

Effect of fuzzy resource allocation method on AIRS classifier accuracy

Abstract

Artificial Immune Recognition System (AIRS) is immune inspired classifier that competes with famous classifiers. Many researches have been conducted to improve the accuracy of AIRS and to investigate the source of power of AIRS. Some of these researches have focused on resource allocation method of AIRS. This study investigates the difference between the accuracy of AIRS with fuzzy resource allocation and the accuracy of original AIRS, by using the reliable statistical method. The combination of ten fold cross validation and t-test was used as evaluation method and algorithms tested on ten benchmark datasets of UCI machine learning repository. Based on the results of experiments, using fuzzy resource allocation increases the accuracy of AIRS in majority of datasets but the increase is significant in minority of datasets.

Keyword: Artificial immune system; AIRS: Fuzzy resource allocation; Statistical evaluation