CSCI 8820 Computer Vision and Pattern Recognition

Assignment 2, Due Friday, March 5, 2021 by 11.59pm (23:59 EST)

For the binary image **B** generated in the previous assignment:

1. Implement an algorithm to determine the Medial Axis (skeleton) for each object (component) in the image. Display the resulting Medial Axis image **M** as a binary image wherein the axis (skeleton) pixels are 1 and the rest are 0. Note that **M** by itself is not a binary image.

2. Implement an algorithm to reconstruct the original binary image from the Medial Axis image **M**. Provide an outline of the reconstruction algorithm in high-level pseudo-code. Display the reconstructed binary image $\mathbf{B_R}$**. Note:** the reconstruction should be lossless.

When submitting the assignment include the following:

1. A *well documented* hardcopy of the source code.
2. Hardcopies of the images **B**, **M** and $\mathbf{B_R}$**.**
3. An outline of the reconstruction algorithm in high-level pseudo-code.
4. Comments on the results obtained.
5. Upload all the above items as a **single PDF file** to the specified ELC dropbox. *Please make sure that the PDF file contains your name and UGA ID Number on the first page.*

NOTE: Only submissions received in the ELC dropbox by the stated deadline will be considered. Submissions received after the deadline via email (or any other means) will **not** be graded and will be assigned a zero grade.