Project Objective

Team ID	PNT2022TMID08041
Project Name	Emerging Methods for Early Detection of Forest Fires

Detecting fire at an early stage before they turn to catastrophic events is crucial to prevent disastrous and save people's lives and properties. Forest fires have become a major threat around the world, causing negative impacts on wildlife and their habitats ,not only this, they also disturb the natural functioning of the environment and human beings. It causes deterioration of the air quality which when inhaled becomes the principal public health threat. They would emit CO_2 and other greenhouse gases, which is also a cause for ozone hole. They also become a source for air pollution,water pollution and land pollution. This has an impact not only in the present but also continues to increase in the future. An average of approximately 70,000 forest fires are happening per year all over the world which is being a notable threat to the environment. Apart from all these things there is a great chance of many species including flora and fauna to become endangered species and extinct species. Earlier the fire was detected using fire and smoke sensors, but the issue with this is they need the fire to burn for a little longer to produce smoke and fire to trigger the alarm. As we are heading towards a world which involves a major development in the field of technology and science , we can now use digital camera technology and video processing techniques to replace traditional forest fire detection methods with computer vision based systems. The proposed model implements feature extraction using powerful deep learning techniques to detect the forest fire at the earliest possible time providing good accuracy using an efficient alert system.