

Sl. No	Title	Authors	Year	Technique	Merits	Demerits
1	A gesture-based tool for sterile browsing of radiology images	JUAN P. WACHS, PHD, HELMAN I. STERN, PHD, Yael EDAN, PHD, MICHAEL GILLAM, MD, JON HANDLER, MD, CRAIG FEIED, MD, PHD, MARK SMITH, MD	2008	“Gestix,” a vision-based hand gesture capture and recognition system that interprets in real-time the user’s gestures for navigation and manipulation of images in an electronic medical record (EMR) database is used. Navigation and other gestures are translated to commands based on their temporal trajectories, through video capture.	Ease of use, Rapid reaction, An unencumbered interface, Distance control—the hand gestures can be performed up to 5 meters from the camera	The setup time for the whole “Gestix” system was approximately 20 minutes.
2	Hand-gesture-based sterile interface for the operating room using contextual cues for the navigation of radiological images	Mithun George Jacob, Juan Pablo Wachs, Rebecca A Packer	2012	Computer vision algorithms were developed to extract intention and attention cues from the surgeon's behavior and combine them with sensory data from a commodity depth camera.	It uses environmental cues to determine intent allowing the user to perform gestures anywhere in the field of view of the sensor and also the framework can be extended to a large gesture vocabulary.	The tracking algorithm occasionally failed in the presence of several people in the camera field of view.

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REALISM:
Real-Time
Hand
Gesture
Interface for
Surgeons
and Medical
Experts

David Louis M.
Achacon Jr.,
Denise M. Carlos,
Maryann Kaye
PuyaoanChristine
T. Clarin,
Prospero C.
Naval, Jr.

2010

The project was
developed using
OpenCV, a computer
vision library originally
developed by Intel and
Cascade Classifiers,
PCA and Nearest
Distance Matching.

The hand
detection module
was able to
achieve
higher precision
and recall in well
lighted
environment.

Although the
system detects
most of the
hands present in
the camera's
vision, it still mis-
classify some
objects as
hands. The
performamce
was not that
good in poorly
illuminated
environment