

Detection of Android Malware Using Genetic Algorithm based Optimized Feature Selection

Bharathi P¹, Karthik M², Suma Sri M³, Sai Manoj K⁴, Tapaswini K⁵

Assistant Professor, Department of Computer Science and Engineering¹

Students, Department of Computer Science and Engineering^{2,3,4,5}

Raghu Institute of Technology, Visakhapatnam, AP, India

Abstract: *Android platform due to open source characteristic and Google backing has the largest global market share. Being the world's most popular operating system, it has drawn the attention of cyber criminals operating particularly through wide distribution of malicious applications. This paper proposes an effectual machine-learning based approach for Android Malware Detection making use of evolutionary Genetic algorithm for discriminatory feature selection. Selected features from Genetic algorithm are used to train machine learning classifiers and their capability in identification of Malware before and after feature selection is compared. The experimentation results validate that Genetic algorithm gives most optimized feature subset helping in reduction of feature dimension to less than half of the original feature-set. For machine learning classifiers, a classification accuracy of over 94% can be maintained with a large feature reduction, thereby improving classification accuracy computational complexity of learning classifiers.*

Keywords: Android Malware

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