Abstract

Feedforward Neural Network (FFNN) is a surrogate of Artificial Neural Network (ANN) in which links amongst the units do not form a directed cycle. ANNs, akin to the vast network of neurons in the brain (human central nervous system) are usually presented as systems of interweaving connected "neurons" which exchange messages between each other. These connections have numeric hefts that can be adjusted and grounded on experience, enforcing adaptively on neural networks to inputs and learning capabilities. This paper presents a comprehensive review of FFNN with emphasis on implantation issues, which have been addressed by previous approaches. We also propose a theoretical model that exhibits potential superior performances in terms of convergence speed, efficient and effective computation and generality than state of the art models.


38. S. Haykin and R. Lippmann, "Neural Networks, A Comprehensive Foundation,"


52. D. Ciresan, U. Meier, and J. Schmidhuber, "Multi-column Deep Neural Networks for Image Classification Supplementary Online Material."


77. K. Hornik, M. Stinchcombe, and H. White, "Universal approximation of an unknown


Index Terms

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Keywords

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