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Classification of Computer Generated Images from Photographic Images Using Convolutional Neural Networks

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Abstract : This paper presents a deep-learning mechanism for classifying computer generated images and photographic images. The proposed method accounts for a convolutional layer capable of automatically learning correlation between neighbouring pixels. In the current form, Convolutional Neural Network (CNN) will learn features based on an image's content instead of the structural features of the image. The layer is particularly designed to subdue an image's content and robustly learn the sensor pattern noise features (usually inherited from image processing in a camera) as well as the statistical properties of images. The paper was assessed on latest natural and computer generated images, and it was concluded that it performs better than the current state of the art methods.

Keywords : image forensics, computer graphics, classification, deep learning, convolutional neural networks
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