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Patent Search

Invention Title	A SYSTEM AND METHOD OF UNMASKING THE MASKED FACE
Publication Number	09/2022
Publication Date	04/03/2022
Publication Type	INA
Application Number	202211009470
Application Filing Date	23/02/2022
Priority Number	
Priority Country	
Priority Date	
Field Of Invention	COMPUTER SCIENCE
Classification (IPC)	G06K0009000000, G08B0013196000, G06N0003040000, G16H0050200000, H04N0021442000

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Abstract:

The invention discloses a system 100 for unmasking the masked face, said system 100 comprising: a camera 101; a processor 102; a computer readable medium 104; a display 106; a user interface 108; an external device 110; a communication network 112; and a memory communicatively coupled to the processor 102. The processor identifies face of a person behind the mask. The method of unmasking the masked face comprises: receiving a dataset from a plurality of sources; training said CNN through a CASIA; receiving image of a person with mask; extracting a plurality of features of said test image by different layers of the CNN for identifying face of the person behind mask in said test image and applying each of convolution and down sampling on said test image in a loop up to a predefined number of times by said CNN.

Complete Specification

The present invention generally relates to the field of Convolutional Neural Networks (CNN). The invention particularly relates to a system for system 100 for unmasking masked face using a Convolutional Neural Network (CNN). The system identifies face of a person behind the mask through convolution and down sampling in the CNN.

BACKGROUND OF THE INVENTION

The COVID-19 outbreak has been major healthcare and social problem in the world since November 2019. As per the WHO, the pandemic is causing a global health emergency, making this the most recent human health virus outbreak throughout the last century so wearing a mask is required. Before this pandemic, people used to carry the mask only to protect themselves from air pollution. This pandemic is circulated through the respiratory system which is spreading very fast. Given the fact that many states mandate people to wear masks in public areas, many individuals forget or refuse to wear masks, or they wear them inappropriately. As a result of these realities, the illness will spread faster and place a higher strain on the public health care system. Regarding the effectiveness of several vaccines, wearing masks is among the most efficient and cost-effective strategies to prevent 80% of respiratory illnesses. As a result, many monitoring systems have been established to provide efficient supervision in sporting events, airports, public transit systems, hospitals, and retail locations to detect the mask. This pandemic affects many areas like the institute, organizations.

Medical masks are surgical or procedure masks that are flat or pleated (some appear like cups) that are attached to the head with belts. Wearing a surgical mask is among the ways of preventing the transmission of such respiratory infections, such as COVID-19, in afflicted regions. Masks, on the other hand, should be worn in compliance with good practice guidelines to be safe. Single-use options include FFP2 face masks, Surgical face masks and N95 face masks. Even so, wearing a mask alone would be

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Page last updated on: 26/06/2019