Abstract

Intrusion detection system (IDS) is the science of detecting malicious activity across the computer network, as it is expanding, there is a challenge to compete with the malicious users or intruders who can easily break into the system. This paper put a light on performance analysis by J48 and Naïve Bayes algorithm to detect the error in intrusion detection system (IDS). Where Naïve bayes algorithm is based on probability and j48 algorithm is based on decision tree. The paper set out to make the comparative study of algorithms Naïve Bayes and J48 in the IDS data set to maximize the True Positive Rate and minimize the False Positive Rate using the WEKA Tool.

The paper is showing the experimental result about classification of accuracy, sensitivity and specificity on data set of IDS and also shows that J48 algorithm is much better than that of Naïve Bayes algorithm in terms of precision and accuracy.
Comparative Analysis of Naïve Bayes and J48 Algorithms on Intrusion Detection System (IDS)


6. https://towardsdatascience.com/naive-bayes-classifier-81d512f50a7c


Index Terms

Computer Science Security

Keywords

Naïve Bayes, J48 decision tree, NSL-KDD, confusion matrix, true positive rate, false positive rate and ROC Curve.