PROPOSED SOLUTION

EMERGING METHODS FOR EARLY DETECTION OF FOREST FIRES

S.NO:	PARAMETERS	REPRESENTATION
1.	**Problem Statement (Description of an issue to be addressed)**	• Fire was one of the first and greatest invention of man. But these days due to global warming and climate change, fires have become very violent and destructive. • Forest fires are one such evil looming the Earth destroying all the flora and fauna with the devastating fumes and flares it carries with itself. • Recent forest fires in California is an evident example of the intensity of the issue and the immediate action that needs to be taken.
2.	**Plan of Design and Execution**	• The propose a platform that uses Unmanned Aerial Vehicles (UAVs), which constantly patrol over potentially threatened by fire areas. • The UAVs also utilize the benefits from Artificial Intelligence(AI) and are equipped with on-board processing capabilities. • This allows them to use computer vision methods for recognition and detection of smoke or fire, based on the still images or the video input from the drone cameras. • The system is designed for monitor the causing factors of forest fires such as temperature, humidity , air pressure level,oxygen and Carbon dioxide on the surface of air. • The user 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. • We classify images using a Convolutional Neural Network and use other open CV tools.
3.	**Peculiarity/ Novelty**	• Makes use of real time monitoring and allows pre-cursors to potential issues (such as corrosion) to be flagged up and immediately be addressed before major issues occur.
4.	**Social Outlook / Customer Friendly**	• Will warn the customers before any fire outbreak. • Prevents any potential devastation and issues precautions. • Protects the flora and fauna from any unfortunate accidents. • Saves forest and human life prevents desertification.
5.	**Business Model**	• Focuses more on sensor probes, wireless sensor networks and machine learning which makes the deployment more easier.
6.	**Feasibility of Solution**	• Cost effective • More performance measure • Economical • Accurate • Effective • Reliable • Socially intact