Abstract

Attenuation minimizes the contrast and air-light enlarges the whiteness in the captured image. Fog and haze are atmospheric conditions generated by floating particles, degrade the quality of images. Haze removal algorithms have become more beneficial for several vision applications. As we know there is no single technique i.e. accurate for all different kind of problems and circumstances. The existing methods have neglected many issues like noise reduction and non-uniform illumination which will be presented in the output image of the existing haze removal algorithms. These existing approaches either required single image or multiple images for removing haze from an input image. Multiple image of a same scene is required in multiple images based algorithms. So, this requirement is not fulfilled mostly times. So, the area of single image dehazing is an active area in the field of digital image processing. This paper introduced an efficient haze removal method based on Dark Channel Prior (DCP) and Weighted Average Filter (WAF). Refinement of transmission map will be done using WAF, and then image is restored. This proposed algorithm is implemented and tested in MATLAB. The results have shown that the proposed algorithm gives quite effective and quality results.
References


Index Terms

Computer Science  Image Processing
Keywords

Dark Channel Prior (DCP), Guided Filter, Average Filter, Weighted Average Filter.