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## **ABSTRACT**

Image Compression based on artificial neural network is presented in this paper. Researchers aimed to develop it using MATLAB by presenting it in a graphical user interface window wherein the pixels of the image is used as input values and the target values was given so that the desired mean square error will be obtained. And then the hidden layer output attained from the network will be the compressed image. It breaks down large images into smaller windows and eliminates redundant information such as coding redundancy, inter pixel redundancy and psycho visual redundancy. Back propagation method was used to train the network and for the minimization of the error. Performance of the network has been tested by the use of some standard grayscale test image like Lena, cameraman and pepper with the dimensions of 512x512, 256x256 and 128x128 and a bit depth of 8. Other properties aside from the given value of the dimensions and bit depth will not be considered in the study. It is shown that the developed program for the said network and the training algorithm used which is the back propagation algorithm, provides a high compression ratio for the image with minimal distortion.

**Keywords – Neural Network, Image Compression, Back Propagation Network**