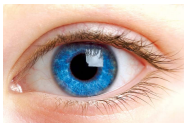
NTNU

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.

Bachelor/Master Thesis
Face Image Eye-Whiteness Quality Assessment

OBJECTIVES & GOALS:

The performance of facial biometric systems, such as face recognition systems is heavily influenced by the quality of the images presented to them. The quality of a facial image is subject to many quality measures. One of these measures is illumination uniformity which measures the difference in illumination on the left and right sides of the face. This project aims to analyze the color components of the “sclera” region of the eye to infer the illumination uniformity of the face image and lightning conditions in the environment.



TASKS:

- Implement an algorithm to analyze the color components of the “sclera” region of the eye and infer the illumination uniformity of the image, reporting this as a single scalar value.
- Systematically evaluate and report how predictive the quality value reported by this method is on the performance of a chosen face recognition (FR) model.

PREREQUISITES:

- High motivation and creativity
- Strong interest in research
- Programming experience

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