A Gesture-Based Tool For Sterile Browsing Of Radiology Images

IDEATION

Gestures as a basic form of non-verbal communication made with the hands. Humans are able to recognize body and sign language easily. This is possible due to the combination of vision and synaptic interactions that were formed along brain development . In order to replicate this skill in computers, some problems need to be solved: how to separate objects of interest in images and which image capture technology and classification technique are more appropriate, among others. In this project Gesture based Desktop automation, User interacts with the UI (User Interface) to upload the image as input. Depending on the different gesture inputs different operations are applied to the input image. Once model analyses the gesture, the prediction with operation applied on image is showcased on the UI. First the model is trained pre trained on the images of different hand gestures, such as a showing numbers with fingers as 1,2,3,4 by data collection and then image is processed by ImageDataGenerator library . The proposed project is done using open cv and IBM cloud.By CNN model is initialized and input,hidden,output layers are created and then is proposed for testing and training. This model uses the integrated webcam to capture the video frame. The image of the gesture captured in the video frame is compared with the Pre-trained model and the gesture is identified. If the gesture predicted is 1 then images is blurred;2, image is resized;3,image is rotated etc. Application layout is done by HTML for better outlook.