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The goal of a feedforward network is to approximate some function f*. For example, for a classifier, y = f*(x) maps an input x to a category y. A feedforward network defines a mapping y = f(x;θ) and learns the value of the parameters θ that result in the best function approximation.
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In machine learning, backpropagation (backprop, BP) is a widely used algorithm in training feedforward neural networks for supervised learning.Generalizations of backpropagation exist for other artificial neural networks (ANNs), and for functions generally – a class of algorithms referred to generically as "backpropagation". In fitting a neural network, backpropagation computes the gradient ...
Feedforward neural networks are artificial neural networks where the connections between units do not form a cycle. Feedforward neural networks were the first type of artificial neural network invented and are simpler than their counterpart, recurrent neural networks. They are called feedforward because information only travels forward in the network (no loops), first through the input nodes ...
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Network training. Feed-forward networks are trained using iterative gradient descent type of algorithm. Additionally during single forward pass only subset of the data is used called batch. Process is repeated until all training examples are used. This is called an epoch. After every epoch MXNet returns training accuracy:
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1. IEEE Trans Neural Netw. 1994;5(6):989-93. Training feedforward networks with the Marquardt algorithm. Hagan MT, Menhaj MB. The Marquardt algorithm for nonlinear least squares is presented and is incorporated into the backpropagation algorithm for training feedforward neural networks.

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