TrustZone Face Recognition

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Estimated Total Hours: 12

Plans (Past Week)

Set up QEMU for simulation: Install and configure QEMU to simulate ARM-based environments. Test basic functionalities of the application in the simulated environment. Set up OP-TEE, AppDev Framework, and Android Studio: Install necessary development environments and tools. Ensure compatibility and version consistency between team members.

What Actually Happened

Work completed:

- Created an android application with a basic registration and login screen. The application includes a camera module when login screen starts.
- Changed project scope from TrustyTEE back to OPTEEE to maintain the scope of the project.
- Setup OPTEEE with QEMU on Linux (Debian) platform and set the environment for TrustZone application.

Major challenges+roadblocks:

- Optimize the OPTEEE environment to make it robust (the make run takes very long time to run).

Attribution:

Plans (Next Week)

- Create a TA that provides the API for enrollment and verification.
- Create (or choose) a facial recognition algorithm for the TA.
- Design a secure database for storing face recognition data (choosing which is robust and secure).
- Figure out sending the image to the Secure Environment.
- Store the registration values in the secure environment.

Summary/Overall Progress

- Set the project track back to OPTEEE and completed the build and installation.
- Created an android application (using Dart) to implement the user interface.

Tiny Demo-App