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| Team ID | PNT2022TMID53546 |
| Project Name | Emerging Methods for Early Detection of Forest Fires |
| Team members | Aanant.V Charan.M Guhaneswa r.S Harishkuma r.G.K |

MILESTONE LIST

| 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 | |

ACTIVITY LIST

| Activity Number | Activity | Sub Activity | Assigned To | Status |
|-----------------|---------------------|---|-------------|-------------|
| 1. | PROJECT OBJECTIVES | | All Members | Completed |
| 2. | PROJECT FLOW | | All Members | Completed |
| 3. | PRE-REQUISITES | | All Members | In progress |
| 4. | DATA COLLECTION | 4.1 Download the Dataset | All Members | In progress |
| 5. | IMAGE PREPROCESSING | 5.1 Import the ImageDataGenerator Library. 5.2 Define the Parameters/Arguments for ImageDataGenerator class. 5.3 Applying ImageDataGenerator Functionality to trainset and testset. | All Members | In progress |
| 6. | MODEL BUILDING | 6.1 Importing the model building libraries. 6.2 Initializing the model. 6.3 Adding CNN layers. 6.4 Adding dense layers. 6.5 Configuring the | All members | In Progress |

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| | | learning process. 6.6 Training the model. 6.7 Saving the model. 6.8 Predictions. | | |
| 7. | VIDEO ANALYSIS | 7.1 OpenCV for video processing. 7.2 Creating an account in Twilio service 7.3 Sending alert message. | All Members | In Progress |
| 8. | TRAIN CNN MODEL ON IBM | 8.1 Train image classification model. 8.2 Register for IBM cloud. | All Members | In Progress |
| 9. | IDEATION PHASE | 9.1 Literature Survey. 9.2 Empathy map. 9.3 Ideation. | All Members | Completed |
| 10. | PROJECT DESIGN PHASE – I | 10.1 Proposed Solution. 10.2 Problem solution fit. 10.3 Solution Architecture. | All Members | Completed |

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| 11. | PROJECT DESIGN PHASE -II | 11.1 Customer journey. 11.2 Functional requirement. 11.3 Data flow Diagrams. 11.4 Technology Architecture. | All Members | Completed |
| 12. | PROJECT PLANNING PHASE | 12.1 Prepare milestone and activity list. 12.2 Sprint delivery plan. | All Members | Completed |
| 13. | PROJECT DEVELOPMENT PHASE | 13.1 Project development-Delivery of Sprint-1. 13.2 Project development-Delivery of Sprint-2. 13.3 Project development-Delivery of Sprint-3. 13.4 Project development-Delivery of Sprint-4. | All Members | In Progress |