Project Design Phase - I

Proposed Solution

Date	27/09/2022
Team ID	PNT2022TMID52907
Project Name	Emerging methods for Early forest fire detection

Proposed Solution Template:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Detection of smoke/fire which may lead to forest fires and eventually destroy forest and wildlife.
2.	Idea / Solution description	The solution consists of Analysis of frames from the video clip captured by the camera using an Algorithm. Our Solution aims to solve the problem efficiently and leaving no chances for the mishap to occur.
3.	Novelty / Uniqueness	● Differentiating clouds, fog and smoke ●
4.	Social Impact / Customer Satisfaction	Early Detection of forest fire can prevent degradation of large forest areas. Through early detection and alerting, lives of people and animals living around the area

		can be saved. It also proves to be less harmful for the forest officers.
5.	Business Model (Revenue Model)	Forest fires lead to loss of animal and plant life. Forests are a huge source of resources and minerals which are essential for our daily life. Hence, loss of forests impacts us economically. Hence early detection is essential as prevention is better than cure. Therefore, implementing this will be a huge benefit for our economy.
6.	Scalability of the Solution	Here the usage of cameras makes the solution scalable. In case of sensors appropriate placement of sensors is necessary and they should be effective even at high temperatures. Presence of animals in the forest is also an important consideration to be taken for the placement of sensors. Whereas, detection using images and videos is better. Image or video capture can be done using drones mounted with cameras which are not affected by temperatures nor forest inhabitants. Satellites can be an important source of data prior to and also during the Fire due to its reliability and efficiency. Hence usage of satellites and capturing images using drones is feasible compared to sensors and can be implemented on a wide scale.