

COE 882 Final Project:

Jude D'Souza 500772401

INSTRUCTOR: Dr. Ghassem Tofighi

TA: Zheng Guo

Section 2

Sunday, April 11, 2021

Report for ELE 882

- 1) The XDog filtering boosts the interesting features of the images and applies a threshold operator creating a new, non-photorealistic image. It produced a different stylized image because it calculates the difference in the gaussian between the two unsharpened images and returns only the relevant information.
- 2) The relevant information of an image is usually contained within the edge of the image, since the XDoG contains the relevant information, the main focus would be the edges of the images. The more we can retain the edges, the clearer the XDoG image would appear.
- 3) The purpose of computing the level set is to find the changes in the topology of an image without having to parametrize the image. This saves time as well as computational power. The level set also allows the image to check the mean color only when the logical array says it is true.
- 4) When setting a pixel intensity to its bin index, the image will have some distortion associated with the bin index. The default bin index is 255 where the colors follow a set intensity value. But if the bin index is changed to a smaller value, the spectrum is forced to shrink and intensity issues may develop.
- 5) The image gains some line cleanup or antialiasing when applying the extra steps of using the connected components.

Demo to the code link:

<https://www.loom.com/share/98165a5a60a74440b13cc788ff483f14>