
– Master-/Bachelor Thesis –

Software-based Fingerprint Presentation Attack Detection

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. 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

Biometric systems are often used for unsupervised authentication in order to accelerate the processing and save personnel expenses. Attacks directed to the sensor can be carried out by eventually any person, without having any knowledge about how the system works. To prevent artificial presentations (i.e. gummy fingers), presentation attack detection (PAD) is of utmost importance. To that end, software-based algorithms, performing a deeper analysis of the captured data, could be applied via updates.

Tasks

- Analysing fingerprint images
- Implementation of PAD algorithms
- Evaluation of the implemented system

Requirements

- High motivation and creativity
- Strong interest in research
- Programming experience
- Knowledge of machine learning is of advantage



By Date

By appointment

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