Abstract

Millions of people and hundreds of thousands of institutions communicate with each other over the Internet every day. In the past two decades, while the number of users using the Internet has increased very rapidly. Align to these developments, the number of attacks made on the Internet is increasing day by day. Although signature-based detection methods are used to avert these attacks, they are failed against zero-day attacks. In this study, the focus is to detect network anomaly using machine learning methods. For the implementation of proposed classifier, the graphics processing unit (GPU)-enabled Tensorflow will be used and for evaluation purpose the benchmark KDD Cup 99 and NSL-KDD datasets will be used for its wide attack diversity. On this dataset, several different machine learning algorithms will be trained and tested to make the model robust and accurate.

References


Intelligence (SCI), Springer 2006, pp. 629-648.


**Index Terms**

Computer Science

Networks

**Keywords**

Anomaly detection, deep learning, auto encoder, PCA.