

A review for a system to detect and notify phishing attacks in mobile phones

KKH Nethmini¹, NT Jayatilake², Thushara Weerawardane²

Department of Computer Science¹, Department of Computer Engineering², Faculty of Computing, General Sir John Kotelawala Defence University, Ratmalana, Sri Lanka

Abstract. Because of the advancement of technology, attackers have shifted their focus away from personal computers and onto smartphones, making mobile security a big concern these days. Furthermore, as technology advances, people are becoming more interested in cell phones. Smishing is a cyber security attack that uses the short message service to steal mobile users' personal information. Attackers have taken advantage of users' trust in their smart gadgets to carry out various mobile security exploits such as smishing. If there is a system or approach to identify these kinds of malicious attacks, it is very useful. This paper includes a survey conducted to get a clear idea on awareness of smishing attacks of people in society and identify the need for a system to detect smishing attacks. According to the survey, although a person with good experience with smishing attacks can detect a smishing attack by looking at the features, people who do not have proper knowledge and experience about smishing attacks may not recognize Smishing attacks properly. Moreover, the paper includes a literature survey along with summarized existing systems to detect smishing attacks. These systems have used algorithms and approaches. Some of them are machine learning algorithms, Random Forest algorithm, Feature-based technique, Optical Character Recognition, Tag & APK check, Rule-based approach, Naïve Bayes classifier, Heuristic approach, Support Vector Machine, Rank correlation algorithms, Decision tree, and Ada boost classifier. If a system or approach can work with high accuracy and efficiency that approach or system can be identified as a successful one.

Keywords: *Smishing, Algorithms, Optical Character Recognition (OCR), Machine learning, Mobile phones, Mobile security*