Abstract

Internet of Things is a networking concept where an object can transmit data over the internet without any human interaction. The object is usually a sensor with a communication device connected to internet. Popularity of Internet of Things increase with the advent of 5G technology;However, the threats to the system are so getting more intense. One of the serious threat to IoT system is known as denial of service (DoS) attack, which usually target broker service on that system. Several researches have been performed to overcome this DoS attack; however, the result of DoS detection system are still low. This study aims to provide a solution to the above problems by proposing an Intrusion Detection System (IDS) based on machine learning approach (Ensemble Learning, AdaBoost) for IoT System. The method used in this study is supervised learning which measures the accuracy of the prediction in detection DoS attack on IoT network data. Experiment have been carried out and achieve detection accuracy 95.84%, and F1-score 95.72%. Recall and precision have achieve 93.28% and 98.29%

Keywords: Ensemble Learning, AdaBoost,IDS, DoS, IoT.