

Medical PPE detector for epidemiological safety

Detect epidemiological safety rules breaches with ML-based PPE detector

INDUSTRY TRENDS

Healthcare providers are required to adhere to the personal protection rules [to save themselves and patients from spreading 2019-nCoV coronavirus infection](#). Basic PPE set for medical staff, patients and workers include gloves, masks and medical eyeglasses.

[According to the WHO, a mask or respirator is an effective PPE item](#) if the following rules are followed:

- A healthy person should wear a mask only if he or she is caring for a patient or cannot, for whatever reason, avoid contact with a person suspected of having a 2019-nCoV infection;
- A person with any sign of SARS (cough, runny nose, etc.) or suspected of having a 2019-nCoV should wear a mask and carefully follow the rules of its use and disposal.
- The use of masks and respirators is necessary if it is impossible to keep social distance or stay at home
- Masks and respirators are effective only when used in conjunction with frequent hand washing or the use of antiseptics.

THE CHALLENGE

Healthcare providers are in search for faster and more efficient control of PPE compliance during 2019-nCoV pandemic to prevent medical staff and patients from contamination and spreading the virus.

Healthcare systems all over the world [are under significant pressure](#) due to cases of coronavirus 2019-nCoV. As this trend is still intensive, adherence to personal protection rules by healthcare staff

is critical. The absence of basic PPE items on medical workers and patients can be one of the causes of [the healthcare system collapse](#) due to lack of duty-capable medical staff.

THE SOLUTION

Medical PPE detector for epidemiological safety is a machine learning solution developed to help healthcare providers during the COVID-19 pandemic. It allows organizations to automatically detect the absence of a medical mask or respirator, gloves and eyeglasses on a person through surveillance cameras. When a violation is detected, the algorithm automatically reports to the controller or safety engineer.

Optionally, it is capable of measuring the body temperature of a person in real time. If temperature is higher than normal, the solution alarms medical staff to take actions.

In addition, the solution is capable of face recognition. On request, this optional function can be activated to identify epidemiological safety rules violators among the staff and automatically report this to management.

KEY BENEFITS

- Improved epidemiological safety
- Reduced risk of contamination caused by PPE incompliance
- Less manual work
- Less human factor in control process
- Automatic detection of people with high body temperature

KEY FEATURES

- Round-the-clock monitoring and detection
- Capable of identifying the absence of three object classes: gloves, mask or respirator, eyeglasses
- Compatible with any high resolution camera
- Easy integration through RESTful API

- Ability to work in low light conditions
- Ability to measure body temperature

ABOUT US

VITech Lab is an R&D division of [VITech company](#).

Since 2008 top healthcare brands have used our services to improve lives of over 60 million people.

We specialize in machine learning and data science for healthcare organizations, including care providers, suppliers, insurance companies, laboratories and engineering teams working for healthcare.

CONTACTS

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