Project Planning Phase
Milestone and Activity List

Date	22 October 2022
Team ID	PNT2022TMID42581
Project Name	Emerging methods for early detection of forest fires
Team leader	Haritha N
Team members	Harritha S, Arvin J C Duke, Dominic Irudhayaraj S

MILESTONE LIST

Name	Milestone Number	Description	Mandatory	Optional
Project Objectives	M-001	We will be able to learn how to get and prepare the dataset. We will be able to know how to do image processing. We will understand how CNN layers are work. Classify images using a Convolutional Neural Network. We will be able to know what are the activation functions can be used. We will be able to know how to read images using OpenCV and convolutional Neural Networks for Computer vision AI Problems.	Yes	-
Project Flow	M-002	To accomplish Project flow, we should complete Data collection, image preprocessing, model building, video streaming and alerting.	Yes	
Pre-Requisites	M-003	To complete this project we should have known following software and packages such as anaconda navigator, tensor flow, Keras.	Yes	
Prior Knowledge	M-004	One should have knowledge on Artificial neural networks Supervised and unsupervise Learning,CNN and Regression Classification and Clustering, ANN.	Yes	
Data collection	M-005	We can collect dataset from different open sources like kaggle.com etc	Yes	
Image Preprocessing	M-006	Importing the ImageDataGenerator libraries, Define Parameters/Arguments 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 and Predictions.	Yes	
Video Analysis	M-008	Open cv for video processing, creating an account in twilio service and Sending alert messages.	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, Dataflow diagram and Technology Architecture	Yes	
Project Planning Phase	M-013	Prepare Milestone and Activity list, Sprint Delivery Plan	Yes	
Project Development Phase	M-014	Project Development delivery of Sprint 1, Sprint 2, Sprint 3, Sprint 4	Yes	

ACTIVITY LIST

Activity Number	Activity Name	Detailed Activity Description	Task Assigned	Status
1.1	Access Resources	Access the resources (courses) in project dashboard.	All Members	COMPLETED
1.2	Rocket chat registration	Join the mentoring channel via platform& rocket-chat mobile app.	All Members	COMPLETED
1.3	Access workspace	Access the guided project workspace.	All Members	COMPLETED
1.4	IBM Cloud registration	Register on IBM Academic Initiative &Apply Feature code for IBM Cloud Credits.	All Members	COMPLETED
1.5	Project Repository Creation	Create GitHub account & collaborate with Project Repository in project workspace.	All Members	COMPLETED
1.6	Environment Setup	Set-up the Laptop / Computers based on the pre-requisites for each technology track.	All Members	COMPLETED
2.1	Literature survey	Literature survey on the selected project & Information Gathering.	All Members	COMPLETED
2.2	Technology Training	Attend the technology trainings as per the training Calendar.	All Members	COMPLETED

2.3	Empathy Map	Prepare Empathy Map Canvas to capture the user Pains & Gains, Prepare list of problem statements	All Members	COMPLETED
2.4	Technology Training	Attend the technology trainings as per the training Calendar.	All Members	COMPLETED
2.5	Brainstorming	List the ideas (at least 4 per each team member) by organizing the brainstorm session and prioritize the ideas	All Members	COMPLETED
2.6	Technology Training	Attend the technology trainings as per the training Calendar.	All Members	COMPLETED
3.1	Proposed Solution Document	Prepare the proposed solution document, which includes the novelty, feasibility of idea, business model, social impact, scalability of solution, etc.	Haritha N, Harritha S	COMPLETED
3.2	Technology Training	Attend the technology trainings as per the training Calendar.	All Members	COMPLETED
3.3	Problem - Solution fit & Solution Architecture	Prepare problem - solution fit document& Solution Architecture.	All Members	COMPLETED
3.4	Technology Training	Attend the technology trainings as per the training Calendar.	All Members	COMPLETED
4.1	Customer Journey Map	Prepare the customer journey maps to understand the user interactions & experiences with the application (entry to exit).	Haritha N, Harritha S, Arvin J C Duke	IN-PROGRESS
4.2	Technology Training	Attend the technology trainings as per the training Calendar.	All Members	COMPLETED
4.3	Functional Requirements	Prepare the Functional Requirement Document & Data Flow Diagrams.	Haritha N, Harritha S	COMPLETED
	DataFlow Diagrams		Haritha N, Harritha S, Dominic Irudhayaraj S	

4.4	Technology Architecture	Prepare Technology Architecture of the solution.	Haritha N, Harritha S, Arvin J C Duke	COMPLETED
4.5	Technology Training	Attend the technology trainings as per the training Calendar.	All members	COMPLETED
5.1	Milestone & Activity list	Prepare Milestone & Activity List.	Haritha N, Harritha S	COMPLETED
5.2	Sprint Delivery Plan	Prepare Sprint Delivery Plan.	Haritha N, Arvin J C Duke, Dominic Irudhayaraj S	COMPLETED
6	Data Collection	Collect datasets from different open sources like kaggle.com, data.gov, UCI machine learning repository, etc.	Haritha N, Harritha S	COMPLETED
7.1	Image Preprocessing	Importing the ImageDataGenerator Library	Haritha N, Harritha S	REVIEW
7.2	Image Preprocessing	Define the parameters/arguments for ImageDataGenerator class.	Haritha N, Harritha S, Arvin J C Duke	REVIEW
7.3	Image Preprocessing	Applying ImageDataGenerator functionality to trainset and test set.	Haritha N, Harritha S, Dominic Irudhayaraj S	REVIEW
8.1	Model Building	Importing the model building libraries.	Haritha N, Harritha S	REVIEW
8.2	Model Building	Initializing the model.	Haritha N, Harritha S	IN PROGRESS
8.3	Model Building	Adding CNN Layers.	Haritha N, Harritha S	IN PROGRESS

8.4	Model Building	Adding Dense Layers	Haritha N, Harritha S, Arvin J C Duke	IN PROGRESS
8.5	Model Building	Configuring the learning process	Haritha N, Harritha S, Dominic Irudhayaraj S	REVIEW
8.6	Model Building	Training the Model	Haritha N, Harritha S	IN PROGRESS
8.7	Model Building	Save the Model	Haritha N, Arvin J C Duke	REVIEW
8.8	Model Building	Predictions	Arvin J C Duke, Haritha N	IN PROGRESS
9.1	Video Analysis	OpenCV for video processing	Haritha N, Dominic Irudhayaraj S	IN PROGRESS
9.2	Video Analysis	Creating an account in Twilio service.	Haritha N, Dominic Irudhayaraj S	IN PROGRESS
9.3	Video Analysis	Sending alert message.	Haritha N, Harritha S	IN PROGRESS
10.1	Train CNN Model on IBM	Register for IBM Cloud	ALL MEMBERS	IN PROGRESS
10.2	Train CNN Model on IBM	Train Image Classification Model	Haritha N	IN PROGRESS