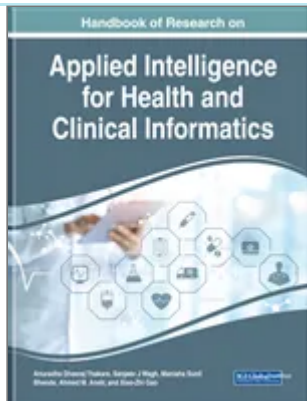


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Face Detection With Face Mask for COVID-19 Pandemic Using Neural Networks

Nitish Devendra Warbhe (MIT Academy of Engineering, India), Rutuja Rajendra Patil (MIT Academy of Engineering, India), Tarun Rajesh Shrivastava (MIT Academy of Engineering, India) and Nutan V. Bansode (MIT Academy of Engineering, India)

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Abstract

The COVID-19 virus can be spread through contact and contaminated surfaces; therefore, typical biometric systems like password and fingerprint are unsafe. Face recognition solutions are safer without any need of touching any device. During the COVID-19 situation as all of the people are advised to wear masks on their faces, the existing face detection technique is not able to identify the person with face occlusion. The fraudsters and thieves take advantage of this scenario and misuse the face mask, favoring them to be able to steal and commit various crimes without being identified. Face recognition methods fail to detect or recognize the face as half of the face is masked and the features are suppressed. Face recognition requires the visibility of major facial features for face normalization, orientation correction, and recognition. Thus, the chapter focuses on the facial recognition based on the feature points surrounding the eye region rather than taking the whole face as a parameter.

Chapter Preview

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Ii. Related Work

Image recognition could be a very good example of the real life application of the concepts of machine learning and deep learning. The reason behind this can be easily understood by looking at the basic steps required for such applications. The base procedure of image matching involves some standard steps such as image acquisition, using various transforms and classifying the information extracted from these images, training models and testing the efficiency and accuracy of the model developed. But