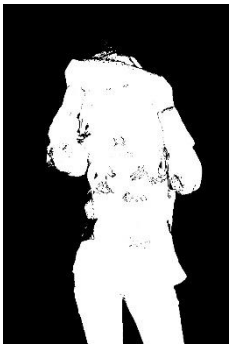
CORK INSTITUTE OF TECHNOLOGY
INSTITIÚID TEICNEOLAÍOCHTA CHORCAÍ

MACHINE VISION.

Lab05: Binary images

BACKGROUND.



In Lecture 5 we looked at binary images. In this exercise you will use the binary cut-out image generated in Lab02 and see how to extract connected components and how different morphological operations can be applied to it.

Task 1.

Calculate the connected components of the binary input image using OpenCV. How many connected components are in there? Calculate the area of each connected component and display the first, second, and third largest.

Task 2.

Calculate the area and the perimeter of the binary input image using the algorithm presented in Lecture 5. What is the form factor of the foreground?

Task 3.

Apply the erosion, dilation, opening and closing operation to the binary input image using OpenCV. Vary the number of iterations and the size of the structuring element. Observe how this affects the results.