Project Design Phase I Proposed Solution Template

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| **Date** | 17.10.2022 |
| **Team ID** | PNT2022TMID09880 |
| **ProjectName** | A gesture-based tool for sterile browsing of radiology images |
| **MaximumMarks** | 2 Marks |

**Proposed Solution Template:**

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

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| **S.No** | **Parameter** | **Description** |
| 1. | Problem Statement (Problem to besolved) | 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/Solutiondescription | 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. |

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| 4. | SocialImpact/ CustomerSatisfaction | Gas detection sensors are most commonly usedto develop an IoT-powered system and identifythe variation of toxic gases around an industrialfacility. It helps benefit the factories andrefineries by keeping them safe against anyunexpected threats like explosions.Get realtime alerts about the gaseous presence in theatmosphere. It prevent hazards and explosions.With the product of this idea helps to ensureworkers health. An IoT powered gas monitoringsolution works through sensors that providesaccurate data regarding the presence of toxicgases in the atmosphere. It is a very usefulsystem to implement in the industries or plantfacilities to avoid catastrophic explosions. Withthe help of a gas monitoring solution, you cansuccessfully measure temperature and humidityin the atmosphere, which results in improvedplantfacilitiesandensuresemployee safety. |
| 5. | Business Model(RevenueModel) | gas leakage is detectable one. gas is a explosionable one that’s why it requires morecareful when handing it. LPG is a highlycombustible substance and quickly formsexplosive air- hydrocarbon mixture whensuspected to atmospheric condition. Liquidleakages that may from in LPG systems cancreate combustible and explosive gas mixturesin large volumes forms 250 unit. gas leakagedetector provides a profit stability to the peoplewho are having it. Because cost wise it becomes to low price in market even poor peoples canalso using this easy manner.Inhaling LPG vaporat high concentration even for a short time cancause fainting and death. Inhaling in nose andthroat, headache and nausea, vomiting, dizziness and loss of consciousness. LPG vapour can cause fainting and choking in closed orpoorlyventilated environments. |
| 6. | ScalabilityoftheSolution | Its ability to warn its stakeholders about theleakage of the LPG gas. The future aspects of thisdetector include the GSM module and a trippercircuit which increases the efficiency of thesystemandprovidesmoresafetyto theusers.  This detector is implemented successfully and iseasy to use and also a low cost product. Anotheradvantage of this device is that even though if noone is there in the house and then gas leaksoccurs, GSM module is there to send immediatemessages to the stakeholders regarding the gasleak and thus it lowers the intensity of accidents.GSM module in this device ensures better safetyregardingthegas leaks. |