

Homework 0

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1

Find a , b , T :

$ax + by + T > 0$ if $(x,y) = (1,1)$

$ax + by + T < 0$ if $(0,1)$ or $(1,0)$ or $(0,0)$

$$a + b + T > 0$$

4

Given an image 3×3 $f = \begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{bmatrix}$ and a kernel $g = \begin{bmatrix} -1 & -2 & -1 \\ 0 & 0 & 0 \\ 1 & 2 & 91 \end{bmatrix}$

a

What is the convolution of f and g ?

$$\begin{bmatrix} 4 + 5 & 4 + 5 + 6 & 5 + 6 \end{bmatrix}$$

b

What is the correlation of f and g ?