School of Computer Science Engineering and Technology

Course- BTech	**Type-** AI Elective
Course Code- CSET344	**Course Name- Image and Video Processing**
Year- 2023	**Semester-** Odd
Date- 30/10/2023	**Batch-** 2021-2025

CO-Mapping

	CO1	CO2	CO3
Q1	√		
Q2	√		
Q3	√		
Q4	√		
Q5	√		

Objectives

1. Students will be able to learn Erosion, Dilation and Morphological Gradient in the image

Questions:

This exercise aims to provide the necessary knowledge in order to work effectively with morphological operations in python. For python, we have several options, and you can use whatever appropriate.
Some docs can be found here and examples how to use them:
scipy
skimage
OpenCV
1. In this task, we will use the image circles.png, as an example image.

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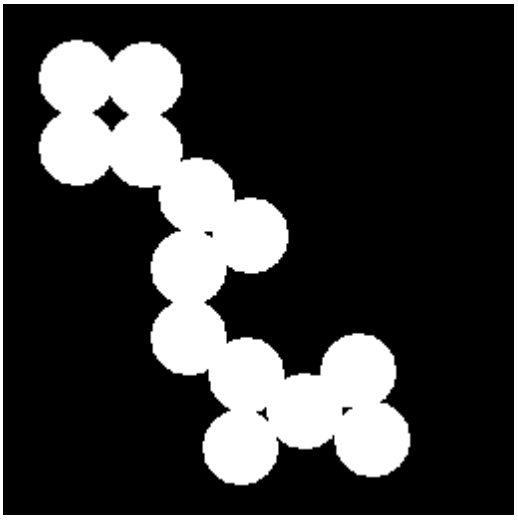

Figure 1

a. Find the boundary of the circles by using morphological erosion. Try with two different structuring elements (circle and square. Analyze and discuss the result of using different structure elements.

b. Find the skeleton of the image (using e.g. skeletonize(img) from skimage.morphology). Note that this function implicitly invokes a sufficient number of erosions.

2. In inspection of electronic circuit cards there is a need to inspect the number of holes and the diameter of the holes, see Figure 2.

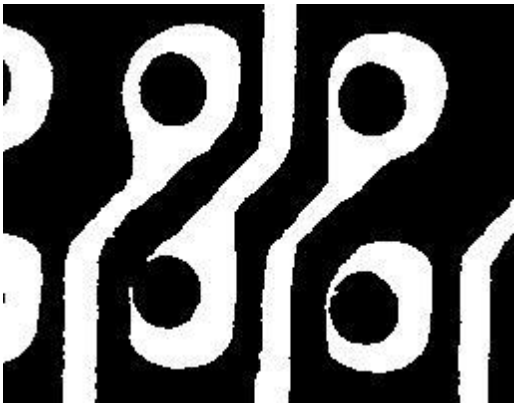

Figure 2

We want to measure the number of holes and their diameter using morphology.