

Digital Images Enhancement using Tiny Character Adjustment and Referenced Image Approach

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ABSTRACT: Digital image enhancement has been a hot topic during the past decades. In this paper, we have established a new approach for local gray contrast adjustment of tiny characters and global referenced base contrast enhancement approach to improve the contrast of degraded images. The proposed approach initially adjusts the contrast of tiny characters and then enhances the contrast of whole image by finding out some vital information from the histogram of the referenced image. The experimental results show that the proposed algorithm can adjust the tiny characters and increase the image contrast efficiently.

Keywords: Gray value enhancement, tiny characters, referenced image, histogram equalization.

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1. Introduction

Digital image enhancement is an obligatory process to upgrade the image quality. The goal of the image enhancement is not only to collect meaningful information based on given requirements, but also to fade unnecessary information. However, to make isolate tiny characters and get them enhanced without alteration is a difficult task. The major dilemma is how to discriminate the tiny characters and noise. Therefore, an efficient image enhancement approach is required to increase the tiny or meaningful characters for preserving the edges and to readjust the intensity values. Median filter is best choice for impulse noise removal from digital images. However, all its remedies use to process each pixel regardless of the current pixel being contaminated or not. Therefore, this operation can produce serious image blurring and may also suffer noise free pixels. Moreover, median filter and all its remedies cannot enhance the tiny characters. Early developed switching median filters provide satisfactory results but only at smaller noise levels [2]. Similarly a soft-switching impulse detector at the expense of