

## Notes for Project 1

Original image was as following:



### Part 1:

The histogram equalization method filters the original image to following:



While convolution with filter 1 and 2 provides the following result:



It is worth mentioning that the performance in time (seconds) is, at best, 3 times slower than the opencv equivalent methods for convolution, and about the same time for histogram equalization method.

Histogram Equalization:

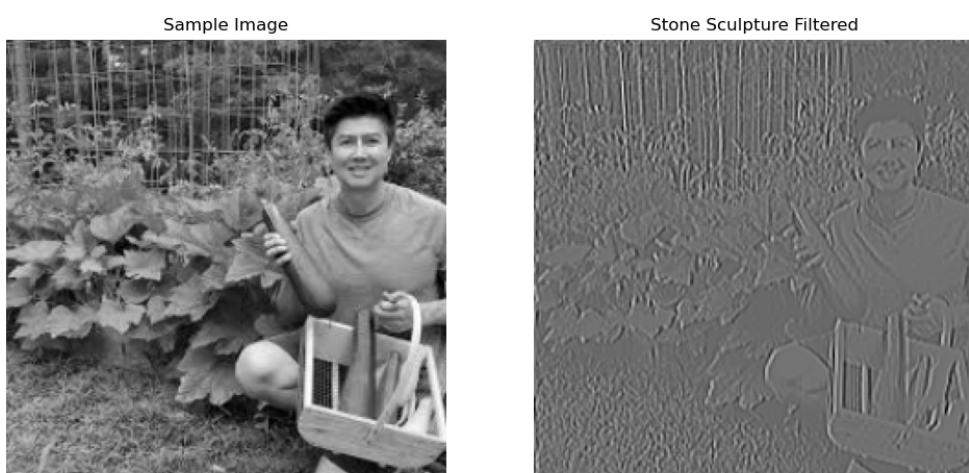
```
My function (s): 0.00304412841796875  
Opencv function (s): 0.0007648468017578125
```

Convolution:

```
My function (s): 0.008677959442138672  
Opencv function (s): 0.0037450790405273438
```

## Part 2: Stone Sculpture Filter

The filter has the following effects on the image:



**Part 3:** (All the image was derived from “space” screenshot option)

Original Image:



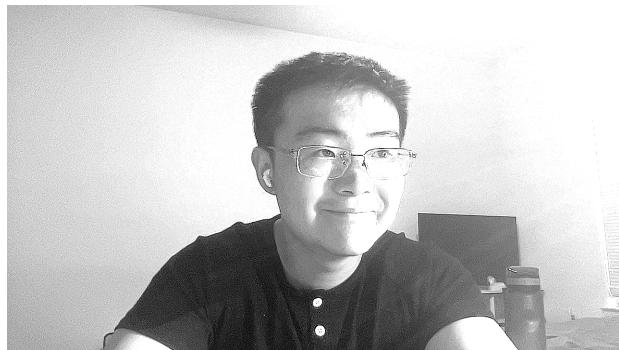
Histogram Equalized (h):



Smoothing Filter (s):



Unsharpening Filter (u):



Edge Detector (e): (I moved, so it is different in position)



Fun Filter (f):

