



Norwegian Biometrics Laboratory (NBL) is a distinguished research lab contributing actively to the biometrics research across Europe. NBL spans its expertise over physiological and behavioral biometrics including 2D & 3D face, iris, fingerprint, hand vein, gait, keystroke, gesture and mouse dynamics recognition.

Master Thesis

Effect of Beautification on Morph Attack Detection Performance

OBJECTIVES & GOALS:

The primary objective of this work is to evaluate the performance of morph attack detection to image beautification operation. Thus, a new dataset will be developed during the course of project using freely available image beautification software. This project will quantify the effect of beautification in three ways (a) the source images are beautified before performing morphing operation (b) image beautification is carried out only on the morphed image (c) image beautification operation is carried out on both source and morphed face image. Finally, well known morph attack detection algorithms are evaluated to benchmark the detection performance to infer the effect of image beautification.



Before

After

TASKS:

- Generation of beautified face dataset.
- Evaluation of generated dataset using open-source face recognition systems.
- Work with state-of-the-art morphing techniques.

PREREQUISITES:

- Interest in image processing, biometrics.
- OpenCV / C/C++ / Matlab

FURTHER READING:

- C. Rathgeb, A. Dantcheva, and C. Busch. Impact and detection of facial beautification in face recognition: An overview. IEEE Access, PP:1–1, 10 2019

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NOTE: Highly qualified foreign students can get financial support to cover cost of an internship.