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Improving Upon Photographic Steganography

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Extensive research encompassing steganography has been carried out in the past couple of decades and has spurred numerous studies. Research regarding steganography and steganalysis has recently shifted, and impressive progress has been carried out with the aid of the emerging popularity of deep convolutional neural networks. This paper addresses a new branch of steganography, namely photographic steganography, which intends to approach hidden message recovery from a steganographic image captured on a consumer-grade device. Challenges faced by this technique require the modeling of image perturbations to facilitate accurate message retrieval, and several papers have thus far managed to obtain impressive results in various image capturing conditions and in bit recovery error rates. However, several limitations persist, such as short hidden message lengths and restrictions imposed upon encoded images. This paper addresses the shortcomings, and novel techniques to improve the current state-of-the-art will be proposed to offer a more complete, accessible, and performant solution.

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