

CVIP HW 3

Python Programming Assignment Project Report

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Solution 1

Original/Input Image



Final Output

Part a, b

Gradient Image Gx



Gradient Image Gy



Gradient



Gradient Sep Gx



Gradient Sep Gy



Gradient Sep



Part c

```
Time taken for 2D convolution with Sobel Filters :
```

```
0.177316
```

```
Time taken for 1D convolution with Separable Sobel Filters :
```

```
0.047957
```

Solution 2

Original/Input Image



Final Output

Converted Grayscale Image



Histogram Equalized Image



Results

