IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 3, Issue 2, April 2023
Impact Factor: 7.301

Monitoring Network Traffic for Suspicious Activity

B. Ravi Teja[1], Josyabhatla Sreejani[2], Jonnada Sasidhar[3], Kalapala Devakiran[4], Gunna Revanth[5]
Faculty, Department of Computer Science and Engineering[1]
Students, Department of Computer Science and Engineering[2,3,4,5]
Raghu Institute of Technology, Visakhapatnam, India

Abstract: *An intrusion detection system investigates hostile behavior within a network or an approach. Software or a gadget called intrusion detection scans a network or system for an untrustworthy action. As computer connectivity increases, intrusion detection becomes increasingly important for network security. Many Intrusion Detection Systems have been built to defend the networks using statistical and machine learning technologies. Accuracy is a crucial factor in how well an intrusion detection system performs. To decrease false detections and boost detection rates, the accuracy of intrusion detection needs to be improved. In recent works, many strategies have been employed to enhance performance. The Intrusion detection system's primary task is to analyze network traffic data. To solve this problem, a structured classification system is needed. This problem is approached in the suggested manner. Classification methods are often used to address related issues. NSL-KDD knowledge discovery Dataset is used to evaluate the results of these systems. This research aims to find an efficient classifier that detects anomaly traffic with a high accuracy level and minimal error rate by experimenting with possible machine-learning techniques.*

Keywords: Intrusion Detection, Deep Learning approaches, anomaly-based network intrusion detection, Classifiers, NSL-KDD

REFERENCES

[1]. .H.Wang,J.Gu,andS.Wang,''An effective intrusion detection framework based on SVM with feature augmentation,'' Knowl.-Based Syst., vol. 136, pp. 130–139, Nov. 2017
[2]. Farah N. H et al. (2015). Application of Machine Learning Approaches in Intrusions Detection Systems. International Journal of Advanced Research in Artificial Intelligence. IJARAI. (9-18).
[3]. S. Revathi and Dr. A. Malathi, "A Detailed Analysis on NSL-KDD Dataset Using Various Machine Learning Techniques for Intrusion Detection," International Journal of Engineering Research & Technology (IJERT), Vol. 2 Issue 12, ISSN: 2278-0181, December – 2013 http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.680.6760&rep=r ep1&type=pdf
[4]. Wathiq Laftah Al-Yaseen , Zulaiha Ali Othman , Mohd Zakree Ahmad Nazri; "Multi-Level Hybrid Support Vector Machine and Extreme Learning Machine Based on Modified K-means for Intrusion Detection System", ELSEVIER, Expert System with Applications, Volume.66,Jan 2017,pp.296-303.
[5]. Hee-su Chae, Byung-oh Jo, Sang-Hyun Choi, and Twae-kyung Park, "Feature Selection for Intrusion Detection using NSL-KDD," Recent Advances in Computer Science, ISBN: 978-960-474-354-4 http://www.wseas.us/e-library/conferences/2013/Nanjing/ACCIS/ACCIS30.pdf.
[6]. Pinjia He, Jieming Zhu, Shilin He, Jian Li, and Michael R. Lyu; "A Feature Reduced Intrusion Detection System Using ANN Classifier", ELSEVIER, Expert Systems with Applications,Vol.88,December 2017 pp.249-247
[7]. Laheeb M. Ibrahim, Dujan T. Basheer and Mahmod S. Mahmod, "A Comparison Study for Intrusion Database (KDD99, NSL-KDD) Based on Self Organization Map (SOM) Artificial Neural Network," Journal of Engineering Science and Technology, Vol. 8, No. 1, pp. 107 – 119, 2013 https://core.ac.uk/download/pdf/25739889.pdf

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Impact Factor: 7.301
Volume 3, Issue 2, April 2023

[8]. Bhupendra Ingre and Anamika Yadav, "Performance Analysis of NSL KDD dataset using ANN," Signal Processing and Communication Engineering Systems (SPACES), 2015 International Conference, 2015, Page(s):92- 96

[9]. Verma P, Shadab K, Shayan A. and Sunil B. (2018). Network Intrusion Detection using Clustering and Gradient Boosting. International Conference on Computing, Communication and Networking Technologies (ICCCNT). (pp. 1-7). IEEE.