Improvement of SVM by K-Mean for Intrusion Detection System

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Abstract:

The Internet is a crucial communication tool worldwide, with a growing need for secure networks. Intrusion Detection Systems (IDS) are utilized by administrators to protect against malicious activities by effectively blocking unknown connections. Traditional security measures like firewalls and antivirus software have limitations in preventing complex cyber threats. Machine learning plays a key role in enhancing IDS capabilities by learning attack patterns and adapting to new threats in real-time. Support Vector Machines (SVM) are popular for non-linear classification tasks like IDS. While IDS can detect known attacks, continuous updates are essential to identify new threats. Specific IDS characteristics play a significant role in recognizing specific attacks, making them more effective in detecting unknown threats. Overall, the study of IDS is crucial for enhancing network security, ensuring the safety of communications and data storage. Can you generate a question.

Keywords:

IDS, SVM, Real time detection.