EMERGING METHODS FOR EARLY DETECTION OF FOREST FIRES

MODEL BUILDING

ADDING CNN LAYERS

|  |  |
| --- | --- |
| **Date** | 12 November 2022 |
| **Team ID** | PNT2022TMID31216 |
| **Project Name** | Emerging Methods for Early Detection of  ForestFires |

# Importing The ImageDataGenerator Library

import keras

from keras.preprocessing.image import ImageDataGenerator

# Define the parameters/arguments for ImageDataGenerator class

train\_datagen=ImageDataGenerator(rescale=1./255,shear\_range=0.2, rotation\_range=180,zoom\_range=0.2, horizontal\_flip=True) test\_datagen=ImageDataGenerator(rescale=1./255)

# Applying ImageDataGenerator functionality to trainset

x\_train=train\_datagen.flow\_from\_directory(r'/content/drive/MyDrive/Dataset/train\_set', target\_size=(128,128),batch\_size=32, class\_mode='binary')

Found 436 images belonging to 2 classes.

# Applying ImageDataGenerator functionality to testset

x\_test=test\_datagen.flow\_from\_directory(r'/content/drive/MyDrive/Dataset/test\_set', target\_size=(128,128),batch\_size=32, class\_mode='binary')

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()

# Add CNN Layer

model.add(Convolution2D(32, (3,3),input\_shape=(128,128,3),activation='relu')) #add maxpooling layer

model.add(MaxPooling2D(pool\_size=(2,2))) #add flatten layer

model.add(Flatten())