

– Master-/Bachelor Thesis –

Contactless Fingerprint Feature Extraction

da/sec



da/sec is the biometrics and Internet security research group and is affiliated with University of Applied Sciences Darmstadt and the National Research Center for Applied Cybersecurity (ATHENE). The group is led by Prof. Dr. Christoph Busch. The focus of the group is on highly innovative and applied IT security research in the special fields of biometrics. Read more on www.dasec.h-da.de.

Motivation & Goal

Modern contact based fingerprint feature extractor rely on machine learning strategies and also work with contactless samples. Nevertheless the performance is inferior.

The goal of this project is to optimize a feature extractor based on machine learning for contactless fingerprint recognition.

Tasks

- Research the state-of-the-art of fingerprint feature extraction
- Retrain and optimize a publicly available feature extractor
- Report the biometric performance of the proposed model

We offer

- 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
- Experiences with machine learning especially GANs
- Image processing experiences (esp. OpenCV)

By Date

By now / by appointment

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