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Detection of copy-move image forgery using normalized cross correlation and fast fourier transform

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Abstract

Digital images are being used as a rich source of information in the present digital era but the advancement of digital cameras & mobile phones and a rapid growth of image tempering software nowadays made digital images' integrity critical. Hence, to determine the trustworthiness of an image, the need for image forensics has become a necessity now.

Digital image forensics is playing a major role in this direction to identify authentic digital images and has classified forgery detection techniques into two type broadly-Active and Passive. The active process needs to authenticate pictures by taking out the watermark or digital signature inserted in it. On the other hand, passive technique either required using special devices not the original content presented to demonstrate forgery of the picture. This paper proposed a search area optimization algorithm in which we used Normalized Cross-Correlation for feature matching or to detect the highly correlated areas of the forged image and Fast Fourier Transform to optimize the search area by converting the image into the frequency domain. The experimental outcomes portray that copy-paste image forgery can be

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