h_da hochschule darmstadt fachbereich informatik

member of EUT+ EUROPEAN UNIVERSITY OF TECHNOLOGY

ATHENE National Research Center for Applied Cybersecurity

– Bachelor Thesis –

Blur Assessment for ID Card Images

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

ID cards are widely used for remote identity verification, where they are captured with smartphones or webcams. These images are often blurred by defocus, camera motion or low resolution, which makes the printed information hard to read and affects automated verification. Existing sharpness measures were mostly developed for faces or natural images and do not transfer well to ID cards. This thesis aims to develop and evaluate a measure that predicts how blurry an ID card image is.

Tasks

- Literature review on blur and sharpness assessment methods.
- Generation of a dataset of blurred ID card images with reference labels.
- Development of a blur measure for ID card images.
- Evaluation against existing methods on synthetic and real captures.

Requirements

- High motivation and creativity
- Basic knowledge in image processing and machine learning
- Experience with programming languages such as Python



By Date

By now

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