Abstract

Intrusion detection system (IDS) is one of the emerging techniques for information security. Security mechanisms for an information system should be designed to prevent unauthorized access of system resources and data. Many intelligent learning techniques of machine learning are applied to the large volumes of data for the construction of an efficient intrusion detection system (IDS). This paper presents an overview of intrusion detection system and a hybrid technique for intrusion detection based on Bayesian algorithm and Genetic algorithm. Bayesian algorithm classifies the dataset into various categories to identify the normal/attacked packets where as genetic algorithm is used to generate a new data by applying
mutation operation on the existing dataset to produce a new dataset. Thus this algorithm classifies KDD99 benchmark intrusion detection dataset to identify different types of attacks with high detection accuracy. The experimental result also shows that the accuracy of detecting attacks is fairly good.

References


Index Terms

Computer Science

Artificial Intelligence
Keywords

Intrusion Detection System (IDS)  Detection Accuracy  Bayesian classification
Genetic algorithms