Abstract

This paper analyzes the Hopfield neural network for storage and recall of fingerprint images. The paper first discusses the storage and recall via hebbian learning rule and then the performance enhancement via the pseudo-inverse learning rule. Performance is measured with respect to storage capacity; recall of distorted or noisy patterns. Here we test the accretive behavior of the Hopfield neural network.

References

Implementation of Hopfield Neural Network for its Capacity with Finger Print Images

5. N. Davey, S.P Hunt, “The Capacity and Attractor Basins of Associative Memory Models”.
23. B. Yegnanarayana, Artificial Neural Networks.

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27. M. Brown, J. Austin, “Invariant Pattern Recognition Using Binary Neural Networks”.


Index Terms

Computer Science Image Processing

Keywords

Hopfield Neural Networks, Associative memory, Pattern storage and recall, Finger print images.