EARLY DETECTION OF FOREST FIRE USING DEEP LEARNING

MODEL BUILDING

Team Id	PNT2022TMID26362
Project Name	Project-Early detection of forest fire using deep learning

Initializing the model

```
import keras
import tensorflow
from tensorflow.keras.preprocessing.image import ImageDataGenerator
from tensorflow.keras.preprocessing import image
In [5]:
#Define the parameters/arguments for ImageDataGenerator class
train = ImageDataGenerator(rescale=1/255)
test = ImageDataGenerator(rescale=1/255)
In [6]:
#Applying ImageDataGenerator functionality to trainset
train_dataset = train.flow_from_directory("/content/drive/MyDrive/Dataset/train_set",
                                          target_size=(150,150),
                                          batch_size = 32,
                                          class_mode = 'binary')

#Applying ImageDataGenerator functionality to testset
test_dataset = test.flow_from_directory("/content/drive/MyDrive/Dataset/test_set",
                                          target_size=(150,150),
                                          batch_size =32,
                                          class_mode = 'binary')
Found 436 images belonging to 2 classes.
Found 121 images belonging to 2 classes.
In [7]:
#import model building libraries

import keras
import tensorflow
from tensorflow.keras.preprocessing.image import ImageDataGenerator
from tensorflow.keras.preprocessing import image
#Define the parameters/arguments for ImageDataGenerator class
train = ImageDataGenerator(rescale=1/255)
test = ImageDataGenerator(rescale=1/255)
#Applying ImageDataGenerator functionality to trainset
train_dataset = train.flow_from_directory("/content/drive/MyDrive/Dataset/train_set",
                                          target_size=(150,150),
                                          batch_size = 32,
                                          class_mode = 'binary')

#Applying ImageDataGenerator functionality to testset
test_dataset = test.flow_from_directory("/content/drive/MyDrive/Dataset/test_set",
                                          target_size=(150,150),
```

```
                                batch_size =32,
                                class_mode = 'binary')
Found 436 images belonging to 2 classes.
Found 121 images belonging to 2 classes.
#import model building libraries

#To define Linear initialisation import Sequential
from keras.models import Sequential
#To add layers import Dense
from keras.layers import Dense
#To create Convolution kernel import Convolution2D
from keras.layers import Convolution2D
#import Maxpooling layer
from keras.layers import MaxPooling2D
#import flatten layer
from keras.layers import Flatten
import warnings
warnings.filterwarnings('ignore')
#initializing the model
model=Sequential()
#To define Linear initialisation import Sequential
from keras.models import Sequential
#To add layers import Dense
from keras.layers import Dense
#To create Convolution kernel import Convolution2D
from keras.layers import Convolution2D
#import Maxpooling layer
from keras.layers import MaxPooling2D
#import flatten layer
from keras.layers import Flatten
import warnings
warnings.filterwarnings('ignore')
In [8]:
#initializing the model
model=Sequential()
```