Project Design Phase-I
Proposed Solution Template

Date	19 September 2022
Team ID	PNT2022TMID47894
Project Name	Project - **Emerging Methods for Early Detection of Forest Fires.**
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	**Statement**: It is difficult to predict and detect Forest Fire in a sparsely populated forest area. **Description**: it is more difficult if the prediction is done using ground-based methods like Camera or Video-Based approach.
2.	Idea / Solution description	The contribution of this work involves • we interacts with a web camera to read the video. Once the input image from the video frame is sent to the model, if the fire is detected it is showcased on the console, and alerting sound will be generated and an alert message will be sent to the Authorities. • Collect the dataset or create the dataset. Import ImageDataGenerator Library. • Define the parameters /arguments for ImageDataGenerator class • Applying ImageDataGenerator on trainset and test set. Import the model building Libraries • Initializing the model • Adding CNN Layers • Adding Hidden Layer • Adding Output Layer • Configure the Learning Process • Training and testing the model • Optimize the Model • Save the Model OpenCV for video processing • Creating an account in Twilio service • Use Twilio API to send messages.

		to perform the coding & solutioning, acceptance testing, performance testing based as per the sprint and submit them
3.	Novelty / Uniqueness	It is very effective methods to detect the forest fires when compare to the other methods. It detects the accurate region in the forest which is in dangerous position during the forest fires. In this methodology it gives enough time to take the necessary steps or commands before the forest fires.
4.	Social Impact / Customer Satisfaction	By this method forest department will take effective steps to protect the wildlife animals and other resources that is in the forest. It decrease the global warming ,smoke effects in the forest, helps in increasing the soil condition.
5.	Business Model (Revenue Model)	This work will summarise all the technologies that have been used for forest fire detection with exhaustive surveys of their techniques/methods used in this application. *Methods*. A lot of methods and systems are available in the market and for research.
6.	Scalability of the Solution	Wildfires have their own measurements. They are classified in terms of fire intensity and burn severity. Data can be stored to find the cause of fires.