Abstract

A Data Structure and a Method for Using the Data Structure

A method is proposed of generating a data structure that comprises a plurality of modules containing neurons. Each module performs a function defined by the neurons. The modules are structured hierarchically in layers, in a bottom-up manner. Competitive clustering is used to generate the neurons. In the bottom layer, the neurons are associated with data clusters in training data, and in higher layers the neurons are associated with clusters in the output of the next lower layer. Hebbian Association is used to generate "connectivity" data, by which is meant data for pairs of the neurons (in the same layer or in different layer) indicative of the correlation between the output of the pair of neurons.

[Figure to print with the abstract: Figure 2c]