

Invariant Object Recognition Using a Distributed Associative Memory

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Abstract:

This paper describes an approach to 2-dimensional object recognition. Complex-log con(cid:173) formal mapping is combined with a distributed associative memory to create a system which recognizes objects regardless of changes in rotation or scale. Recalled information from the memorized database is used to classify an object, reconstruct the memorized ver(cid:173) sion of the object, and estimate the magnitude of changes in scale or rotation. The system response is resistant to moderate amounts of noise and occlusion. Several experiments, us(cid:173) ing real, gray scale images, are presented to show the feasibility of our approach.