Phishing Email Detection and Reporting System

Prof. Rahul P. Bembade[1], Diya Debbarma[2], Aparna Murkute[3], Varada Joshi[4]
Aditya Borawake[5]
Assistant Professor, Computer Science & Engineering[1]
Students, Computer Science & Engineering[2,3,4,5]
MIT ADT, Loni Kalbhor, Pune, India

Abstract*: Phishing attacks remain a significant threat to cybersecurity, compromising sensitive information and causing substantial financial losses. This paper presents a comprehensive phishing email detection and reporting system designed to identify and mitigate phishing attempts effectively. Leveraging a combination of machine learning algorithms and natural language processing, the system analyzes email content, sender reputation, and embedded URLs to accurately differentiate phishing emails from legitimate ones. Additionally, a streamlined reporting mechanism allows users to flag suspicious emails, enabling real-time feedback and continuous system improvement. Our approach demonstrates high accuracy and efficiency, outperforming several baseline models in both detection rate and speed. This research highlights the need for integrated phishing defenses in email systems and provides insights into how user reports can enhance detection capabilities. Future directions include refining model adaptability and implementing automated threat intelligence sharing across organizations.*

Keywords: Phishing, Real-time Feedback, High Accuracy