CSI 4133

Lab 5

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Methodology

Part A

A function *detectCircles* was written, accepting 6 parameters which were then passed to the OpenCV HoughCircles function. After the circles were detected, circles were drawn around them, and at their center.
To accurately detect circles in the image, the parameters for the HoughCircles function had to be adjusted to the following:

Parameter	Value
Image	The greyscale image provided
minDist	20
param1	50
param2	30
minRadius	40
maxRadius	65

Figure 1 contains an image of the final output from part A on the specified test image.

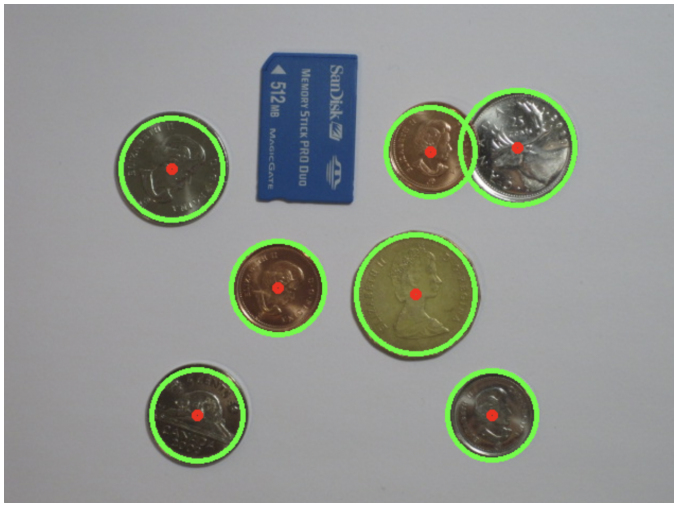

Figure 1

Part B

A function *detectLines* was written, accepting 6 parameters which were then passed to the Canny and HoughLines functions from OpenCV. To accurately detect circles in the image, the parameters for the HoughLines and Canny functions were adjusted to the following:

Parameter	OpenCV Function	Value
Image	Canny	The greyscale image provided
Thresh1	Canny	20
Thresh2	Canny	50
apSize	Canny	30
rho	HoughLines	1.2
theta	HoughLines	pi/180
thresh3	HoughLines	130

Figure 2 contains an image of the final output from part B on the specified test image.

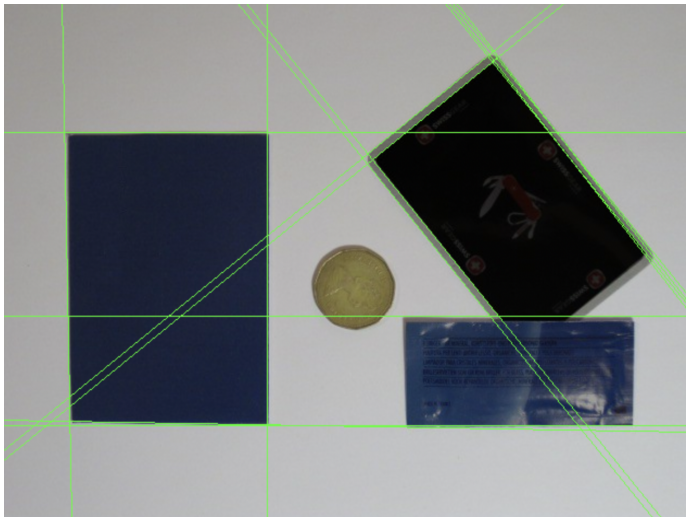

Figure 2

Unfortunately I was unable to detect the intersection of lines.