V.S.B. ENGINEERING COLLEGE

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Title : Emerging Methods for Early Detection of forest fires

Domain name : Artificial Intelligence

Leader Name : Poorani D
Team Members : Kaviya S
Prithika N
Prithiba G
Mentor Name : Sivalingam T

Problem statement:

An Enormous disastrous fire that spread over a timberland or area of forest which prompts harm in Natural life, people, property and Climate. The significant Causes Are Lightning. Flashes from Rock falls. Volcanic Ejection or some other manual Start from the People deliberately which prompts

the accompanying drawbacks: A backwoods fire sets up the potential for soil erosion to occur, Forest fires always bring death to life of humans and animals, Uncontrolled fires can cause localized air pollution, Homes can be destroyed without compensation.

PROPOSED SOLUTION:

1 FIRE AND SMOKE DETECTION FROM SUN-SYNCHRONOUS SATELLITES -

Imaging sensors in sun-synchronous satellites include three multispectral imaging sensors,
namely advanced very-high-resolution radiometer moderate resolution imaging spectroradiometer and visible infrared imaging radiometer suite whose data have also been used for wildfire detection. The advanced very-high-resolution radiometer is a multipurpose imaging instrument that measures the reflectance of the Earth and has been used for global monitoring of cloud cover, sea surface temperature, ice,
snow, and vegetation cover characteristics .

2. FIRE AND SMOKE DETECTION FROM GEOSTATTIONARY SATELLITES -

Regarding satellite imagery from geostationary satellites, important work for fire and smoke

detection has already been performed using the advanced Himawari imager sensor of the Himawari-8 weather satellite. Himawari 8 is a new generation of Japanese geostationary weather satellites operated by the Japan Meteorological Agency. AHI-8 has significantly higher radiometric, spectral, and spatial resolution than its predecessor.

3. EFFECTIVELY MANAGING THREATS TO A FOREST'S HEALTH -

With proper application of forest herbicides, private forest landowners can promote the growth of their young trees by controlling wild vegetation that competes for growing space above and below ground, and by enriching soils with fertilizers. Strict requirements on herbicides use has Washington foresters taking the necessary steps to achieve their benefits without risking water and soil quality, the habitat of the fish and wildlife, and the human lives that live and work around our private forests. The forestry practices of WFPA’s members have been developed through years of science-based research, adaptive management, and collaboration.