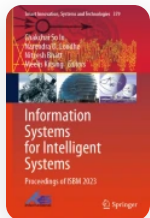


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Enhancing Criminal Identification: Human Face Deblurring and Mask Detection Using Convolutional Neural Networks


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Abstract

It can be hard to recognize offenders from CCTV footage for several reasons, such as image fuzz, the use of facial masks, or bad weather. In this study, we provide a strategy for improving criminal detection by employing CNNs (Convolutional Neural Networks) for mask and real face deblurring. Our method entails creating a CNN-based model that can precisely gauge the blur kernel of human faces and Deblurring is carried out with a data-driven methodology. Additionally, we suggest a face mask recognition algorithm that can correctly determine if someone is donning one. Using a dataset of CCTV footage comprising photos of offenders with varied degrees of blur and masks, we test the effectiveness of our models. The outcomes of our tests show that, when contrasted with current techniques, our methodology can greatly increase the accuracy of criminal detection. Our suggested approach has the potential to be used in a range of surveillance settings, including uses for law enforcement, safety, and community security. By offering a practical method for improving criminal identification through human face deblurring and mask recognition using CNNs, our research contributes to the computer vision field.

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