

Master/ Bachelor Thesis

Fisher Vector encoding of trainable Binarized Statistical Image Features (BSIF) for Face Presentation Attack Detection

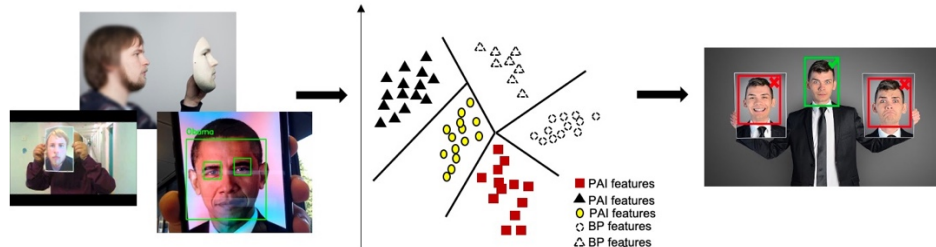
da/sec



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 <http://www.dasec.h-da.de/>.

Motivation & Goals

The large development experienced by social networks has unveiled security concerns related to potential attacks on biometric systems. In particular, several examples have shown how a non-authorized subject can easily download a photo or video of a given person, and use it to gain access to numerous applications, in which face recognition systems are commonly deployed. In order to address those security threats, Fisher Vector-based Presentation Attack Detection (PAD) solutions have showed a reliable detection performance to identify both known and unknown attack presentations, in contrast to traditional PAD approaches.



Tasks

- Analysis of face images to select the most suitable to train BSIF filters.
- Design and implementation of new BSIF filters-based classifiers.
- Evaluation and benchmark of the implemented systems

Requirements

- High motivation
- Interest in security technologies and biometrics
- Strong interest in research
- Good programming skills (C/C++) are of advantage.

Start / Period

Immediately / by appointment

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