Dynamic-node neural network architecture learning: a potential function approach

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We present a novel method for data clustering which performs classification based on a set of potential fields synthesized over the domain on input space by a number of potential function units. We propose DYPOF (DYnamic POtential Functions) neural network, which is based on radial basis functions neural networks (RBFN). A fundamental component in building DYPOF is a potential function entity (PFE), which generates a respective potential function over the input space, characterizing the distribution of training set via adjusting the weights and the parameter vectors.