Abstract

Individual micro calcifications are difficult to be detected as they are variable in shape and size and may be embedded in areas of dense parenchymal tissues. One of the most important problems of medical diagnosis, in general, is the subjectivity of the pattern recognition by diagnosis experts. This is due to the fact that the results are depended on the interpretation of the input from the patients but not on systematic procedure. In this paper, an adaptive neuro-fuzzy model optimized by PSO algorithms has been proposed. The symptoms and signs are gathered and the fuzzy membership values are defined. Feed forward multilayer networks are used to accept the fuzzy input values and is trained using back-propagation algorithm. The system is tested for detecting the micro-calcifications in breast sonograms. Later the results are compared for its performance.
Reference


Index Terms

Computer Science

Wireless

Key words

Sonograms

micro-calcifications

fuzzy systems

neural networks