elements of the layers are single neurons. The signal goes from the input layer via hidden layers to the output layer. Communication is only allowed between the $n - 1$ and n 'th layer. Because of that MLP is also called "Multilayer feed-forward network".

MLPs have a powerful generalisation ability which however might be lost due to the "overfitting" of the network, when the network becomes too dependent on the training set. A common example that demonstrates the might of the MLPs is the solution of the XOR-problem, a linearly unsolvable problem.