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| **Team ID** | **PNT2022TMID13265** |
| **Project Name** | **Emerging Methods for Early Detection of Forest Fires** |
| **Team members** | **K.Karthikeyan**  **E.Bhavan ramana**  **M.Gunaseelan**  **P.Hemanth kumar reddy**  **R.Aravind raj** |

**MILESTONE LIST**

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| **Milestone Name** | | **Mileston**  **e**  **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 CNNfor computervision 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 | |  | |
| 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 | 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 | All Members | Completed |
| 5. | [IMAGE](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse5)  [PREPROCESSING](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse5) | Import the  ImageDataGenerator Library.  Define the  Parameters/Arguments for ImageDataGenerator class.  Applying  ImageDataGenerator  Functionality to trainset and testset. | All Members | In Progress |
| 6. | [MODEL BUILDING](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse6) | Importing the model building libraries.  Initializing the model.  Adding CNN layers.  Adding dense layers.  Configuring the | All Members | In Progress |

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|  |  | learning process.  Training the model.  Saving the model.  Predictions. |  |  |
| 7. | [VIDEO ANALYSIS](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse7) | OpenCV for video processing.  Creating an account in Twilio service. Sending alert message. | All Members | In Progress |
| 8. | [TRAIN CNN MODEL ON IBM](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse8) | Train image classification model. Register for IBM cloud. | All Members | In Progress |
| 9. | [IDEATION PHASE](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse9) | Literature Review.    Empathy map.    Ideation. | K.Karthikeyan  M.Gunaseelan,E.Bhavan ramana  Aravind raj, Hemanth kumar reddy | 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) | Proposed Solution.  Problem solution fit. Solution  Architecture. | Karthikeyan  Gunaseelan,bhavan ramana  Aravind raj, Hemanth kumar redddy | 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. | 1.Karthikeyan.k   1. Gunaseelan ,m 2. Hemanth kumar reddy 3. Bhavan ramana,Aravind raj | Completed |
| 12. | [PROJECT PLANNING PHASE](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse12) | 1.Prepare milestone and activity list.  2.Sprint delivery plan. | 1.Karthikeyan.k  2.gunaseelan.m | Completed |
| 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) | Project developmentDelivery of Sprint-1. Project developmentDelivery of Sprint-2. Project developmentDelivery of Sprint-3. Project developmentDelivery of Sprint-4. | 1.karthikeyan ,gunaseelan, bhavan ramana  2.karthikeyan, Hemanth kumar reddy,gunaseelan ,bhavan ramana,Aravind raj  3.karthikeyan,gunaseelan, bhavan ramana,Hemanth kumar reddy  4.gunaseelan,bhavan ramana,Aravind raj | In Progress |