

# Android Malware Detection: A Hybrid Approach using Machine Learning

## Relation with ICT (Rationale for the Research)

Android Malware is the key factor for the most security breaches in android operating system. Moreover malware is growing exceedingly to keep pace with the immense growth of android applications. In each month, on average almost 10 million new malware is introduced [1]. Most alarming thing is that, nowadays malware authors also aware of the malware detection system and they use many novel and crafty evasion techniques to avoid them. So, to fight against these cunning black hats, we need to incorporate the most up-to-date and comprehensive detection technique. This work tends to alleviate those evasion techniques by integrating *Hybrid Analysis*. This research aims to improve the performance of malware detection process. By doing so, this research seeks to make a contribution to academia as well as to the country.

Android is the most used mobile operating system (OS) in Bangladesh as the market share of it is 84.04% among other mobile OS by June, 2019 [2]. To assimilate the advantages of this vast popularity of android, the government of Bangladesh has taken many projects for developing android applications nationally. In 2015, the government launched 500 mobile apps costing 9.5 crore taka with an aim to achieve the new millennium development goal by 2021 [3, 4]. Besides, ICT division carries on various activities and projects such as Mobile Application Idea Generation Contest, Apps Sensitization Boot Camp (7 Divisions), Apps Development Training (64 districts), Mobile application ready One office One app, National Mobile App Championship etc [5].

To accomplish the government's goal, secured mobile application is the most vital factor. Without maintaining the security concerns of these mobile applications, the whole plan might have been failed. Detecting malware in advance can guarantee a certain level of security for the latest applications developed by the government aided developers as well as local developers. This research aims to detect android malware in advance effectively. Thereby, this research can assist the Bangladesh government's new millennium development goal: *Digital Bangladesh* by 2021.

## References

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