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