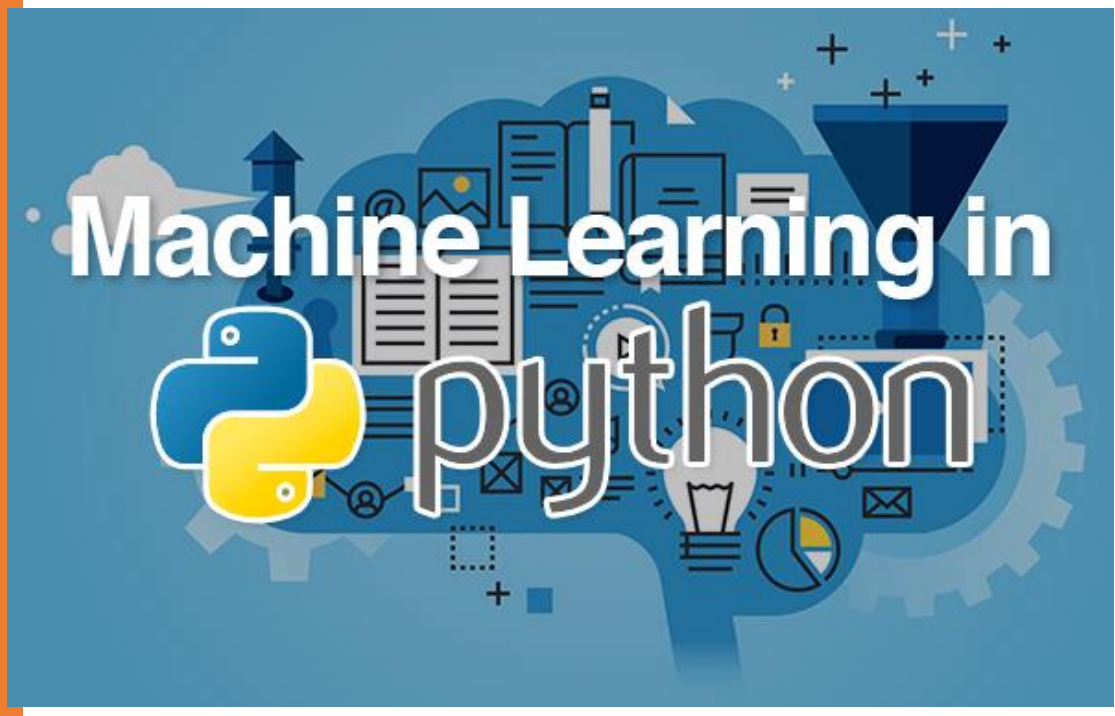
Night Vision Challenge - Find The Edges in a Image



By-

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python™ OpenCV

PROBLEM STATEMENT

This project is designed to test your mastery over Computer Vision through an interactive edge detection assignment. Write Python programs to detect the edges and apply it to a night vision photograph outlined in the assignment below. The image details are included in the assignment below. Put comment lines in the program to show your implementation steps. Make suitable assumptions if required. The programs should directly run in the python 3 environment without any modifications.

ABSTRACT

PIL is the Python Imaging Library which provides the python interpreter with image editing capabilities.

Here I am attaching a python code, which can read the designated Image and can detect the edges. And display the output

METHODOLOGY

Step 1: Load the libraries

Basic Libraries are loaded such as pillow(for image Processing), and cv2(for computer vision)

Step 2: Get the image paths and setup output directory

In this Project:

Input image = night_image.jpeg

Output image = output_night_image.jpeg

Optimized output image = optimized_night_image.jpeg

Step 3: Display the basic input file

Step 4: Read the image_ input file

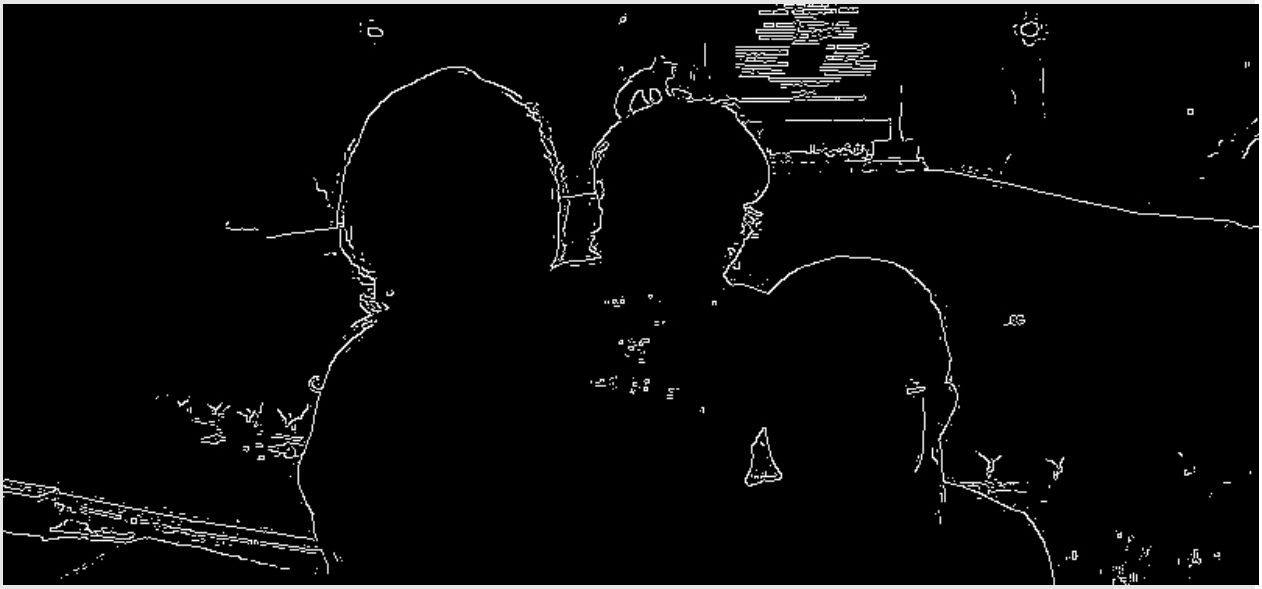
Here I used cv2.imread() to read the file

Step 5: Find the Edge of the image_ input file

cv2.imwrite(filename, cv2.Canny(img,100, 100))

I set the initial edges as 100 to check the output

Step 6: Display the output Image file



Step 7: Optimize the edges

As the number of edges are more, it's harder to detect perfect Edges. This could be optimized to a smaller number of edges as It can give much better edges, hence, code is optimized. Here I used the edges and Found 350 as a better edge compared to 100

Step 8: Display the output optimized Image file

Xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx**End**xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx