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# An Evaluation of Convolutional Neural Network (CNN) Model for Copy-Move and Splicing Forgery Detection

Muniappan, Thiiban<sup>a</sup>; Warif, Nor Bakiah Abd<sup>a</sup> ; Ismail, Ahsiah<sup>b</sup>; Abir, Noor Atikah Mat<sup>a</sup>

Save all to author list

<sup>a</sup> Centre for Information Security Research, Faculty of Computer Science and Information Technology, Universiti Tun Hussein Onn Malaysia, Johor, Batu Pahat, Malaysia

<sup>b</sup> Kuliyyah of Information and Communication Technology, International Islamic University Malaysia, Kuala Lumpur, Malaysia

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**Abstract**

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**Abstract**

Image forgeries such as copy-move and splicing are very common due to the availability of the advancement in software editing techniques. However, most of the existing methods for forgery detection consider only one type of image forgery due to the reason that both forgeries have different traits. In this paper, a Convolutional Neural Network (CNN) model which is one of the deep learning approaches is simulated and analyzed to detect any forged image without knowing their types of

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forges. In the model, three phases are involved: Data Preprocessing, Feature Extraction, and Classification. The model learns to extract features from convolutional, pooling, and Rectified Linear unit layer, and classified the image whether it is original or forged using fully connected layer. For the experimental works, three datasets namely MICC-F2000 (2000 images), CASIA 1 (1721 images), and CASIA 2 (12615 images) are tested and compared with existing deep learning-based methods. The results show that the CNN model achieved the highest performance with accuracy of 79% for CASIA 1 and 89% for CASIA 2. © 2023, Ismail Saritas. All rights reserved.

#### Author keywords

Convolutional Neural Network; Deep Learning; Image Forgery Detection

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🔍 Warif, N.B.A.; Centre for Information Security Research, Faculty of Computer Science and Information Technology, Universiti Tun Hussein Onn Malaysia, Johor, Batu Pahat, Malaysia; email:norbakiah@uthm.edu.my

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