Abstract

It is difficult to identify the abnormalities in brain specially in case of Magnetic Resonance Image brain image processing. Artificial neural networks employed for brain image classification are being computationally heavy and also do not guarantee high accuracy. The major drawback of ANN is that it requires a large training set to achieve high accuracy. On the other hand fuzzy logic technique is more accurate but it fully depends on expert knowledge, which may not always available. Fuzzy logic technique needs less convergence time but it depends on trial and error method in selecting either the fuzzy membership functions or the fuzzy rules. These problems are overcome by the hybrid model namely, neuro-fuzzy model. This system removes
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essential requirements since it includes the advantages of both the ANN and the fuzzy logic systems. In this paper the classification of different brain images using Adaptive neuro-fuzzy inference systems (ANFIS technology). Experimental results illustrate promising results in terms of classification accuracy and convergence rate.

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Index Terms

Computer Science
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Keywords

Fuzzy Logic   Neural Network   Anfis   Convergence Rate