

Evaluating Performance of an Anomaly Detection Module with Artificial Neural Network Implementation

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Abstract : Anomaly detection techniques have been focused on two main components: data extraction and selection and the second one is the analysis performed over the obtained data. The goal of this paper is to analyze the influence that each of these components has over the system performance by evaluating detection over network scenarios with different setups. The independent variables are as follows: the number of system inputs, the way the inputs are codified and the complexity of the analysis techniques. For the analysis, some approaches of artificial neural networks are implemented with different number of layers. The obtained results show the influence that each of these variables has in the system performance.

Keywords : network intrusion detection, machine learning, artificial neural network, anomaly detection module

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