

Experiment # 6

AIM: Implementation of filters for smoothening images.

Tasks

```
1. Perform convolution with
kernel = np.array([[ -1,  -1,  -1],
                   [ -1,  8,  -1],
                   [ -1,  -1,  -1]])
```

- (i) Use 12x12 random matrix with maximum gray level 32.
- (ii) Convolution with padding 1 and 2.

2. Smoothen an image added with a noise with the following filters: (i) average (ii) median (iii) Box (iv) Gaussian.

For noise addition you may use below:

```
uni_noise=np.zeros((640,480),dtype=np.uint8)
cv2.randu(uni_noise,0,255)
uni_noise=(uni_noise*0.5).astype(np.uint8)In [8]:
un_img=cv2.add(img,uni_noise)
```