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| **Team ID** | **PNT2022TMID26330** |
| **Project Name** | **Smart Farmer – IoT Enabled Smart FarmingApplication** |
| **Team members** | Aparna K  Akshaya R  Harhsini PR  Adithi R |

MILESTONE LIST

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| Milestone Name | Milestone Number | Description | Mandatory |  |
| Project Objectives | M-01 | We will be able to learn to prepare dataset, image processing, working with CNN layers, read images using OpenCV and CNN for computer vision AI | Yes | - |
| Project Flow | M-02 | A project management process flowchart is a graphical aid, designed to visualize the sequence of steps to be followed throughout the project management process | Yes |  |
| Pre-Requisites | M-03 | To complete this project, we should have known following project such as Keras, TensorFlow, Python ,Anaconda, OpenCV, Flask, Scikit-learn etc.… | Yes |  |

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| Prior Knowledge | M-04 | One should have knowledge on the Supervised Learning ,CNN and Regression Classification and Clustering, ANN | Yes |  |
| Data collection | M-05 | We can collect dataset from different open sources like kaggle.com, UCI machine learning etc. | Yes |  |
| Image Preprocessing | M-06 | Importing the ImageDataGenerator libraries, Define Parameters/Arguments for ImageDataGenerator class, Applying Image Data Generator Functionality to trainset and test set | Yes |  |
| Model Building | M-07 | Importing the model building libraries, Initializing the model, Adding  CNN  layers, Adding Dense layers, Configuring the learning Process, Train the model, Save the model, Predictions. | Yes |  |
| Video Analysis | M-08 | Opencv for video processing, creating an account in twilio  service and sending alert message | Yes |  |
| Train CNN model | M-09 | Register for IBM Cloud and train Image Classification Model | Yes |  |
| Ideation Phase | M-10 | Prepare Literature Survey on the selected Project and Information Gathering, empathy map and ideation | Yes |  |
| Project Design Phase-I | M-11 | Prepare Proposed solution , problem-solution fit and Solution Architecture | Yes |  |
| Project Design  Phase-II | M-12 | Prepare Customer journey ,functional requirements, Dataflow diagram and Technology Architecture | Yes |  |
| Project Planning Phase | M-13 | Prepare Milestone list , Activity list and Sprint Delivery Plan | Yes |  |
| Project Development Phase | M-14 | Project Development delivery of Sprint 1, Sprint 2, Sprint 3, Sprint 4 | Yes |  |

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ACTIVITY LIST

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| Activity Number | Activity | Sub Activity | Assigned To | Status |
| 1. | [PROJECT OBJECTIVES](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse1) |  | All Members | Review |
| 2. | [PROJECT FLOW](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse2) |  | All Members | Review |
| 3. | [PRE-REQUISITES](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse3) |  | All Members | Review |
| 4. | [DATA COLLECTION](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse4) | 4.1 Download the Dataset | All Members | Review |
| 5. | [IMAGE](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse5) [PREPROCESSING](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse5) | * 1. Import the ImageDataGenerator Library.   2. Define the Parameters/Arguments for ImageDataGenerator class.   3. Applying ImageDataGenerator Functionality to trainset and testset. | All Members | Review |
| 6. | [MODEL BUILDING](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse6) | * 1. Importing the model building libraries.   2. Initializing the model.   3. Adding CNN layers.   4. Adding dense layers.   5. Configuring the | All Members | Review |

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|  |  | learning process.   * 1. Training the model.   2. Saving the model.   3. Predictions. |  |  |
| 7. | [VIDEO ANALYSIS](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse7) | * 1. Open CV for videoprocessing.   2. Creating an account in Twilio service.   3. Sending alert message. | All Members | In Progress |
| 8. | [TRAIN CNN MODEL](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse8) [ON IBM](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse8) | * 1. Train image classification model.   2. Register for IBM cloud. | All Members | In Progress |
| 9. | [IDEATION PHASE](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse9) | * 1. Literature Review.   2. Empathy map.   3. Ideation. | All Members | Completed |
| 10. | [PROJECT DESIGN](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse10) [PHASE – I](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse10) | * 1. Proposed Solution.   2. Problem solution fit.   3. Solution Architecture. | All Members | Review |
| 11. | [PROJECT DESIGN](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse11) [PHASE -II](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse11) | * 1. Customer journey.   2. Functional requirement.   3. Data flow Diagrams.   4. Technology Architecture. | All Members | Review |
| 12. | [PROJECT PLANNING](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse12) [PHASE](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse12) | * 1. Prepare milestone and activity list.   2. Sprint delivery plan. | All Members | In Progress |

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| 13. | [PROJECT](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse13) [DEVELOPMENT](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse13) [PHASE](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse13) | * 1. Project development-Delivery of Sprint-1.   2. Project development-Delivery of Sprint-2.   3. Project development-Delivery of Sprint-3.   4. Project development-Delivery of Sprint-4. | All Members | In Progress |