Project #5

assign December 12, 2022 due December 20, 2022

Consider the gray-scale image**, Kid at playground.tif**, apply Canny edge detection algorithm to obtain the edge image by using the following setup and parameters:

- σ of Gaussian smoothing filter: 0.5% of the shortest dimension of the image
- Sobel operator for computing gradient vectors
- Hysteresis thresholding: $T_H = 0.10$ $T_L = 0.04$

Note: You need to scale the intensities of the image to the range [0, 1] first!

Your report (in pdf) should contain:

- Source codes (30%)
- Plot images of the gradient magnitude and gradient angle (20%)
- Plot *nonmaxima suppressed* image $g_N(x,y)$ as well as images of $g_{NL}(x,y)$ and $g_{NH}(x,y)$ (30%)
- Plot final edge map $e(x,y)$ (20%)

Note: Images must be plotted with 200 dpi.

Upload your report to new e3 before due time!

Kid at playground.tiff
960 x 960