

A PROPOSED METHOD FOR COLORIZING GRAYSCALE IMAGES

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ABSTRACT

In this paper a new method is proposed that leads to colorize a grayscale images. The proposed technique colorizes grayscale images by transferring colors from a reference (source) color image to a destination grayscale image. A feed forward artificial neural network (ANN) is constructed and trained by mapping the pixels from a grayscale space (grayscale version) into a color space of the selected reference (source) color image that has a similar “mood” of the destination grayscale image. The proposed algorithm has two main phases of action. Phase one is setting up the (ANN) and training it using Levenberg-Marquardt training algorithm. From the grayscale image version, the gray intensity of each pixel, average and standard deviation of the intensities of the 8 - surrounding pixels are used versus the color components (RGB) form the color version. The second phase is the colorization phase of the destination grayscale image by using the trained neural network. The results showed color photos in an acceptable and very distinct look.

KEYWORDS: Color Images, Colorizing, Gray Scale Images, Neural Network