

Jordan University of Science and Technology

LSC-CHAM: a New Algorithm for Intrusion Detection Systems

Authors: R. M. Duwairi, Fadi Tashtoush

Abstract: This paper introduces a new classifier, called LSC-CHAM, for intrusion detection systems. This classifier is based on the Local Sparsity Coefficient-mine algorithm (referred to as LSC-mine) [AE2004] and the CHAMELEON algorithm [KHK98]. The LSC-mine and the CHAMELEON were integrated to produce a new classifier that outperforms either of them when taken individually. Experiments were performed on a sample obtained from DARPA 98 dataset; this sample consists of 50,000 connections; about 10% of these connections are infected with intrusions. Conducted experiments show that the detection rate of LSC-CHAM is 75.12% and the false alarm rate is equal to 2.468%. The LCS-CHAM classifier performed well when compared with other known classifiers such as the SVM classifier.