**Project Reporting**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Weekly Report**  ***(12/05/2017 – 19/05/2017)***  **Project Name:*****Object Recognition and Image Enhancement For Night Vision Surveillance***  **Report Prepared By: Aayush Kafle** | | | | | |
| Project Members – Aashish Bhandari  Aayush Kafle  Pranjal Dhakal  Prateek Raj Joshi | | | | | |
| **Project Overview of this week:** | | | | | |
| This week, we focused on different image enhancement algorithms on spatial as well as frequency domain. We also studied different camera calibration techniques and algorithms. Similarly, we also started the project assigned by the company. | | | | | |
|  | | | | | |
| **Major Tasks performed this week:** | | | | | |
| * Started the research on different image enhancement algorithms in frequency domain like Contourlet Transform, Wavelet Transform, Fractional Fourier Transform and compare the results. * Calibration of cameras in normal (normal camera) and low light (IR camera) conditions. * Collected datasets of common object. * Project assigned by the company: Studied the required database format and the got familiar with the use of codeigniter framework. | | | | | |
| **Plan for next week: (Known as of today):** | | | | | |
| * Continuing collection of images for dataset creation and train classifiers using the dataset. * Compare the different image enhancement algorithms in different and same conditions. * Complete calibration of IR camera in low light condition. * Project assigned by the company: Preparation of design document (documentation) and start to code the backend of the project. | | | | | |
|  | | | | | |
| **Project Concern, Challenges or Dependencies:**  [*Bullet points of any project concern or dependencies. Could be additional resource requirement for the project.]* | | | | | |
| Dependencies:   * TensorFlow API (to define the CNN structure) * Numpy (for basic Mathematical Calculation) * Raspbian (Debain based OS for Raspberry Pi) * PyGTK and Glade for UI designing in client-side. * OpenCV (for image collection and image processing) * Python (programming) * PHP, Apache2, Mysql, phpmyadmin, HTML and CSS (for internal project of the company) | | | | | |
| **Important Information or News:**  [*Bullet points of any important information or news that project lead wants to share with PMU (Project Monitoring Unit]* | | | | | |
|  | | | | | |
|  | | | | | |
| **Scope Change:** | | | | | |
|  | | | | | |
|  | | | | | |
| **Milestone:**  *[Milestone planned for this week. The status could be completed, on schedule, behind schedule etc]* | | | | | |
| **SNo.** | **Milestones** | **Planned Date** | **Actual Date** | **Status** | **Comment** |
| 1 | Collecting datasets for a sample object by capturing its images at a fixed lighting condition. | 20/04 |  | On Schedule |  |
| 2 | Research on image enhancement techniques | 03/05 | 05/12 | On going |  |
| 3 | Hardware for intensity calculation | 01/05 | 03/05 | Planned for upcoming weeks |  |
| 4 | Calibration of camera | 13/05 | 15/05 | On Schedule |  |

***Note: Put N/A if any of the section is none applicable.***