to - Jeniland - Ich Canny Edge Detector: - standardos (1 1) Chaussian Filter 2) Calculate Intensity Gradients 31 Non-maximum suppression ul Thresholding with Hyskinsis process to Apply a haussian Filter: * Define motion size (Weally odd number) Gaussian Function: >c -> >c cordinate value y -> y coordinate value on standard deviation standard deviation in the hawian Renchon " controls the amount of bluming" Small standard A large standard Deviation [blur less] / day 2 x 12, Deviation [blur more] medium might be more useful.

$$x$$
-coordinal = 10
 y -coordinal = 20
 $\sigma = 1$
 $\pi = 2.13$

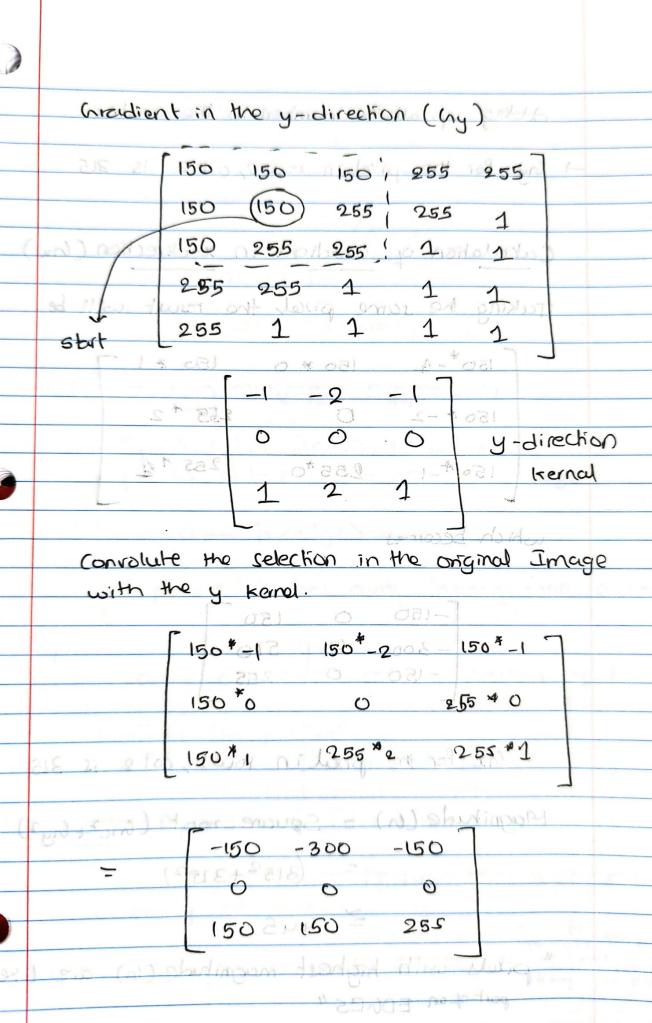
$$= \frac{1}{2 \times 3 \cdot (3 \times (1)^{2})} \times e^{\left(-\frac{(10^{2} + 20^{2})}{2(1)^{2}}\right)}$$

$$= \frac{1}{6 \cdot 26} \times e^{\left(\frac{-600}{2}\right)}$$

$$=\frac{1}{6.26} \times e^{-250}$$

calculate Intensity Gradients:

5×5 patch



Alting up all the number in the matrix

- by for the pixel in row 2, col 2 is 315

Cakalation of avadient in x-direction (ha)

0

0

0

6

1

0

Taking he same pisch the result will be

150*-4 150 * 0 150 * 1 = 150*-2 D 255 * 2 150*-1 255*0 255 * 2

which becomes

-150 0 150 -300 0 510 -150 0 255

the for the pixel in row 2, col 2 is 315

Magnitude (4) = Square root (6x2+6y2)

= (3152+3152)

= 445

" pixels with highest magnitude (n) are likely port of an EDGRES"

Then calculate gradient direction o, 0 = atan (Gy) = aton (35/36) = atan (1) = 0.78539 rod - Perform Non-maximum suppression: Scans entire Image to get rid of pixels that are not part of an edge en (va -sib cedge > see (v) If per pixel b it as more intensity than a and a and c are in gradient direction of b s) compute transferrice of the solver b is considered as edge Thresholding: - 14 - (4) 190 - 8 Because Non-maximum supression is not perheat for noisy situations. remove the weak Commy Edge Detector applys thresholding - and keep the strong