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| **Requirement Template** | | | | |
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| **Project :** | **Smart Surveillance using Raspberry pi** | | |  |
| **Project No.:** |  | | |  |
| **Team Members:** | Suvathi.V, Tamilselvan.M, Vandhana.M, Vandhana.S | | |  |
| **Guided by:** | Mr.Siva Kumar | | |  |
| **Institution:** | **SRI ESHWAR COLLEGE OF ENGINEERING** | | |  |
| **Date:** | **25-01-2019** | | |  |
| **Version:** | **SR001** | | |  |
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| **Revision History** | | | | |
| **Date** | **Version** | **Change Request** | **Description** | |
| 22-01-2019 | 1.0 | Addition of software requirements and flowchart | - | |
| 23-01-2019 | 1.1 | Addition of phases |  | |
| 25-01-2019 | 1.2 |  |  | |
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| **Requirement Template** | | | | | | |
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| **Project Overview** | | | | | | |
| **Description of the project** | | | | | | |
| **This project will implement Face recognition using Raspberry pi camera module to identify intruders into a particular household by comparing authorized faces in the database and alerting the owner by making a call.**  **Alerting mechanism will be implemented using Raspberry pi GSM board. The entire product will be implemented using Raspberry Pi zero and IoT Raspberry Pi security camera running OpenCV for object detection.** | | | | | | |
| **Scope** | | | | | | |
| **To implement a smart surveillance system using face recognition using Raspberry Pi zero and camera module and alerting the owner with a call using Raspberry Pi GSM incase of any intrusion.** | | | | | | |

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| **Requirements** | | | | | | |
| Raspberry Pi Zero Wireless  Raspberry Pi Camera module  Raspberry Pi GSM board  Raspberry bi desktop | | | | | | |

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| **Project Flow** | | | | | | |
| 1. Install Raspberry Pi in 64 bit system. 2. Connect Electronics. 3. Create a database with authorized faces. 4. Install Open CV using Python to detect objects. 5. Provide email credentials to alert the owner using gsm board. | | | | | | |

**FLOWCHART**

ALLOW GUEST

AUTHORIZED



ALERT USER

DETECT FACES

 UNAUTHORIZED

**Requirement Template**



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| **Project Phases** | | | | | | |
| **Phase 1: Install Raspberry Pi in 64 bit system**  **Phase 2**: **Create a database with authorized faces.**  **Phase 3: Install Open CV using Python to detect objects.** | | | | | | |

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| **Requirement Identifier** | | | | | |  | | |
| **Functional Requirements** | | | | | |  | | |
| **Req\_ID** | **High-Level Requirement** | **Detailed Requirement** | | | |  | | |
| **FR001** | Recognition | The task of recognizing the face by analyzing the part of image identified during the face detection phase. | | | |  | | |
| Non-functional requirements | | | | | |  | | |
| **Req\_ID** | Nf - high-level requirement | Nf-detailed requirement | | Requirement classification | |  | | |
| **NFR001** | Storing credentials | The video stream will be stored in the cloud storage. | | Security | |  | | |
| **NFR002** | Extending to new versions | The project can be extended to support motion detection. | | Scalability | |  | | |
| **NFR003** | User privacy | The image details will not be delegated to any third parties. | | Legal | |  | | |