

R10521516 廖浚評

OpenCV python

```
def convolving (img ,k):  
    rowimg , colimg = img.shape  
    rowk ,colk =k.shape  
    convolving = 0  
    for i in range (rowimg):  
        for j in range(colimg):  
            if rowimg- i- 1>= 0 and rowimg-i -1 <rowk and\  
                colimg- j-1>= 0 and colimg -j-1 <colk:  
                convolving +=(img[i,j] *k[rowimg-i -1,colimg -j-1])  
    return convolving
```

主要利用這個式子去做捲積運算，其他按照要求設定 kernel，大同小異

Result



Robert:12



Prewitt:24



Sobel:38



Frei and Chen:30



Kirsch:135



Robinson:43



Nevatia-Babu :12500