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A NEW TRAINING APPROACH FOR NEURAL NETWORK CLASSIFICATION

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This paper proposes a new learning method of Neural Network for classification problems. Back propagation (BP) is now the wide spread procedure which, in order to have some advantages, often used simple training algorithm for artificial neural networks. However, it is generally known that it is very slow if it does at times converge, especially if the network size is not too large compared to the problem at hand. The main problem with BP algorithm is that it has a constant learning rate coefficient and its convegence affects to the initial weights of the training network. In this paper used a dynamic change of learning rate coefficient (super SAB-Self-Adaptive back propagation) based on the nature of the gradient surface. The approach has been presented utilize the statistics features of the datasets, especially the distance of pattern from centroid class as well as π function, to start up as initially connection weights of the network. The experimental results have got better than the standard BP and most quickly decreased error of BP.

References

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