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HOCHSCHULE DARMSTADT
UNIVERSITY OF APPLIED SCIENCES
fbi
FACHBEREICH INFORMATIK

ATHENE
Nationales Forschungszentrum
für angewandte Cybersicherheit

Bachelor/Master Thesis

Generating keys from privacy-enhancing approaches

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, internet security, and digital forensics. Read more on http://www.dasec.h-da.de/.

Motivation & Goals

Nowadays, privacy-sensitive information can be obtained from deep face templates. In this context, different privacy-enhancing approaches have been proposed in the literature. Although, these approaches could fulfill with particular requirements of the biometric template protection schemes (BTP), they do not follow a stable pattern (e.g. user specific-key dependent patterns) in order to be suitable and used as a BTP scheme.

Tasks

- Investigate different strategies to generate negative databases.
- Analyse how suitable can be the negative databases to generate user specific-keys over the privacy-enhancing approaches. For the evaluation, use the "Unsupervised Enhancement of Soft-biometric Privacy with Negative Face Recognition" privacy-enhancing approach as a baseline.

We offer

- Incentives for the student to work on this project (work within scientific context and in close collaboration with researchers)

Requirements

- Good programming skills in python.
- Passion and high motivation for research

Start / Period

Immediately / by appointment

Contact

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