IDEATION

Date	03 October 2022
Team ID	PNT2022TMID38774
Project Name	Project - A Gesture-based Tool for Sterile Browsing of Radiology Images

1	In order to provide surgeons with a more efficient, comfortable, precise, and sterile interaction technique, the hands can be an effective means of accomplishing this goal in comparison to other modalities, such as voice or eye interaction . Touch-less gesture interaction is an option to interact with imaging systems, displays, and controllers without breaking the sterility barrier. The system utilizes nothing but a camera with good quality and can follow the hand of the user in 2 dimensions and identify up to four mouse-defined hand motions.
2	Recent progress in artificial intelligence provides innovative opportunities for motion tracking and human-machine interaction. In the field of healthcare, sensors like Microsoft Kinect has been used for detecting postures. And using electromyography technology to capture gesture instead of the camera, therefore it is less affected by the external factors such as light and obstruction.
3	Voice command is another type of touchless communication but its commands are discrete rather than hand gestures which are able to perform analog commands. On the other hand, voice command has other disadvantages such as its low accuracy due to existence of noise in surgery rooms and accents.