A review of phishing email detection approaches with deep learning algorithm implementation

ABSTRACT

Phishing email is designed to mimics the legitimate emails to fool the victim into revealing their confidential information for the phisher's benefit. There have been many approaches in detecting phishing emails but the whole solution is still needed as the weaknesses of the previous and current approaches are being manipulated by phishers to make phishing attack works. This paper provides an organized guide to present the wide state of phishing attack generally and phishing email specifically. This paper also categorizes machine learning into shallow learning and deep learning, followed by related works in each category with their contributions and drawbacks. The main objective of this review is to uncover the utility of machine learning in general, and deep learning in particular, in order to detect phishing email by studying the literature. This will provide an insight of the phishing issue, the alternatives prior to the phishing email detection and the contrast of machine learning and deep learning approaches in detecting phishing emails.