05/07/2023

ClassWork#3 report.

a. original picture



b. picture with noise



c. Cancelled noise picture.

A black and white image of a person's arm

Description automatically generated

d. Source code

import cv2 as cv

import random

import numpy

img = cv.imread("img1.png", cv.IMREAD\_GRAYSCALE)

def seasoning(img):

    density\_salt = 0.1

    density\_pepper = 0.1

    #set salt pix

    number\_of\_salt = int(density\_salt \* (img.shape[0] \* img.shape[1]))

    #add some salt

    for i in range(number\_of\_salt):

        y\_coord = random.randint(0, img.shape[0]-1)

        x\_coord = random.randint(0, img.shape[1]-1)

        img[y\_coord][x\_coord] = 255

    #set salt pix

    number\_of\_pepper = int(density\_pepper \* (img.shape[0] \* img.shape[1]))

    #add some salt

    for i in range(number\_of\_pepper):

        y\_coord = random.randint(0, img.shape[0]-1)

        x\_coord = random.randint(0, img.shape[1]-1)

        img[y\_coord][x\_coord] = 0

    return img

sp\_img = seasoning(img)

cv.imwrite("sp\_img.png", sp\_img)

median = cv.medianBlur(sp\_img, 5)

cv.imwrite("medien.png", median)