

Milestone and Activity List

Team ID	PNT2022TMID25867
Project Name	Emerging Methods for Early Detection of Forest Fires.
Maximum Marks	4 Marks

Milestone List:

MILESTONE NAME	MILESTONE NUMBER	DESCRIPTION	MANDATORY	OPTIONAL
Project Objectives	M-001	We will be able to learn to prepare dataset, image processing, working with CNN layers, read images using Open CV and CNN for computer vision AI.	Yes	-
Project Flow	M-002	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-003	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-004	One should have knowledge on the Supervised Learning , CNN and Regression Classification and Clustering, ANN.	Yes	-
Data collection	M-005	We can collect dataset from different open sources like kaggle.com, UCI machine learning etc	Yes	-
Image Preprocessing	M-006	Importing the ImageDataGenerator libraries, Define parameters for ImageDataGenerator class. Applying Image Data Generator Functionality to trainset and testset.	Yes	-

Model Building	M-007	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-008	OpenCV for video processing, creating an account in twilio service and sending alert message.	Yes	-
Train CNN model	M-009	Register for IBM Cloud and train Image Classification Model.	Yes	-
Ideation Phase	M-010	Prepare Literature Survey on the selected Project and Information Gathering, empathy map and ideation.	Yes	-
Project Design Phase - I	M-011	Prepare Proposed solution , problem solution fit and Solution Architecture	Yes	-
Project Design Phase - II	M-012	Prepare Customer journey, functional requirements, Data flow diagram and Technology Architecture.	Yes	-
Project Planning Phase	M-013	Prepare Milestone list, Activity list and Sprint Delivery Plan.	Yes	-
Project Development Phase	M-014	Project Development delivery of Sprint 1, Sprint 2, Sprint 3, and Sprint 4.	Yes	

Activity List:

ACTIVITY NAME	ACTIVITY NUMBER	DESCRIPTION	ASSIGNED TO	STATUS
Access Resources	1-A	Access the resources from the project dashboard.	All Members	Completed
Rocket chat Registration	1-B	Join the mentoring channel via platform & rocket-chat mobile app.	All Members	Completed
Access Workspace	1-C	Access the guided project workspace.	All Members	Completed
IBM Cloud registration	1-D	Register on IBM Academic Initiative & Apply Feature for IBM Code Cloud Credits.	All Members	Completed
Project Repository Creation	1-E	Create GitHub account and collaborate with Project Repository in project workspace.	All Members	Completed
Environment Setup	1-F	Set-up the Laptop / Computers based on the pre-requisites for each technology stack.	All Members	Completed
Literature survey	2-A	Literature survey on the selected project & Information Gathering	All Members	Completed
Technology Training	2-B	Attend the technology trainings as per the training Calendar.	All Members	Completed
Empathy Map	2-C	Prepare Empathy Map Canvas to capture the user Pains & Gains, Prepare list of problem statements.	All Members	Completed
Technology Training	2-D	Attend the technology trainings as per the training Calendar.	All Members	Completed
Brainstorming	2-E	List the Ideas by organizing the brainstorming session and prioritize the top 3 ideas based on the feasibility and importance.	All Members	Completed
Technology Training	2-F	Attend the technology trainings as per the training Calendar.	All Members	Completed

Proposed Solution Document	3-A	Prepare the proposed solution document, which includes the novelty, feasibility of idea, business model, Social impact, scalability of solution, etc.	Pavithiran G Sharan Padmanabhan	Completed
Technology Training	3-B	Prepare problem - solution fit document and Solution Architecture.	All Members	Completed
Problem - Solution fit	3-C	Prepare problem - solution fit document.	All Members	Completed
Solution Architecture	3-D	Prepare problem- Solution Architecture.	Chandar B Abinash M	Completed
Technology Training	3-E	Attend the technology trainings as per the training Calendar.	All Members	Completed
Customer Journey Map	4-A	Prepare the customer journey maps to understand the user interactions & experiences with the application.	All Members	Completed
Technology Training	4-B	Attend the technology trainings as per the training Calendar.	All Members	Completed
Functional Requirements & Data Flow Diagrams	4-C	Prepare the Functional Requirement Document & Data-Flow Diagrams.	All Members	Completed
Technology Architecture	4-D	Prepare Technology Architecture of the solution.	All Members	Completed
Technology Training	4-E	Attend the technology trainings as per the training Calendar.	All Members	Completed
Milestone & Activity List	5-A	Prepare Milestone & Activity List.	All Members	Completed
Sprint Delivery Plan	5-B	Prepare Sprint Delivery Plan.	All Members	In Progress
Data Collection	6	Collect datasets from different open sources like kaggle.com, data.gov, UCI machine learning repository, etc.	All Members	In Progress
Image Preprocessing	7-A	Importing the ImageDataGenerator Library	All Members	In Progress

Image Preprocessing	7-B	Define the Parameters / arguments for ImageDataGenerator class.	All Members	In Progress
Image Preprocessing	7-C	Applying ImageDataGenerator functionality to train set and test set.	All Members	In Progress
Model Building	8-A	Importing the model building libraries.	All Members	In Progress
Model Building	8-B	Initializing the model.	All Members	In Progress
Model Building	8-C	Adding CNN Layers	All Members	In Progress
Model Building	8-D	Adding Dense Layers	All Members	In Progress
Model Building	8-E	Configuring the learning process.	All Members	In Progress
Model Building	8-F	Training the Model.	All Members	In Progress
Model Building	8-G	Save the model.	All Members	In Progress
Model Building	8-H	Predictions.	All Members	In Progress
Video Analysis	9-A	OpenCV for video processing.	All Members	In Progress
Video Analysis	9-B	Creating an account in Twilio service.	All Members	In Progress
Video Analysis	9-C	Sending alert message.	All Members	In Progress
Train CNN Model on IBM	10-A	Register for IBM Cloud.	All Members	In Progress
Train CNN Model on IBM	10-B	Train Image Classification Model.	All Members	In Progress

Milestone:

- Modern Technology are increasing and optimizing the Performance of the Artificial Intelligences (AI) Model.
- Finding of the exact location of the fire and sending notification to the fire authorities soon after the occurrence of fire can make a positive impact.
- We have implemented a fire detection system to detect fire by capturing images.
- The system uses CNN (Convolutional Neural Network), and image processing techniques.
- In this Project Milestone will be given the Best Solution for the nature of forests using the complete friendly and simple user interface web application to fetching the solution by own.

- In addition, process we are planned to add a valid Module that is Early Detection of Forest Fires. It can give both Artificial and Natural of forests.



Activity List:

- Planning is a crucial activity in project management for assigning team members to specific project phases.
- The numerous tasks assigned to and completed by the team members are displayed in this activity.
- We can divide the project into four steps, which are as follows:
 - Phase 1: Information Gathering and Requirements Analysis.
 - Phase 2: Module Development and Project Planning.
 - Phase 3: Using a Highly Accurate Deep Learning Algorithm to Improve Performance.
 - Phase 4: Deploying the Model to the Cloud and Testing Model and User Interface Performance.

Agile Methodology for Activity Planning

