CS-6501: Machine Learning for Image Analysis
Problem Set 1 Report

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1 Prove Properties of Convolution

2 Frequency Smoothing

3 Gradient Descent for Image Denoising

4 Sources Used

https://stackoverflow.com/questions/35286540/how-to-display-an-image

https://www.eurogamer.net/digitalfoundry-2024-warhammer-40k-space-marine-2-a-technologically-ambitious-sequel-that-can-look-stunning

https://mathworld.wolfram.com/GaussianFunction.html

https://numpy.org/doc/stable/reference/

https://stackoverflow.com/questions/38332642/plot-the-2d-fft-of-an-image

https://www.geeksforgeeks.org/how-to-display-multiple-images-in-one-figure-correctly-in-matplotlib/

https://stackoverflow.com/questions/74769468/how-to-reverse-fourier-transform-on-an-image-with-np-fft-ifft2-python