

**Project Design
Phase-I Proposed
Solution Template**

Date	15.10.2022
Team ID	PNT2022TMID09899
Project Name	A gesture-based tool for sterile browsing of radiology images
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Pioneering work in this arena heavily applied traditional computer vision techniques for performing image preprocessing, hand detection, and hand tracking and used finite state machine for gesture classification [10, 11]. Some of them had poor usability and caused fatigue for the users [12]. A classical machine learning approach was taken by Achacon et al. [13]. Their system called REALISM included only a few gesture classes. They first performed hand detection with Haar-like features and cascade classifier then employed Principal Component Analysis and Euclidean Distance matching from the samples of the classes to perform classification.
2.	Idea / Solution description	A hand gesture system for MRI manipulation in an EMR image database called "Gestix" was tested during a brain biopsy surgery. This system is a real-time hand-tracking recognition technique based on color and motion fusion .
3.	Novelty / Uniqueness	This paper presents " 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.
4.	Social Impact / Customer Satisfaction	First, the data acquisition block constructs a 3D image input based on the aforementioned algorithm, which serves as an 'input layer' for

		<p>our framework. This input is passed to the feature learning block of the classifier, which is comprised of a combination of hidden layers of CNN and a series of seven inception modules. Each individual inception module further consists of three convolutional layers with a filter size of 1×1, 3×3, and 5×5, and a max pooling layer. The outputs of each filter are concatenated together to form the overall output of the corresponding inception module block.</p>
5.	Business Model (Revenue Model)	<p>gas leakage is detectable one. gas is a explosionable one that's why it requires more careful when handing it. LPG is a highly combustible substance and quickly forms explosive air- hydrocarbon mixture when suspected to atmospheric condition. Liquid leakages that may from in LPG systems can create combustible and explosive gas mixtures in large volumes forms 250 unit. gas leakage detector provides a profit stability to the people who are having it. Because cost wise it becomes to low price in market even poor peoples can also using this easy manner. Inhaling LPG vapor at high concentration even for a short time can cause fainting and death. Inhaling in nose and throat, headache and nausea, vomiting, dizziness and loss of consciousness. LPG vapour can cause fainting and choking in closed or poorly ventilated environments.</p>
6.	Scalability of the Solution	<p>A hand gesture system for MRI manipulation in an EMR image database called "Gestix" was tested during a brain biopsy surgery. This system is a real-time hand-tracking recognition technique based on color and motion fusion.. Data from two usability tests provide insights and implications regarding human-computer interaction based on nonverbal conversational modalities.</p>