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| Team ID | PNT2022TMID45949 |
| Project Name | Emerging Methods for Early Detection of  Forest Fires |
| Team Members | G.samson  B.S.tharani  M.subash  C.saranya |

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, Tensor Flow, 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 train set 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  Architecture | solution | , problem-solution | fit | and | Solution | 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 | Completed |
| 2. | [PROJECT FLOW](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse2) |  | All Members | Completed |
| 3. | [PRE-REQUISITES](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse3) |  | All Members | Completed |
| 4. | [DATA COLLECTION](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse4) | 4.1 Download the Dataset | G.samson  M.subash | Completed |
| 5. | [IMAGE](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse5) | 5.1 Import the | All Members | In Progress |
|  | [PREPROCESSING](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse5) | ImageDataGenerator Library. |  |  |
|  |  | 5.2 Define the  Parameters/Arguments for ImageDataGenerator |  |  |
|  |  | class.  5.3 Applying |  |  |
|  |  | ImageDataGenerator Functionality to trainset and testset. |  |  |
| 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 | In Progress |

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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. OpenCV for video processing.   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 | Completed |
| 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 | Completed |
| 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 | Completed |

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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.   * 1. Project   development-Delivery of Sprint-2.   * 1. Project   development-Delivery of Sprint-3.   * 1. Project   development-Delivery of Sprint-4. | All Members | In Progress |