عنوان مقاله:

A Fuzzy Classifier Based on Modified Particle Swarm Optimization for Diabetes Disease Diagnosis

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خلاصه مقاله:

Classification systems have been widely utilized in medical domain to explore patient's data and extract a predictive model. This model helps physicians to improve their prognosis,diagnosis or treatment planning procedures. Diabetes disease diagnosis via proper interpretation of the diabetes data is animportant classification problem. Most methods of classification either ignore feature analysis or do it in a separate phase, offlineprior to the main classification task. In this paper a novel fuzzy classifier for diagnosis of diabetes disease along with feature selection is proposed. The aim of this paper is to use a modifiedparticle swarm optimization algorithm to extract a set of fuzzy rules for diagnosis of diabetes disease. The performances of theproposed method are evaluated through classification rate, sensitivity and specificity values using 10-fold cross-validationmethod. The obtained classification accuracy is 85.19% which reveals that proposed method, outperforms several famous and recent methods in classification accuracy for diabetes disease diagnosis

کلمات کلیدی:

Diabetes disease diagnosis; Particle swarm optimization; Fuzzy classifier

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