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Smoker Recognition from Lung X-Ray Images Using Convolutional Neural Network

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Abstract : Smoking is one of the most popular recreational drug use behaviors, and it contributes to birth defects, COPD, heart attacks, and erectile dysfunction. To completely eradicate this disease, it is imperative that it be identified and treated. Numerous smoking cessation programs have been created, and they demonstrate how beneficial it may be to help someone stop smoking at the ideal time. A tomography meter is an effective smoking detector. Other wearables, such as RF-based proximity sensors worn on the collar and wrist to detect when the hand is close to the mouth, have been proposed in the past, but they are not impervious to deceptive variables. In this study, we create a machine that can discriminate between smokers and non-smokers in real-time with high sensitivity and specificity by watching and collecting the human lung and analyzing the X-ray data using machine learning. If it has the highest accuracy, this machine could be utilized in a hospital, in the selection of candidates for the army or police, or in university entrance.

Keywords : CNN, smoker detection, non-smoker detection, OpenCV, artificial Intelligence, X-ray Image detection
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