Abstract

In this paper, an algorithm is suggested to train a single layer feedforward neural network to function as a heteroassociative memory. This algorithm enhances the ability of the memory to recall the stored patterns when partially described noisy inputs patterns are presented. The algorithm relies on adapting the standard delta rule by introducing new terms, first order term and second order term to it. Results show that the heteroassociative neural network trained with this algorithm perfectly recalls the desired stored pattern when 1.6% and 3.2% special partially described noisy inputs patterns are presented.

References

Enhancing the Delta Training Rule for a Single Layer Feedforward Heteroassociative Memory Neural Network

Index Terms
Computer Science  Artificial Intelligence

Keywords
Associative memory  neural network  partially described input patterns  delta
adaptation rule.