Report – Canny Edge Detector Algorithm

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Introduction:

The canny edge detector is an edge detection operator that uses a multi-stage algorithm to detect a wide range of edges in images. It was developed by John F. Canny in 1986. *(rf: Wikipedia).*

How to make a canny edge detector?

1. You must convert your image to grayscale.
2. You must blur the image to remove noise, I used Gaussian blurring filter for that.
3. You must find gradients, and mark those which have large magnitudes.
4. Only local maxima should be marked as edges, so you need to delete non-maximum.
5. You must do a double thresholding to determine potential edges.
6. By making hysteresis thresholding, you delete all edges that are not connected to a very strong edge.

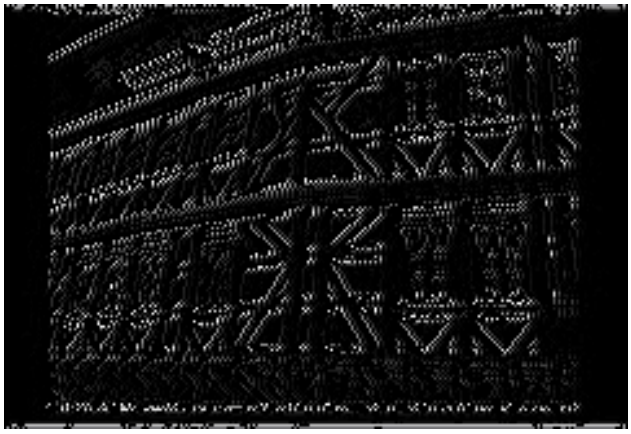
How the program work?

I developed the Canny edge detector algorithm in Java language.

To run it, you need to give in parameters the path of the image you want to treat.

If image is not find, the program will return an error, please check you put the right path.

Results:



References:

https://colinleverger.fr/assets/projects/CANNY-COLIN-LEVERGER.pdf

https://www.youtube.com/channel/UC9-y-6csu5WGm29I7JiwpnA