Abstract

Due to a recent rise in internet usage, it has evolved into a tool for cyber crime activity. DDoS attacks are one of the cyber crimes that continue to occur frequently. The purpose of this attack is to weaken the victim's server. If the victim's server has been successfully compromised, several further attacks will be easier to execute and undoubtedly harm the victim. A DDoS attack prediction system is therefore needed in order to address this situation, at the very least allowing the victim to take the initiative when a fresh attack is begun. The goal of the research is to develop a DDoS attack prediction using a hybrid of the LDA (Linear Discriminant Analysis) and CART (Classification and Regression Tree) machine learning algorithms. The "DDoS attack SDN Dataset" was the dataset utilized in this study. It contains 104,345 data points and 23 data attributes, including labels. From the experiment results, standard CART accuracy 98.64% and execution time 0.9s , and CART hybrid LDA accuracy 73.56% and execution time 0.3s.

Keywords: DDoS, CART, LDA, Internet, Machine learning