# **FEED - PROJECT CHARTER**

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| **1. General Project Information** | | | | | | | | | |
| **Project Name:** | | | | **FEED - A Face Recognition App which Identifies Humans Entering Secured Premises Extracting Relevant Features Using Deep Learning Model** | | | | | |
| **Adviser/s:** | | | | **Dr. Larmie Feliscuzo** | | | | | |
| **Impact of project:** | | | | Installing digital video cameras in a secured apartment premises is prevalent nowadays. This minimizes crime rate, a sense of security to the owner and its tenants, transparency to business operations, providing evidence to legal and illegal actions, recording of in and out of tenants, and many more. A facial recognition system is used to verify and identify a person by recognizing their face. It can also uniquely identify a person by analyzing the patterns based on the person’s facial texture and shape. It automatically generates a report where the identities of those who entered the premises and the time they were captured by the camera is highly important. This will ease the time consumed in reviewing the recorded video. Specifically, we target the residential apartment business establishments as users of this application. The facial recognition system for the apartment is deemed to be compliant with local and national standards and by capturing facial patterns and images we make sure that the installation adheres with the privacy constraints as stated in the 10173, otherwise known as the Data Privacy Act of the Philippines. | | | | | |
| **2. Project Team** | | | | | | | | | |
|  | | **Name** | | | **Affiliations** | | **Location** | **E-mail** | |
| **Project Manager:** | | Marisa Buctuanon | | | University of San Jose - Recoletos | | Cebu City | marisamahilum@gmail.com | |
| **Team Members:** | | Alvin L. Sibayan | | | Palawan State University | | Puerto Princesa City, Palawan | alvin\_sibayan@psu.palawan.edu.ph | |
|  | | Jenny L. Resuello | | | University of Eastern Philippines | | Catarman, Northern Samar | maamjenres@gmail.com | |
|  | | Jiann Balanlay | | | University of Eastern Philippines | | Catarman Northern Samar | jiannonline@gmail.com | |
| **3. Stakeholders *(e.g., those with a significant interest in or who will be significantly affected by this project)*** | | | | | | | | | |
| Apartment Owners – They are the primary stakeholders of this application since a residential apartment should be secured and only residents should be entering the premises. Knowing who entered and the time captured without reviewing the recorded video is important. It provides additional value to the business establishment, specifically apartments that need heightened security. | | | | | | | | | |
| Apartment Residents/Tenants- Knowing that there is an application that monitors regularly those entering the apartment makes them feel more secure since the system is able to identify individuals who are in motion from a distance, classifying them as authorized or unauthorized people in an instant. | | | | | | | | | |
| **4. Project Scope Statement** | | | | | | | | | |
| **Project Purpose / Business Justification** *Describe the business need this project addresses* | | | | | | | | | |
| The arising common issues in apartments entails some problems both in the part of the owner and the tenants. It involves considerable risks as addition to the legal implications. There are many owners who are losing money because they do not have any real control over their property. There are also practical issues brought by subletting in which subtenants or other intruders may destroy properties, the coming in and out of visitors and unauthorized individuals, or when the owner avoids the practice of subleases and relative acts. FEED is an application which identifies those who entered a secured apartment premise through facial recognition using a deep learning model. This premise is secured, since a digital video camera, specifically an ip camera, is installed to capture the faces of those entering the premise.The identification is carried out by extracting the facial features of a person from an image and then compared with existing images that have been previously stored in the database. Since, surveillance cameras are widely used to monitor and secure the place around an organization, and even at home, having a list of those who entered the premises with the captured time is highly important. This will fast track the process of reviewing the recorded video. The reliability of the system can be defined through its level of accuracy and of its being non-intrusive nature. The FEED system in apartment properties enables the owners to find out if they are being cheated by those who rent their properties, by making sure that only authorized tenants are allowed access to their home. It does not require an individual to stop or slow down in front of the ip camera in order to get captured and be scanned efficiently.. It provides a secured access of security to buildings at all levels.  Specifically :   * Easy and non-invasive way of cross-checking of authorized/tenant’s appearance in the apartment’s premises * Reviewing the recorded video is no longer necessary | | | | | | | | | |
| **Objectives (in business terms)** *Describe the measurable outcomes of the project, e.g., reduce cost by xxxx or increase quality to yyyy* | | | | | | | | | |
| * Increase efficiency in identifying who entered the secured premises * Increase competitive advantage * Increase quality of safety * Increase timeliness of report | | | | | | | | | |
| **Deliverables** *List the high-level “products” to be created (e.g., improved xxxx process, employee manual on yyyy)* | | | | | | | | | |
| * A GUI to import still images that will be stored to the database * A GUI to view the streaming video or the recorded video * A GUI to view the logs or report that contains the names of the identified persons and the corresponding time they are captured | | | | | | | | | |
| **Scope** *List what the project will and will not address (e.g., this project addresses units that report into the Office of Executive Vice President. Units that report into the Provosts Office are not included)* | | | | | | | | | |
| FEED captures the following:   * The data fed to the system will come from an ip camera, other surveillance or other digital video cameras will not be explored. * The intelligence of the facial recognition is dependent on the number of still images stored from the database * If detected faces are not identified, unknown tenants or intruders are displayed. Otherwise, the application displays a list of authorized/tenants and the time they entered the premises. * The quality of the video from the ip camera is highly important to the application. Thus, the installation of the ip camera matters. * The system is enabled with the ability to provide real-time trace of the subject’s activity * The log produced by the system is done per day.   However, the following features are not covered by FEED:   * If the owner, tenant or intruders who are entering the apartment’s premises where their faces are covered, they will not be recognized by the system. * The system does not automatically notify the apartment’s owner if there are unknown individuals or intruders entering the premises. They need to see the log themselves. | | | | | | | | | |
| **Project Milestones** *Propose start and end dates for Project Phases (e.g., Inception, Planning, Construction, Delivery) and other major milestones* | | | | | | | | | |
| |  |  | | --- | --- | | **Milestone** | **Date** | | Inception | Aug 29, 2020 | | Planning - project charter, research on the available resources for the project | Aug 31, 2020 - Sep 5, 2020 | | Develop the connection from IP Camera to the Application using C# | Sep 7, 2020 - Sep 19, 2020 | | Populating still images to the Database | Sep 21, 2020 - Sep 26, 2020 | | Implement face recognition in still images found from db using Deep Learning | Sep 28, 2020 - Oct 3, 2020 | | Integrate face recognition in the streaming video connected from an IP Camera | Oct 5, 2020 - Dec 5, 2020 | | Polishing | Dec 7, 2020 - Dec 12, 2020 | | Presentation | Dec 19, 2020 | | | | | | | | | | |
| **Major Known Risks (including significant Assumptions)** *Identify obstacles that may cause the project to fail.* | | | | | | | | | |
| |  |  | | --- | --- | | **Risk** | **Risk Rating (Hi, Med, Lo)** | | Distorted Videos - can’t recognize the face properly | High | | Internet Connectivity - can’t get the exact timezone | High - Med | | Few Still Images - can’t have enough still images as basis for facial recognition | High | | | | | | | | | | |
| **Constraints** *List* a*ny conditions that may limit the project team’s options with respect to resources, personnel, or schedule (e.g., predetermined budget or project end date, limit on number of staff that may be assigned to the project).* | | | | | | | | | |
| Resources - The biggest resource that is needed here is time. Since, all of us are working, allotting time to do research, project development, meeting, and other project related tasks are really of great value. Managing our own personal, work, and project time is very challenging. Also, our knowledge of the technologies involved in this project is still few. | | | | | | | | | |
| Personnel - All of us are still exploring python and related technologies and APIs (Application Programming Interfaces). Having someone to really dedicate his time to develop this project is essential. | | | | | | | | | |
| Schedule - We can only meet and virtually show our outputs on Saturdays. Hopefully, we can finish the project before the semester ends. | | | | | | | | | |
| **5. Communication Strategy** *(specify how the project manager will communicate to the Executive Sponsor, Project Team members and Stakeholders, e.g., frequency of status reports, frequency of Project Team meetings, etc.* | | | | | | | | | |
| Executive Sponsor - Dr. Larmie Feliscuzo, as our project management professor and our adviser, we will give reports every Saturday, during our class time. | | | | | | | | | |
| Project Team Members - We will give updates from time to time on the tasks assigned to us. We’ll virtually meet once a week. | | | | | | | | | |
| Stakeholders - They will be the one who will provide additional entries and feedback in the attainment of the project. Business rules and relative requirements shall be their primary input. | | | | | | | | | |
| 6. Sign-off | | | | | | | | | |
|  | | | **Name** | | | **Signature** | | | **Date** |
| **Project Manager** | | | Marisa Buctuanon | | |  | | | 09/05/2020 |
| **Adviser** | | | Dr. Laramie Feliscuzo | | |  | | |  |
| **7. Notes** | | | | | | | | | |
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