

– Masterthesis –

Unconstrained mobile touchless Fingerprint Acquisition

da/sec



da/sec is the biometrics and internet security research group and is affiliated with University of Applied Sciences Darmstadt and the Center for Research in Security and Privacy (CRISP). The group is led by Prof. Dr. Harald Baier and Prof. Dr. Christoph Busch. The focus of the group is on highly innovative and applied IT security research in the special fields of biometrics, internet security and digital forensics. Read more on www.dasec.h-da.de.

Motivation & Goal

Touchless fingerprint recognition is a fast-growing research topic and achieves a high user acceptance and usability. A simple and flexible acquisition is achieved by capturing one finger photo e.g. with a smartphone and apply a preprocessing on it. To achieve an unconstrained acquisition setup the device should be able to detect the hand pose, provide user feedback and initiate the capturing process automatically. The goal is to implement a prototype of an unconstrained fingerprint acquisition scheme on a mobile platform and evaluate its usability.

Tasks

- Design different strategies to solve the given issue
- Implement a prototype
- Comparative evaluation of the findings

We offer

- State-of-the-art mobile phone for development
- Incentives for the student to work on this project (work within scientific context, international collaboration, work on project in collaboration with companies)

Requirements

- High motivation and creativity
- Image and video processing experiences
- Good programming skills
- Basic knowledge of machine learning

By Date

By now / by appointment

Contact

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