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HOCHSCHULE DARMSTADT
UNIVERSITY OF APPLIED SCIENCES

fbi
FACHBEREICH INFORMATIK

ATHENE
Nationales Forschungszentrum
für angewandte Cybersicherheit

Master/ Bachelor Thesis
## Score and Detection of Face Beautification images

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 task of determining the beauty of one person is a subjective metric. "Beauty is in the eye of the beholder." Today, many smartphone applications or software allow modifying the face images to remove artifacts, modifying the lips, nose, and hair color. This task is trivial for social networks, but it is very relevant in the Face Identification system. The attacker will try modifying or hiding one person's identity. Even they can produce a change in the image to look like another person. Today we can use this kind of tool to improve a high-quality "Morphing image" and get a valid passport or a successful identification process. Therefore, it is relevant to index, detect and classify this modification with a low error rate.
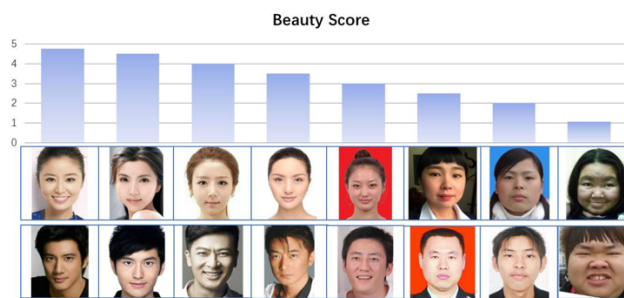
*Imagen taken from SCUT-FBP5500-Database-Release

Tasks

- Design and develop a model to assess the beauty score (index) in an image pair-based assessment of facial images.
- Design and implementation of several classification (beauty/no beauty) approaches.
- Evaluation and benchmark of the implemented systems.

Requirements

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

Start / Period

Immediately / by appointment

Contact

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