Abstract

This paper proposes a novel application of Fireworks Algorithm in Artificial Neural Network training. Fireworks Algorithm is a recently developed Swarm Intelligence algorithm for function optimization. Fireworks Algorithm mimics the explosion process of fireworks. In this paper, Fireworks Algorithm is applied in training of Multi-Layer Perceptron for classification task in medical data mining. The classification task is carried out on 5 well-known medical data sets from UCI machine learning repository. A comparative study has been made with classical optimization algorithm Levenberg-Marquardt Method and another Swarm Intelligence algorithm Particle Swarm Optimizer. The experimental results show that the proposed method performs better than other algorithms in classification.

References


**Index Terms**

Computer Science

Algorithms
Keywords

Fireworks Algorithm, Artificial Neural Network, Medical Data Mining, Classification