

INSTITUTO SUPERIOR DE ENGENHARIA DE LISBOA
MESTRADO EM ENGENHARIA INFORMÁTICA E DE COMPUTADORES
MESTRADO EM ENGENHARIA INFORMÁTICA E MULTIMÉDIA
SISTEMAS BIOMÉTRICOS / BIOMETRIC SYSTEMS

Part II - Laboratory 2 - 2024/2025 (November, 19)

1. Intensity Transformations

- (a) Implement and apply a *contrast stretching function*. Report the experimental results on three different images at your choice. Compare the entropy and the contrast metric on the input and output image. Comment on the results.
- (b) Consider the *histogram equalization* (HE) and *histogram specification* (HS) techniques. Apply the HE and HS operations on three different images at your choice. Comment on the results.

2. Spatial Filtering

- (a) Consider the set of fingerprint images on the `Fingerprints.zip` file. For these fingerprint images, perform a *sharpening* operation with the goal to highlight the ridges on the fingerprints.
- (b) From the sharpened fingerprint images compute their binary versions. Comment on the results.