A GESTURE - BASED TOOL FOR STERILE BROWSING OF RADIOLOGY IMAGES

PROBLEM STATEMENT :

Hand gestures are a kind of body language in which the position and shape of the center of the palm and the fingers communicate specific information. Different individuals describe gestures differently due to the cultural variety and uniqueness of gestures. 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 maintain the doctor's hand sterile inside the operation room hand gesture can be used. The use of doctor-computer interaction devices in operation room requires new modalities that supports medical image manipulation by allowing doctor's hand to remain sterile, supporting then to focus, attention and by providing fast response. In this project, gesture based desktop automation model is used, first the model is pre-trained on the images of different hand gestures, such as a showing numbers with fingers as 1 ,2,3,4 etc . 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 predictes 1 then images is blurred; 2- the image is resized; 3- the image is rotated and so on. The general objective is to keep the doctor sterile inside the operation room.