Email Classification using Machine Learning

Prof. R. Y. Thombare, Prathamesh Patil, Pranav Shelar, Omkar Dhakane, Krishna Chakor

Department of Computer Technology

K. K. Wagh Polytechnic, Nashik, Maharashtra, India

Abstract: *Email usage has become a fundamental means of communication for both businesses and personal use. Its widespread usability has also led to an increase in the volume of email data. While e-mails are necessary for everyone, they also come with unnecessary, undesirable bulk mails, which are also called Spam Mails. Email sorting has become a problem due to volumes and if not properly done could lead to inefficiency at work . Anyone with access to the internet can receive spam on their devices. Most spam emails divert people's attention away from genuine and important emails and direct them towards detrimental situations. Spam emails are capable of filling up inboxes or storage capacities, deteriorating the speed of the internet to a great extent. These emails have the capability of corrupting one's system by smuggling viruses into it, or steal useful information and scam gullible people. The identification of spam emails is a very tedious task and can get frustrating sometimes. Wasting time searching through unsorted emails could lead to vulnerability of spam and phishing attacks during that process. This project looks at a comparative research of Naïve Bayes, Neural Networks and SVM performance to classify emails.*

Keywords: Machine learning techniques, Neural Networks, Support Vector Machine, Naïve Bayes

REFERENCES

[1]. Hu, Y., Zhang, Y., Gong, D. (2021). Multiobjective particle swarm optimization for feature selection with fuzzy cost. IEEE Transactions on Cybernetics, 51(2), 874–888. DOI 10.1109/TCYB.2020.3015756.

[2]. Suryawanshi, Shubhangi&Goswami, Anurag & Patil, Pramod. (2019). Email Spam Detection: An Empirical Comparative Study of Different ML and Ensemble Classifiers. 69-74.10.1109/IACC48062.2019.8971582.

[3]. NaghmehMoradpoor, Benjamin Clavie, Bill Buchanan,"Employing Machine Learning Techniques for Detection and Classification of Phishing Emails", IEEE Computing Conference, pp 149-156, 2017

[4]. Dr.SwapnaBorde, Utkarsh M. Agrawa,Viraj S. Bilay, Nilesh M. Dogra, "Supervised Machine Learning techniques for Spam Email Detection", IJSART – Vol.3, Issue.3, pp 760-764,

[5]. 2017. AnjuRadhakrishnan, Vaidhehi V, "Email Classification Using Machine Learning Algorithms", International Journal of Engineering and Technology (IJET), Vol.9, No.2, pp 335340, 2017.

[6]. 4.Mohammad R, Mustafa A. A lifelong spam emails classification model. ApplComput Inform.2020; 18(1/2). doi: 10.1016/j.aci.2020.01.002.

[7]. Sharma S, Amit A. Adaptive approach for spam detection. Inter National J Computer Sci Issues(IJCSI). 2013; 10(4): 23.