h_da hochschule darmstadt fachbereich informatik

member of EUT+ EUROPEAN UNIVERSITY OF TECHNOLOGY

ATHENE National Research Center for Applied Cybersecurity

– Master-/Bachelor Thesis –

Detecting illumination anomalies on ID Cards.

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 identification and authentication purposes. But they are often subject to various types of image quality issues, which can affect the accuracy and reliability of automated ID Card verification systems. One common issue is illumination anomalies, which can occur due to uneven lighting conditions during image capture. These anomalies can lead to shadows or glares on the ID Card, making it potentially difficult for automated systems to accurately read and verify the information on the card. This thesis aims to examine existing methods and their applicability on ID Cards and possibly develop new methods to detect illumination anomalies on ID Cards.

Tasks

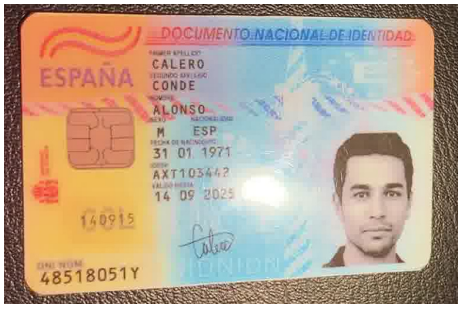
- Literature review on illumination anomaly detection methods.
- Review of existing datasets and if necessary creation of a new dataset with illumination anomalies on ID Cards.
- Evaluation of existing methods on the datasets.
- Development of new methods for illumination anomaly detection on ID Cards.

Requirements

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

By Date

By now



Contact

Gregor Grote
gregor.grote@h-da.de

h_da
Faculty of
Computer Science

ATHENE–National Research Center for Applied Cybersecurity
da/sec – biometrics and internet security research group
Schöfferstraße 8b
64295 Darmstadt