**Android Malware Classification with Supervised Learning Method**

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**ABSTRACT**

Malware (Malicious Software) is a malicious program that is harmful to users who are infected with malware. This program can infect hardware and various operating systems. One of them infects mobile hardware and the Android operating system. The impact of the loss is data loss, battery drop, and others. The reason is that the mobile phone is infected with malware. In operating mobile phones, users often download applications without checking the Android application. After the Android application is downloaded, the user does not do the analysis and immediately installs by giving permissions to the Android application. This problem encourages researchers to research in the field of Android malware. The purpose of this study is to detect whether the Android application is malware or not. Besides that, it also detects Android application files that are infected with malware, including the ransomware family of malware, risk malware, and others. The classification of malware will also be carried out using the supervised learning method. The use of several methods and algorithms will be described in this study, such as principal component analysis, support vector machine, k nearest neighbor's, and decision trees used to generate supervised learning models.

*Keywords: Malware; Principal Component Analysis; K Nearest Neighbors; Decision Tree; Support Vector Machine.*