

EMERGING METHODS FOR EARLY DETECTION OF FOREST FIRE

IMAGE PRE-PROCESSING

APPLYING Image Data Generator to train and test dataset

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Project Name	Emerging methods for early detection of forest fire

The ImageDataGenerator class has three methods,

1.flow (),

2.flow_from_directory ()

3.flow_from_dataframe () to read the images from a big numpy array and folders containing images.

flow_from_directory () expects at least one directory under the given directory path.

APPLYING ImageDataGenerator to train dataset:

plyflow_from_directory ()methodfor Train folder.

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▾ Defining the Parameters

[11] 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)

<keras.preprocessing.image.ImageDataGenerator at 0x7fb7448ac110>

▾ Applying ImageDataGenerator functionality to train dataset

✓ [10] from google.colab import drive
      drive.mount('/content/drive')

      Drive already mounted at /content/drive; to attempt to forcibly remount, call drive.mount("/content/drive", force_remount=True).

✓ [17] x_train=train_datagen.flow_from_directory('/content/drive/MyDrive/IBM PROJECT/dataset/DATA SET/archive/Dataset/Dataset/train_set',target_size=(128,128),batch_size=32,class_mode='binary')

      Found 436 images belonging to 2 classes.
```

APPLYING ImageDataGenerator to test dataset:

Applying the flow_from_directory () methodfortest folder.

```
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▾ Applying ImageDataGenerator functionality to test dataset

✓ [ ] x_test=test_datagen.flow_from_directory('/content/drive/MyDrive/IBM PROJECT/dataset/DATA SET/archive/Dataset/Dataset/test_set',target_size=(128,128),batch_size=32,class_mode='binary')

      Found 121 images belonging to 2 classes.
```