Project Design Phase-I
Proposed Solution Template

Date	10 October 2022
Team ID	PNT2022TMID37860
Project Name	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**: To find emerging methods for early detection of forest fires using artificial intelligence. **Description:** This technology is to be implemented to locate a forest or a bush fire based on the concept of deep learning and YOLO algorithm**.** After detecting, authorities are to be alerted immediately to mitigate any damage.
2.	Idea / Solution description	1. In case of forest fire detection the burning substances are primarily identified as sceptical flame regions using a division strategy to expel the non-fire structures and results are verified by a deep learning model. 2. The technology used to locate a forest or a bush fire is based on the concept of deep learning and YOLO algorithm. This deep learning model is deployed on a UAV which help in detection of fire, meanwhile it can be monitored by web application in order to prevent it at advance.
3.	Novelty / Uniqueness	1. Accurate and reliable recognition of sceptical flame regions by means of using YOLO v3 algorithm. 2. Unlike previous algorithms, the exact location of the origin of the forest fire is also detected and sent to the web-app.
4.	Social Impact / Customer Satisfaction	1. Because of earlier prediction, loses of life, destruction of various environmental, geographical and essential resources can be avoided. 2. By detecting a fire quickly and accurately, this system can limit the emission of toxic products created by combustion, as well as global-warming gases produced by the fire itself.

5.	Business Model (Revenue Model)	1. The software platform to provide the fully autonomous processing of data received from the camera of UAV to obtain live feed in web-App. 2. This can also be implemented as a mobile application where the services can be accessed on subscription basis.

6.	Scalability of the Solution	1. This application can be developed as the world wide surveillance system to monitor the several sections of different forests.. 2. Filtration of false positive result by comparing the dataset with the video feed obtained.