

## – Master-/Bachelor Thesis –

### Analysis Framework for Super-detector Gaze Behaviour in Differential Classification Experiments

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](http://www.dasec.h-da.de).

#### Motivation & Goal

Research of human perception and cognitive processes, especially in areas of human proficiency, is of key interest to enable future advances in machine intelligence. Conversely, the study of human cognition is difficult; inherently allowing only indirect measurement and additionally yielding noisy data related to individual differences and subconscious biases. One approach to capture human perception is eye-tracking for visual attention, and thus a proxy for decision strategies. However, work in this specific area is limited, and therefore an established consensus on reliable gaze analysis methodology for differential face processing tasks is absent.

#### Tasks

- Analyse the State of the art in face processing eye-tracking analysis
- Develop a framework proposal of evaluation methodology for eye-tracking in differential face processing tasks
- Conduct an evaluation on experimental data showing the applicability of the proposed analysis framework

#### Requirements

- High motivation, interest in security technologies and biometrics
- Good analytical skills
- Experience with data science libraries is beneficial

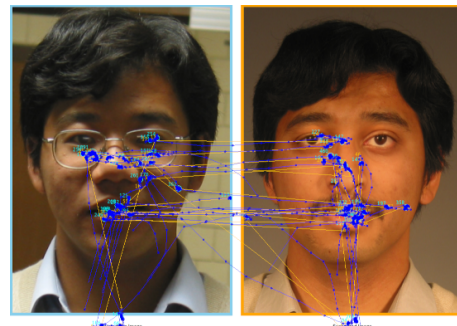
#### By Date

By now / by appointment

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