1.Question

1.Filter

I applied filter 1 to both image. The first filter has a value of 1 in the upper right corner, so the image makes a shift to the left in the diagonal.

2.Filter

I applied filter 2 to both image. Our middle value for filter 2 is 1.5 times the value of the pixels above the image. Increases the brightness of pixels. (I made the middle value 3 to see more clearly and I understood better)

3.Filter

I applied filter 3 to both image. 3. The filter makes the edges look sharp. I think there is a filter used for determining the edge on the image.

2.Question

Upload the math library

Upload to the image

Open the image from the folder

Define the size, height and width of the image

Apply sobel kernel to the image for edge detection save it and using it

Apply filter to understand the edge of the circle

for i in range(width):

for j in range(height):

if pixels (i,j) is equal to zero:

while a=b: (if it's center a and b must be equal.)

if 0.1< R<1:

R+=0.1

if θ is between 0 to 360:

θ+=1

a= i-R*cos θ

b=j-R*sin θ a, b is center of the object (could be square/circle/rectangle)

(i-a)^ {2} + (j-b) ^ {2} = r^ {2}

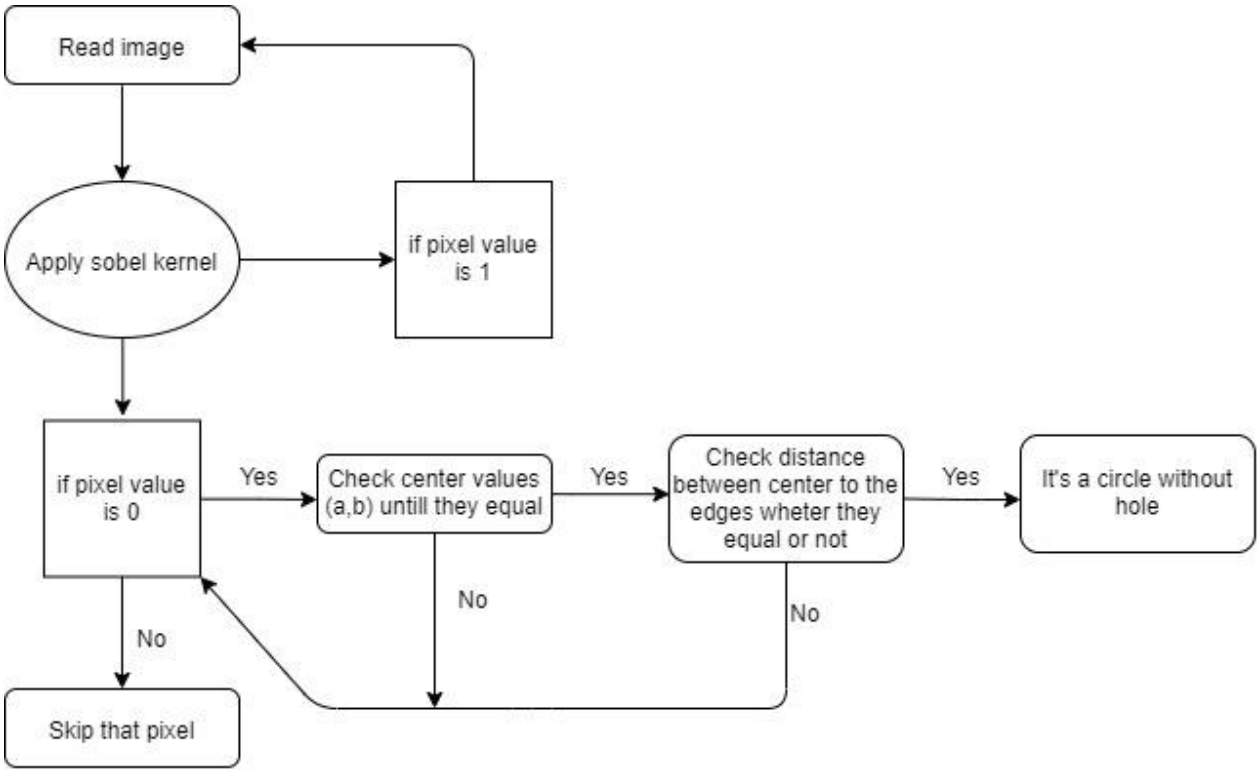
c=0

if (i-a) == (j-b): (If object is circle distance between center to the edges must be equal for all lines. If there is a hole in object this two distance can't be equal.)

c+=1 # Number of circles without holes

print(c)

Block Diagram



3.Question

1.App -"Digital Image Processing"

Complete Free handbook of Digital Image Processing with diagrams and graphs. App covers notes on Digital Image Processing. The best app in Engineering Education also brings the blog where you can contribute your work and get the research, industry, university News on the subject.

Digital Image Processing application serves to both engineering students and professionals.

It provides quick revision and reference to the topics like a detailed flash card. Each topic is complete with diagrams, equations and other forms of graphical representations for easy understanding.

It covers more than 120 topics of Digital image processing. The topics are divided in 7 units.

2.App-“Image Editor - Photo Editor & Image processing”

There are so many effects, stickers and features to apply to your photos and album Images.

Image Editor is a fun and powerful photo editor that lets you quickly be produce, even if you’ve never edited a photo before

Features

Color, Curves & Levels, Effects, Adding text, images or shapes, Frame, Denoise, Drawing, Pixel, Clone, Cut Out, Rotation, Straighten, Crop, Resize etc.

3.App -“Photogrammetry”

Photogrammetry lets you view automatically generated 3D models using a drone scan or a camera equipped with a depth sensor.

It is also possible to preview the point clouds associated with the models in our gallery or to download your own files in the OFF file format (Object File Format).

4.App-“SDF (Subdivformer) 3D”

Thanks to the SoftEdge modelling technology, SDF is a great tool for creative modelling, architecture, ergonomic Items, furniture design, toys, jewellery, decorative elements, game design, industrial concept works, aviation, automotive industry and many other designs.

SDF features a standard toolset of modelling functions and high-resolution export for 3D Printers (STL Format). SDF uses the SoftEdge modelling technique which is memory efficient and adapted to mobile devices respecting their memory and CPU limitations.

Soon SDF will offer some some advanced premium features, available via in App Purchase such as synchronous Mirror, precision tools, advanced (native) export (*.obj, etc.), professional toolset, colour-format export to .3DS. Support for multiple objects (regions), colouring, advanced start objects such as cone, torus, large sphere etc.

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