

عنوان مقاله:

Application of Fuzzy Association Rules-Based Feature Selection and Fuzzy ARTMAP to Intrusion Detection

محل انتشار:

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نویسنده:

خلاصه مقاله:

Intrusion Detection System (IDS) deals with very large amount of data that includes redundant and irrelevant features. Therefore feature selection is a necessary data pre-processing step to design IDSs that are lightweight. In this paper, a novel feature selection method based on data mining techniques is proposed which uses fuzzy association rules to obtain the optimum feature subset. In this research, the fuzzy ARTMAP neural network is used as the classifier to evaluate the goodness of the obtained feature subset. The effectiveness of proposed method is evaluated by experiments on KDD Cup99 dataset. According to the performance comparisons with some other machine learning methods that have used the same dataset, the proposed method is the most efficient on detection rate, false alarm rate and cost per example.

کلمات کلیدی:

Data mining, intrusion detection, en, Neural Networks, Feature Selection, Fuzzy association rules, Computer Networks, Fuzzy ARTMAP

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