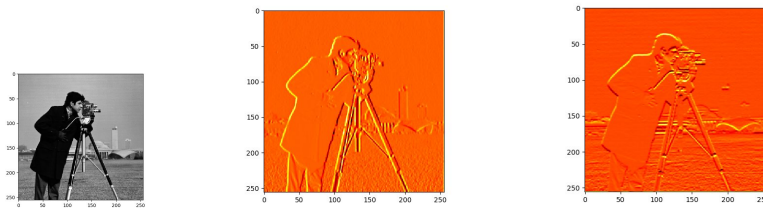


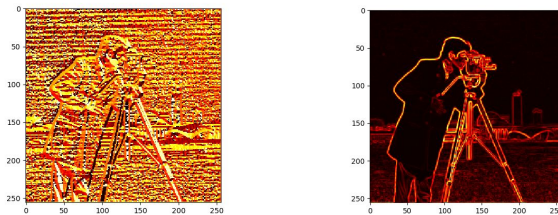
CS 5561 - Homework 1 Summary

Histogram of oriented gradients (HOG) is a good descriptor of images for several applications. This process shows step-by-step as to how HOG descriptor is computed for a given image

1. Given an initial image it filtered with sobel filter in x and y directions



2. Then magnitude and angle of gradient is calculated for every pixel



3. Then histogram of gradients (HOG) is calculated given a cell size by binning the gradient angle domain as x-axis and adding magnitudes for y-axis
4. Then the HOGs are normalized within a given block size and that operation is convolved across the image to produce normalized HOGs
5. These normalized HOGs can be used to visualize the edges

