Backpropagation Demos
A Backprop Learning Tool for Function Approximation

by Paul Watta, Mohamad Hassoun, and Norman Danneg (1996)

The following applet can be used to experiment with backprop learning for function approximation problems. You can choose an underlying function to be approximated, then choose a number of training samples, network size, and learning rate. It is interesting to observe the generalization that the multilayer neural network achieves as a function of training cycles. In a recent paper (see below) we have advocated a method to stop training early in order to achieve good generalization. This method of training does not require three separate data sets: training, testing, and validation, as required by the method of cross-validation.
http://sund.de/netze/applets/BPN/bpn2/ochre.html
A convolutional neural network is a type of feed-forward neural network where the individual neurons are tiled in such a way that they respond to overlapping regions in the visual field. Convolutional networks were inspired by biological processes and are variations of multilayer perceptrons which are designed to use minimal amounts of preprocessing. They are widely used models for image-recognition.