Emerging Methods for Early Detection of Forest Fires
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S. No	Title	Author	Year	Short abstract	Dataset	Performance metrices	Future work suggested	Algorithm
1	FOREST FIRE DETECTION USING MACHINE LEARNING	Georgie Vadakkadathu Rajan , Sinumol Paul	2022	The detects the forest fire by sending video alerts which are more accurate and efficient,self build video frames are used as dataset and the input is tested and validate accurately.	Self built dataset containing video frames	The system detected accuracy rate of 93% and error rate of 2.3% chance of fire and and small fire 1.8% and no fire 1%.	Increase the efficiency of Detected small fires	Convolution Neural Network.
2	Fire-Net: A Deep Learning Framework for Active Forest Fire Detection	Seyd Teymoor Seydi,Vahideh Saeidi,Bahareh Kalantar,Naonori Ueda,and Alfian Abdul Halin	2022	Landsat imagery 8 was used for detection of active fire and burning biomass .Optical and thermal modalities were used for effective detectiom	Image were are taken from Australian and North American forests regions, the Amazon rainforest , Central Africa and Chernobyl (Ukraine)	The system has overall accuracy of 97.35% ,22 tiles were used as dataset where 14 used for training,3 for validation and 5 for testing	More dataset and more parameters have to be analysed	Fire-Net
3	Riau Forest Fire Prediction using Supervised Machine Learning	Benny Sukma Negara,Risky Kurniawan,Maizurah Nazri, S N H S Abdullah	2020	The number of hotspot of forest fire had been increased in Indonesia ,in order to overcome that early detection of forect fire	1733 weather data were using in 5 years while devolopi ng.	BN outperforms DT with accuracy rate and RMSE value in pairs of 99.62% and 0.076, and 93.18%	Comparisons of algorithm with various algorithm are required.	Bayesian Network(BN) and Decision Tree(DT).

				were introduced.		and 0.244 subsequently		
4	Forest Fire Prediction Using Machine Learning Techniques	Suvarna Kanakaraddi,Aishwarya Beelagi,Sumalata Malagi,Aishwarya Sudi	2021	An approach using meterioogical Parameters linke temperature,Rain,winf and humidity parameters were used for detection of forest fires using satellite images and use averaging to perfect accuracy.	Fire affected region is predicted based on the satellite images Were used as dataset.	It gives best result of Mean absolute error(MAE) 0.03, Mean squared error(MSE) 0.004, Root mean squared error(RMSR) 0.07	Can be performed on various other parameters.	Decision Tree,Random Forest,Support vector machine,Artificial Neural Networks
5	Wild fire prediction using machine learning models	Nadir Khan, Nowshath K Batcha	2021	This system focusses on building wild fire prediction model based on machine learning that will facilitate to take precautionary measures in order to minimize the losses to human life and property.	Dataset has been acquired from kaggle.com which contains a repository for dataset. The dataset for our research contains data related to the occurrence of Wild fires in US.	Classification (KNN) yields the highest Accuracy (95%).Decision Tree and Random Forest yields the same Accuracy (92%) while Logistic Regression yields the lowest Accuracy (82%)	Conclusion of dataset has to be made precide and the accuracy can be improved	CRISP-DM Cross industry standard process for data mining,Decision Tree,Logistics Regression and Random Forest