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

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| Date | 15.10.2022 |
| Team ID | PNT2022TMID09862 |
| 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.

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| **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 finitestate 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. |

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| 4. | Social Impact / Customer Satisfaction | Recommender systems apply data mining techniques and prediction algorithms to predict users' interest on information, products and services among the tremendous amount of available items. The vast growth of information on the Internet as well as number of visitors to websites add some key challenges to recommender systems. These are: producing accurate recommendation, handling many recommendations efficiently and coping with the vast growth of number of participants in the system.  To address these issues we have explored several collaborative filtering techniques such as the item based approach, which identify relationship between items and indirectly compute recommendations for users based on these relationships. The user based approach was also studied, it identifies relationships between users of similar tastes and computes recommendations based on these relationships. |
| 5. | Business Model (Revenue Model) | We introduce a new interdisciplinary theoretical framework for the development of what we refer to as “business models for ecosystem management service,” defined by the very central place they give to the achievement of measurable biodiversity performance. We then propose four such new business models designed through participatory methods that combine in a unique way a corporate value creation model with an ecological value cocreation model at the ecosystem level. |
| 6. | Scalability of the Solution | In today's world, recommendation systems are used to solve the problem of information overload in many areas allowing users to focus on important information based on their interests.Key Method using text mining and collaborative filtering techniques the system first scans the user's profile and resume, identifies the key skills of the candidate and generates personalized job recommendations. |