**IBM- NALAIYA THIRAN PROJECT**

**EMERGING METHODS FOR EARLY DETECTION OF FOREST FIRE**

**LITERATURE SURVEY:**

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| **S.No** | **Paper Title** | **Author Name** | **Publication Year** | **Result** |
| 1 | Forest Fires Segmentation using Deep Convolutional Neural Networks | Rafik Ghali,  Moulay A.Akhloufi,  Marwa Jmal,  Wided Souidene Mseddi,  Rabah Attia | 2021 | Forest fire  detection and segmentation using three algorithms namely U-Net, U2 -Net, and EfficientSeg. |
| 2 | Forest Fire Detection and Localization Using Thermal and Visual  Cameras. | Mohsen Sadi, Youmin Zhang, Wen-Fang Xie,  F M Anim Hossain | 2021 | An image-based thermo-visual servoing (IBTVS) system  is implemented for the fire tracking process. A two-degree-of-  freedom (2DOF) frame is fabricated based on IBTVS to test the  tracking and locating capabilities of the system. |
| 3 | Optimized Convolutional Neural Network Model for  Fire Detection in Surveillance Videos. | Moin Ahmed,  Abhinav Gupta,  Mohit Goel,  Shailender Kumar. | 2022 | This research proposes a better performing yet  less complex and cost-effective version of existing convolutional  neural networks for fire detection on binary environments,  inspired by the GoogLeNet architecture. Our network is aimed to  seamlessly integrate with embedded systems like CCTV  surveillance cameras because of its low computational costs and  detect early fires for aiding the firefighting and medical teams. |
| 4 | Lightweight Forest Fire Detection Based On Deep Learning | Ruixian Fan, Mingtao Pei. | 2021 | Forest fire is detected using YOLOv4-Light.  The original YOLOv4’s backbone feature extraction network  is replaced by MobileNet, and PANet’s standard convolution  is replaced by depthwise separable convolution. |
| 5 | Internet-of-Things Enabled Forest Fire Detection  System. | Kaushal Mehta,  Sachin Sharma,  Dipankar Mishra. | 2021 | This paper describes the creation of a fire  detector using Arduino, which is equipped with smoke and  temperature sensors and emits a buzzer alarm in response to  the findings. |