Project Design Phase-I
Proposed Solution

Date	19 October 2022
Team ID	PNT2022TMID54434
Project Name	Emerging Methods for Early Detection of Forest Fires
Maximum Marks	2 Marks

Proposed Solution:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Forest fires occur yearly with increasing intensity in the summer and autumn periods. Regardless of the reasons for the ignition of forest fires, they usually cause devastating damage to both nature and humans. Forest fires are also considered the main contributor to air pollution.
2.	Idea / Solution description	Our solution is to develop a model that uses deep learning algorithms such as CNN, trained to analyze and detect forest fires from image and video data along with computer vision in real-time. The model will predict the regions in which the fires could spread.
3.	Novelty / Uniqueness	The model is then used in unmanned aerial vehicles (UAVs) with specialized cameras to monitor vulnerable regions. A mobile application is developed as an alerting system to notify residents and forest departments once a forest fire is detected. WSNs can be used to monitor parameters that can cause forest fires.
4.	Social Impact / Customer Satisfaction	As the forests are prevented beforehand, huge catastrophes can be prevented such as ecological and economical losses. Habitats of flora and fauna can be conserved. Air pollution can be reduced. The livelihood of residents living in or nearby the forests can be sustained.
5.	Business Model (Revenue Model)	We believe that the mobile application would provide efficient service for the people, forest department, and as well as the government in the long term.
6.	Scalability of the Solution	Sparsely populated areas typically encounter complications during detection. However, the solution can monitor enormous forests and detect forest fires even in sparsely populated regions.