Project Planning Phase
Milestone and Activity List

Date	20 November 2022
Team ID	PNT2022TMID24176
Project Name	Emerging methods for early detection of forest fires
Team leader	BALAJI R
Team members	Arun K, Dinesh R, Kota Karthik K

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

2.3	Empathy Map	Prepare Empathy Map Canvas to capture the user Pains & Gains, Prepare list of problem statements	All Members
2.4	Technology Training	Attend the technology trainings as per the training Calendar.	All Members
2.5	Brainstorming	List the ideas (at least 4 per each team member) by organizing the brainstorm session and prioritize the ideas	All Members
2.6	Technology Training	Attend the technology trainings as per the training Calendar.	All Members
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.	All Members
3.2	Technology Training	Attend the technology trainings as per the training Calendar.	All Members
3.3	Problem - Solution fit & Solution Architecture	Prepare problem - solution fit document& Solution Architecture.	All Members
3.4	Technology Training	Attend the technology trainings as per the training Calendar.	All Members
4.1	Customer Journey Map	Prepare the customer journey maps to understand the user interactions & experiences with the application (entry to exit).	All Members
4.2	Technology Training	Attend the technology trainings as per the training Calendar.	All Members
4.3	Functional Requirements DataFlow Diagrams	Prepare the Functional Requirement Document & Data Flow Diagrams.	All Members

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

8.4	Model Building	Adding Dense Layers	All Members
8.5	Model Building	Configuring the learning process	All Members
8.6	Model Building	Training the Model	All Members
8.7	Model Building	Save the Model	All Members
8.8	Model Building	Predictions	All Members
9.1	Video Analysis	OpenCV for video processing	All Members
9.2	Video Analysis	Creating an account in Twilio service.	All Members
9.3	Video Analysis	Sending alert message.	All Members
10.1	Train CNN Model on IBM	Register for IBM Cloud	All Members
10.2	Train CNN Model on IBM	Train Image Classification Model	All Members