

COMP/EECE 7/8740 Neural Networks

Final Project Proposal

**Single Image Super-Resolution Using Deep Learning in  
Python**

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## **Single Image Super-Resolution Using Deep Learning in Python**

Image restoration has become a popular field as of late. Being able to clearly see what an image or video is, has many applications in classification task. Enlarging the size of a small image with a minimum drop in quality has numerous applications, including in the fields like satellite communication for aerial imaging analysis, medical sciences for medical image processing, and for compressed image/video enhancement. This MATLAB example uses a Convolutional Neural Network (CNN) in order to restore images and compare it to a common technique for image restoration, interpolation. The group is planning to take the MATLAB example and test to see if using Python makes a difference for the comparison. The ease of implementation using Python will be tested as well as the explanation of how the CNN works and is tested.