

MASKED FACE RECOGNITION USING CONVOLUTIONAL NEURAL NETWORK

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Abstract

Overview of the project



- Recognition from faces is a popular and significant technology in recent years. Face alterations and the presence of different masks make it too much challenging.
- An abundant number of researches work has been performed for recognizing faces under different conditions like changing pose or illumination, degraded images, etc. Still, difficulties created by masks are usually disregarded.
- The primary concern to this work is about facial masks, and especially to enhance the recognition accuracy of different masked faces.



Abstract

Overview of the project



- A feasible approach has been proposed that consists of first detecting the facial regions. The face detection problem has been approached using Multi-Task Cascaded Convolutional Neural Network (MTCNN).
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- Then facial features extraction is performed using the Google FaceNet embedding model.
- And finally, the classification task has been performed by Support Vector Machine (SVM).





Objectives

What we want to achieve



1. To develop a model to detect face mask.

2. To recognize the difference between a person with mask and without mask using machine learning.

3. To enhance the recognition accuracy of different masked faces.



Benefits to Society



1. Airports

The Face Mask Detection System could be used at airports to detect travelers without masks. Face data of travelers can be captured in the system at the entrance. If a traveler is found to be without a face mask, their picture is sent to the airport authorities so that they could take quick action..

2. Hospitals

Using Face Mask Detector System, Hospitals can monitor if quarantined people required to wear a mask are doing so or not. The same holds good for monitoring staff on duty too.

3. Offices & Working Spaces

The Face Mask Detection System can be used at office premises to ascertain if employees are maintaining safety standards at work. It monitors employees without masks and sends them a reminder to wear a mask.

4. Government

To limit the spread of coronavirus, the police could deploy the face mask detector on its fleet of surveillance cameras to enforce the compulsory wearing of face masks in public places.





Thank
You