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Micro SIEM for Android

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Team Members:

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Under the guidance of:

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# Overview

This project is about a malware detection in Android applications. This application will predict the percentage of risk involved upon installing the given Android application. This application takes APK file of an Android application do reverse engineering of the code, and then perform analysis using open-source tools, followed by predictions of risk by using machine learning models, After that a report is generated that contains: permissions requested by the application, privacy infringement and the percent of risk involved by using/installing the Android application. The results will be displayed in a user-friendly manner. Thus, the user does not require to have prior knowledge about any technical details involved.

# Final Goal

Create an application which is capable of generating a report which will state the vulnerabilities and risk factor involved in installing an application from any source. The user can heed the warnings or choose to override them.

# Goals

1. Do research and try to find a better algorithm.
2. Read a few more research papers on this topic.
3. Understand the code written by the previous team.
4. Learn Sandboxing and Android Studio.
5. Prepare a dataset more relevant to our present application.
6. Deploy it in an android device.
7. Test the application on 100 devices.

# Past Work

<https://drive.google.com/file/d/1bY8gZ15EZ8aYFEI0C_KNWT1zFoF7CHir/view?usp=sharing>

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# Milestones

## Research and Algorithm (25/01/2020)

Read all the related research papers. Test datasets to find the best algorithm suited for android application.

## Learn Sandbox in Android (01/02/2020)

Understand the concept of sandboxing in android and understand how the structure of our application should be in order to sandbox it.

## Decide the Architecture (08/02/2020)

Consult Prof.Thangaraju sir to understand the needs and architecture required to build such app.

## Building the Android Application (04/04/2020)

Start working on the application and have it ready for testing tentatively by april 4th

## Testing the application (25/04/2020)

Test the application on 100 students in the campus and get feedback. Depending on the feedback debug or modify the app.

## Report(25/04/2020)

Present Complete analysis of our testing, produce a stable Android application and a complete report of the project.