

S.NO	Author Name	Topic	Year	Existing System
1,	<u>Ravisankar B,</u> <u>Gurubaran K,</u> <u>Manoj D,</u> <u>Nagendran R,</u> <u>Gowrishankar V,</u> <u>Satheesh R</u>	UAV-based forest fire detection and tracking	2019	<p>] This paper proposes that forest fires can be detected by vision-based fire detection systems which can be mounted to an unmanned aerial vehicle (UAVs) for strategically scanning acreage of fire prone areas. This paper also strongly recommends Convolutional neural networks for identifying smoke and fire through videoframes which is taken as images. They have collected the dataset from different internet sources. They have resized the images to canonical size of 240x320. In this paper, the basic idea is to find the fire patches in an image. The authors propose two methods for the algorithm to build the model. First was to apply fire patch classifier from scratch. Second was to teach a full image classifier and apply fine-tuned patch classifier if the image contains fire. Then they compare SVM-pool5 (Support vector machines) with CNN-pool5, the accuracies recorded are 95.6% and 97.3% respectively with a detection rate of 84.8%, making CNN-pool5 network more accurate than SVM-pool5 classifier.</p>

2,	Angayarkkani K., Radhakrishnan N.	An intelligent system for effective forest fire detection using spatial data	2018	<p>In this paper, the author uses CNN-convolutional neural networks to detect fire with the help of live video footage through anti-fire surveillance systems. The paper proposes YOLOv2 convolutional neural network is one of the best solutions for detecting fire and smoke both indoor and outdoor environment. You only look once (YOLO) is a deep learning model for object detection, YOLOv2 is the next version which has been upgraded to rectify the setbacks of YOLO namely the inaccuracy to locate and mark the region of interest in the images and the lower recall rate compared to other region-oriented algorithms. Thus, increasing the efficiency of the architecture. They started with an input image of size 128x128x3. They used convolutional layers to map the features on the input image. The features extracted are then given as input to YOLOv2 object detection subnetwork. YOLOv2 Transform layer is implemented to improve network stability for object localization.</p>
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3,	Osman Gunay and Habiboglu	Emerging Methods For Early Detection Of Forest Fires	2020	<p>They proposed a system based on Covariance Descriptors, Color Models, and SVM Classifier. This system uses video data.</p> <p>Spatiotemporal Covariance Matrix (2011) is used in this system which divides the video data into temporal blocks and computes covariance features. The fire is detect redusing this feature. SVM Classifier is used to filer fire and fire-like regions. This system supports only for clear data not for blur data. laterally with the gas deliberation rising.</p>
4,	N. M. Tahir, A. Y. Nasir, Adoyi Boniface, A.M. Hassan	Forest fire detection and sensor automation.	2019	<p>He proposed a fire detection system based on Neural Network; here Neural network is used in detection Information for temperature, CO Concentration, and smoke density to Determine probability of three Representative fire conditions. RBF neuron Structure is used, the information regarding Temperature, CO concentration, and smoke Density are collected and data fusion is used To generate fire signal decision. The Detectors</p>

				<p>have continuous analog outputs, When detection limit is exceeded the Hardware circuit sends a local fire Indication to fusion center, this force the System detectors to generate final decision. Single-sensor detector is used to generate the final decision.</p>
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