The dynamic transmission map for dehazing method in single image with tropical atmospheric condition

ABSTRACT

Normally, outdoor images are degraded by light scattering and absorption from the atmosphere's dust, mist, haze, and smoke. These affect the image captured and cause poor visibility, dimmed luminosity, low contrast, and colour distortion. Therefore, it is crucial to restoring images captured, especially in haze conditions called image dehazing. The crucial aim of image dehazing is to improve the details on visibility, edge, and texture and retain the structure and colours of the image without data loss. Most algorithmic methods, considering the large number of algorithms suggested for single image dehazing, introduce dehazing at a certain haze level. There is a lack of a dehazing algorithm focused on the visibility range to overcome several haze levels. This paper proposes an improvement of the dehazing algorithm based on the meteorological visibility range with a dynamic transmission map to fix this problem This algorithm focuses on removing haze at different levels based on the determination of the visibility range, which is different from most existing dehazing algorithms. The dehazing algorithm emphasizes this proposed method contribute to better image quality than the existing state-of-the-art dehazing process.