Project Flow

TEAM ID : PNT2022TMID51836

PROJECT NAME : Emerging Methods for Early Detection of Forest Fires

- Fire in a sparsely populated forest area and it is more difficult if the prediction is done using ground-based methods like Camera or Video-Based approach.

- The user interacts with a web camera to read the video.

- Once the input image from the video frame is sent to the model, if the fire is detected it is showcased on the console, and alerting sound will be generated and an alert message will be sent to the Authorities.

- Usage of the satellite images to observe, detect, and report fire events. Implementation of the wireless sensor networks to observe the fire events exist in all areas

To accomplish this, we have to complete all the activities and tasks listed below

- Data Collection - data collection is the process of gathering, measuring, and analysing accurate data from a variety of relevant sources to find answers to research problems, answer questions, evaluate outcomes, and forecast trends • Collect the dataset or create the dataset.

• Image Pre-processing - Image processing is a method to perform some operations on an image, in order to get an enhanced image or to extract some useful information from it.

• Import Image Data Generator Library.

• Define the parameters /arguments for Image Data Generator class

• Applying Image Data Generator on train set and test set. Model Building

• Import the model building Libraries

• Initializing the model

• Adding CNN Layers

• Adding Hidden Layer

• Adding Output Layer

• Configure the Learning Process

• Training and testing the model

• Optimize the Model

• Save the Model