Abstract

Feature Selection is a pre-processing step in knowledge discovery from data (KDD) which aims at retrieving relevant data from the database beforehand. It imparts quality to the results of data mining tasks by selecting optimal feature set from larger set of features. Various feature selection techniques have been proposed in past which, unfortunately, suffer from unavoidable problems such as high computational cost and getting stuck into the local optima. Evolutionary algorithms such as Particle Swarm Optimization (PSO) possess immense abilities to explore a large search space and rarely fall into local optima thus making them a nice choice for feature selection. In this paper, we have explored pros and cons of traditional and PSO based feature selection techniques and suggested some effective changes in existing approaches.


Particle Swarm Optimization based Feature Selection


Index Terms

Computer Science Information Sciences

Keywords

Particle Swarm Optimization (PSO), Evolutionary Algorithm (EA), Feature Selection (FS).