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Roberts operator with threshold = 12



Navigate the points surround the pixel in the boundary, if the position is out of range, padding it.

Calculate the gradient magnitude = $\sqrt{(\text{bottom_right} - \text{origin})^2 + (\text{bottom} - \text{right})^2}$, if the value \geq threshold, make the pixel value 0, else 255.

Roberts operator with threshold = 30



Prewitt edge detector with threshold = 24



Calculate the gradient magnitude = $\sqrt{p_1^2 + p_2^2}$, if the value \geq threshold, make the pixel value 0, else 255.

Sobel edge detector with threshold = 38



Calculate the gradient magnitude = $\sqrt{s_1^2 + s_2^2}$, if the value \geq threshold, make the pixel value 0, else 255.

Frei and Chen gradient operator with threshold = 30



Calculate the gradient magnitude = $\sqrt{f_1^2 + f_2^2}$, if the value \geq threshold, make the pixel value 0, else 255.

Kirsch compass operator with threshold = 135



Calculate the gradient magnitude = $\max(k_0 \text{ to } k_7)$, if the value \geq threshold, make the pixel value 0, else 255.

Robinson compass operator with threshold = 43



Calculate the gradient magnitude $= \max(r_0 \text{ to } r_7)$, if the value \geq threshold, make the pixel value 0, else 255.

Nevatia-Babu 5×5 operator threshold = 12500



Calculate the gradient magnitude $= \max(N_0 \text{ to } N_5)$, if the value \geq threshold, make the pixel value 0, else 255.