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Covid-19 Face Mask Detection using Image Processing

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Abstract: *In this paper we are detecting people's face if they are wearing face mask or not by using Face mask detection method which is very efficient and simple. First we do feature extraction followed by a supervised learning. The features are formed of color information by considering red, green and blue channels for an RGB color image. Ratio of color channels is considered to differentiate between mask and non-mask images. This method is tested on set of 1211 facial images which is extracted from group of people wearing a mask and people who are not wearing mask, by a 2-class problem , in where mask class is represented by positive examples whereas people not wearing a mask are negative examples. Some part of image dataset is used for training support vector machines for learning discriminant features of each class, followed by a prediction for each test sample. The image set has different types of images i.e, it varies from simple and common colored masks to challenging complex patterned masks. Success rate of this method is 97.25 using cross validation approach.*

Keywords: Mask detection, COVID - 19, color information, support vector machines, CNN.

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