MILESTONE LIST

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| **Team ID** | **PNT2022TMID31081** |
| **Project Name** | **Emerging Methods for Early Detection of**  **Forest Fires** |
| **Team members** | 1. **Pireveenkumar.V**   **2.Prabakaran.R 3.Kannan.K**  **4.Chandru.B** |

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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 Pre**  **processing** | M-06 | Importing the Image Data Generator libraries, Define Parameters/Arguments for Image Data Generator 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 | Open CV 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** | M-11 | Prepare Proposed solution, problem-solution fit and Solution  Architecture | Yes |

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| **Phase-I** |  |  |  |
| **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 |

**ACTIVITY LIST**

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| **Activity Number** | **Activity** | **Sub Activity** | **Assigned To** | **Status** |
| 1. | [PROJECT](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse1) [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](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse4) [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) | * 1. Import the Image Data Generator Library.   2. Define the | All Members | In Progress |
|  |  | Parameters/Arguments for Image Data Generator class.  5.3 Applying |  |  |
|  |  | Image Data Generator |  |  |

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|  |  | Functionality to trainset and test set. |  |  |
| 6. | [MODEL](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse6) [BUILDING](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse6) | * 1. Importing the model building libraries.   2. Initializing the | All Members | In Progress |
|  |  | model. |  |  |
|  |  | 6.3 Adding CNN |  |  |
|  |  | layers. |  |  |
|  |  | 6.4 Adding dense |  |  |
|  |  | layers. |  |  |
|  |  | 6.5 Configuring the |  |  |
|  |  | learning process. |  |  |
|  |  | 6.6 Training the |  |  |
|  |  | model. |  |  |
|  |  | 6.7 Saving the model. |  |  |
|  |  | 6.8 Predictions |  |  |

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| 7. | [VIDEO](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse7) [ANALYSIS](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse7) | * 1. OpenCV for video processing.   2. Creating an account in Twilio service. 7.3   Sending alert  message. | All Members | In Progress |
| 8. | [TRAIN](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse8) [CNN](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse8) [MODEL 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](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse9) [PHASE](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse9) | * 1. Literature Review.   2. Empathy map.   3. Ideation. | All Members | Completed |
| 10. | [PROJECT](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse10) [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. 10.3 | All Members | Completed |

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|  |  | Solution Architecture. |  |  |
| 11. | [PROJECT](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse11) [DESIGN](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse11) [PHASE -II](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse11) | 11.1 Customer journey. 11.2 Functional requirement.  11.3 Data flow Diagrams. 11.4  Technology  Architecture. | All Members | Completed |
| 12. | [PROJECT](https://careereducation.smartinternz.com/Student/guided_project_workspace/15856#collapse12) [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.   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 |