

Project Design Phase-I Proposed Solution

Date	1 Novmber 2022
Team ID	PNT2022TMID141120
Project Name	Emerging methods for early detection of forest fires
Team Leader	Herambha Prasath S
Team Mates	Arun V, Sathis kumar S , Dinesh Kumar V
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)	AI based Emerging methods for early detection of forest fires
2.	Idea / Solution description	A solution is needed that detects fires early by detecting smoke, hydrogen and other gases released by pyrolysis in the early stages of a wildfire, buying firefighters valuable time to extinguish the fire before it spreads out of control. Sensing solutions from Bosch Sensortec can help to reduce wildfires.
3.	Novelty / Uniqueness	Remote sensing Machine learning Wildfire prediction Data mining using Artificial intelligence
4.	Social Impact / Customer Satisfaction	The most important factors in the fight against the forest fires include the earliest possible detection of the fire event , the proper categorisation of the fire and fast response from the fire services . Several different types of forest fires are known , including ground fires , surface fires and crown / tree fires . Each of these types of forest fires is specific and the proper counteractions against it must be considered and implemented to successfully fight it . Over the years the detection of forest fires has been conducted in different ways , ranging from the use of forest outposts to fully automated solutions .
5.	Business Model (Revenue Model)	The annual losses from forest fires in India for the entire country have been moderately estimated at Rs 440 crores (US\$ 107

		million).
6.	Scalability of the Solution	Aerial-based systems gained recently a lot of attention due to the rapid development of UAV technology. Such systems provide a broader and more accurate perception of the fire, even in regions that are inaccessible or considered too dangerous for fire-fighting crews. In addition, UAVs can cover wider areas and are flexible, in the sense that they monitor different areas, as needed