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| <b>Date</b>         | <b>22 October 2022</b>                                      |
| <b>Team ID</b>      | <b>PNT2022TMID13753</b>                                     |
| <b>Project Name</b> | <b>Emerging Methods for Early Detection of Forest Fires</b> |

## MILESTONE LIST

| <b>Milestone Name</b> | <b>Milestone Number</b> | <b>Description</b>  | <b>Mandatory</b> |
|-----------------------|-------------------------|---|------------------|
| 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              |
| 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 ImageData 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 Phase I    | M-11 | Prepare Proposed Solution, Problem- Solution Fit, Solution Architecture                               | Yes |
| Project Design Phase II   | M-12 | Prepare Customer journey, functional requirements, Dataflowdiagram and Technology Architecture        | Yes |
| Project PlanningPhase     | 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   | Status      |
|-----------------|---------------------|--|-------------|
| 1.              | PROJECT OBJECTIVES  |  | Completed   |
| 2.              | PROJECT FLOW        |  | Completed   |
| 3.              | PRE-REQUISITES      |  | Completed   |
| 4.              | DATA COLLECTION     | 4.1 Download theDataset  | Completed   |
| 5.              | IMAGE PREPROCESSING | 5.1 Import ImageDataGeneratorLibrary.<br>5.2 Define the Parameters/ Arguments for ImageDataGeneratorclass.<br>5.3 Applying ImageDataGenerator Functionality totrainset and test set. | In Progress |

|     |                           |   |             |
|-----|---------------------------|---|-------------|
| 6.  | MODEL BUILDING            | 6.1 Importing the modelbuilding libraries.<br>6.2 Initializing the model.<br>6.3 Adding CNN layers.<br>6.4 Adding dense layers.<br>6.5 Configuring the learning process<br>6.6 Training the model.<br>6.7 Saving the model.<br>6.8 Predictions. | In Progress |
| 7.  | VIDEO ANALYSIS            | 7.1 OpenCV for video processing.<br>7.2 Creating an accountin Twilio service.<br>7.3 Sending alertmessage.  | In Progress |
| 8.  | TRAIN CNN MODELON IBM     | 8.1 Train image classification model.<br>8.2 Register for IBMcloud.   | In Progress |
| 9.  | IDEATION PHASE            | 9.1 Literature Review.<br>9.2 Empathy map.<br>9.3 Ideation.   | Completed   |
| 10. | PROJECT DESIGNPHASE – I   | 10.1 Proposed Solution.<br>10.2 Problem solution.<br>10.3 Solution Architecture   | Completed   |
| 11. | PROJECT DESIGNPHASE -II   | 11.1 Customer journey.<br>11.2 Functional requirement.<br>11.3 Data flow Diagrams.<br>11.4 TechnologyArchitecture.  | Completed   |
| 12. | PROJECT PLANNINGPHASE     | 12.1 Prepare milestone and activity list<br>12.2 Sprint delivery plan.  | Completed   |
| 13. | PROJECT DEVELOPMENT PHASE | 13.1 Project development-Delivery ofSprint-1.<br>13.2 Project development-Delivery ofSprint-2.<br>13.3 Project development-Delivery of Sprint-3<br>13.4 Project development-Delivery ofSprint-4.  | In Progress |