

– Master-/Bachelor Thesis – Face Manipulation as a Service

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

Due to recent advancements in AI, image editing software has greatly improved in terms of access and fidelity. While digital image manipulation is controversial, it offers potential uses like aiding missing person identification or facial composite creation by adjusting attributes such as age, glasses, or hair. The varying capabilities of available platforms raise concerns about their reliability in forensic settings where accuracy and respecting privacy is critical. The goal of this work is to develop a prototype tool designed specifically for forensic professionals.

Tasks

- Analyse the State of the art of automated face image manipulation and data privacy implications
- Develop a web application that uses face manipulation and face recognition systems to provide a user with a forensic tool
- Evaluate the systems' utility by measuring identification performance differences when manipulations are applied.

Requirements

- High motivation, interest in security technologies and biometrics
- Good analytical skills
- Programming proficiency (Web- and ML frameworks)

By Date

By now / by appointment

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