

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202011042949 A

(19) INDIA

(22) Date of filing of Application :02/10/2020

(43) Publication Date : 23/10/2020

(54) Title of the invention : ARTIFICIAL NEURAL NETWORK BASED MACHINE LEARNING INTRUSION DETECTION IN WIRELESS NETWORK USING FEATURE SELECTION

<p>(51) International classification :G06K 9/62 H04L 29/06 G06N 20/00</p> <p>(31) Priority Document No :NA (32) Priority Date :NA (33) Name of priority country :NA (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA</p>	<p>(71)Name of Applicant :</p> <p>1)Pushpa Gothwal, Amity University Rajasthan Address of Applicant :Amity University Rajasthan NH11C Kant Kalwar, RIICO Industrial Area, Jaipur Rajasthan India 303007 Rajasthan India</p> <p>2)Dr. I. D. Soubache, Rajiv Gandhi College Of Engineering and Technology</p> <p>3)Ankur Gupta, Vaish College of Engineering</p> <p>4)Dr. V. S. Bhagavan, Koneru Lakshmaiah Education Foundation Deemed to be University</p> <p>5)Dr. R. Prema, Hindusthan College of Arts and Science</p> <p>6)Dr. A.P. Jagadeesan, R.V.S. College of Engineering</p> <p>7)K Ranjit Kumar, Annamalai University</p> <p>8)K. Manikandan, Government Arts College - Autonomous</p> <p>9)Dhruvang Suthar</p> <p>(72)Name of Inventor :</p> <p>1)Pushpa Gothwal, Amity University Rajasthan</p> <p>2)Dr. I. D. Soubache, Rajiv Gandhi College Of Engineering and Technology</p> <p>3)Ankur Gupta, Vaish College of Engineering</p> <p>4)Dr. V. S. Bhagavan, Koneru Lakshmaiah Education Foundation Deemed to be University</p> <p>5)Dr. R. Prema, Hindusthan College of Arts and Science</p> <p>6)Dr. A.P. Jagadeesan, R.V.S. College of Engineering</p> <p>7)K Ranjit Kumar, Annamalai University</p> <p>8)K. Manikandan, Government Arts College - Autonomous</p> <p>9)Dhruvang Suthar</p>
--	---

(57) Abstract :

In this invention, a novel system is developed based on supervised machine learning which is able to classify network traffic whether it is benign or malicious. Best model is found based on success rate of detection hence feature selection method is integrated with supervised learning algorithm in this invention. Based on research Artificial Neural Network (ANN) is found to outperform than support vector machine (SVM) as the proposed invention involves machine learning along with wrapper feature selection in order to classify network traffic. Intrusion detection is the first step in prevention of security attack. Network traffic is classified by this system using both SVM algorithm and ANN algorithm by utilizing NSL-KDD dataset. It is found that success rate of intrusion detection for the proposed Artificial Intelligence based Machine learning algorithm for wireless network is comparatively efficient than SVM algorithm.

No. of Pages : 13 No. of Claims : 6