

– Master-/Bachelor Thesis – Biographic Recognition Methods for Person Identification

da/sec



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

Motivation & Goal

Contextual understanding and multimodal recognition, a task that is effortless for humans, pose a challenge for automated methods and therefore are gaining importance in various applications of machine-learning. Biometric recognition systems rely on deep learning methods, such as Vision Transformer (ViT) networks in order to achieve high accuracy. However, good biometric performance for highly unconstrained images and resilience to impersonation attacks remain an open challenge. Therefore, in this work, we will explore and evaluate different approaches to represent and identify individuals based on biographic properties as an additional source of information.

Tasks

- Analyse the State of the art for person identification
- Train a Uni- or Multi-modal model to identify individuals based on biographical and/or contextual traits, augmenting biometric recognition
- Evaluate the systems' performance and resilience to impersonation attacks

Requirements

- High motivation, interest in security technologies and biometrics
- Good analytical skills
- Programming proficiency (preferably Python)

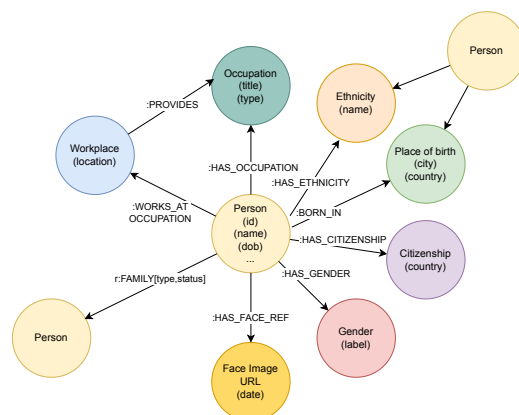
By Date

By now / by appointment

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