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# A New Image Compression Technique Based on Combining Feedforward Neural Networks and Discrete Cosine Transform

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## Abstract:

In this paper, we propose an algorithm for the application of one-hidden layer Feedforward Neural Network (OHL-FNN) to image compression. The algorithm combines OHL-FNN with Discrete Cosine Transform (DCT), here, the neural network learning algorithm performs the compression in a spectrum domain of DCT coefficients, i.e., the OHL-FNN approximates only the DCT coefficients representing the high detailed part of the image, Network parameters are stored in order to recover the image. Results, compared with baseline JPEG algorithm, demonstrate that the new algorithm dramatically increase compression for a given quality; conversely it increases image quality for a given compression ratio.

## Keywords:

Image compression, discrete cosine transform, Feedforward Neural Network (FNN)

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