

# Advancement in Efficient Approaches for Detection of Prevalent Phishing Attacks

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## Abstract

Phishing attacks are thoroughly engineered attacks where the attackers use emails, messages, and websites of reputed sources as a medium to trick their targets into sharing sensitive content. This sensitive content primarily consists of their financial information, in the case of small attacks whereas some planned advanced attacks also target to obtain their login information. In the past few years, there has been a noticeable shift in attackers' priorities, moving away from targeting individuals and instead concentrating on the organization's employees. It is also observed that most cyber-attacks are the result of employee negligence. Due to the widespread availability of phishing kits and the expansion of ransomware as a service (RaaS), aspiring hackers now possess a straightforward method to defraud individuals. What is particularly worrisome about this growing trend is that individuals lacking technical expertise are engaging in such activities using simple tools and online instructional materials. Machine learning can help in recognizing different phishing attacks and patterns. We describe several classical algorithms to detect Phishing attacks. We aim to utilize machine learning techniques like Multilayer perceptron, Random Forest, XG Boost, and different classifiers for detection. This paper will compare various studies for detecting phishing attacks using each Artificial Intelligence technique: Deep Learning and Machine learning. In order to enhance our study, we have also listed various other conventional methods of detection that do not utilize the benefits of training through machine learning models.

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