

```
import pandas as pd
import numpy as np
```

```
!pip install keras
```

Collecting keras

Using cached keras-2.10.0-py2.py3-none-any.whl (1.7 MB)

Installing collected packages: keras

Successfully installed keras-2.10.0

```
!pip install tensorflow
```

Requirement already satisfied: markdown>=2.6.8 in c:\users\naren karthick\anaconda3\lib\site-packages (from tensorboard<2.11,>=2.10->tensorflow) (3.4.1)

Requirement already satisfied: werkzeug>=1.0.1 in c:\users\naren karthick\anaconda3\lib\site-packages (from tensorboard<2.11,>=2.10->tensorflow) (1.0.1)

Requirement already satisfied: google-auth<3,>=1.6.3 in c:\users\naren karthick\anaconda3\lib\site-packages (from tensorboard<2.11,>=2.10->tensorflow) (2.14.1)

Requirement already satisfied: requests<3,>=2.21.0 in c:\users\naren karthick\anaconda3\lib\site-packages (from tensorboard<2.11,>=2.10->tensorflow) (2.25.1)

Requirement already satisfied: google-auth-oauthlib<0.5,>=0.4.1 in c:\users\naren karthick\anaconda3\lib\site-packages (from tensorboard<2.11,>=2.10->tensorflow) (0.4.6)

Requirement already satisfied: tensorboard-data-server<0.7.0,>=0.6.0 in c:\users\naren karthick\anaconda3\lib\site-packages (from tensorboard<2.11,>=2.10->tensorflow) (0.6.1)

Requirement already satisfied: rsa<5,>=3.1.4 in c:\users\naren karthick\anaconda3\lib\site-packages (from google-auth<3,>=1.6.3->tensorboard<2.11,>=2.10->tensorflow) (4.9)

Requirement already satisfied: cachetools<6.0,>=2.0.0 in c:\users\naren karthick\anaconda3\lib\site-packages (from google-auth<3,>=1.6.3->tensorboard<2.11,>=2.10->tensorflow) (5.2.0)

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Requirement already satisfied: importlib-metadata>=4.4 in c:\users\naren karthick\anaconda3\lib\site-packages (from markdown>=2.6.8->tensorboard<2.11,>=2.10->tensorflow) (5.0.0)

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>tensorboard<2.11,>=2.10->tensorflow) (1.26.4)  
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Requirement already satisfied: absl-py>=1.0.0 in c:\users\naren karthick\anaconda3\lib\site-packages (from tensorflow) (1.3.0)

Requirement already satisfied: tensorflow-io-gcs-filesystem>=0.23.1 in c:\users\naren karthick\anaconda3\lib\site-packages (from tensorflow) (0.27.0)

Requirement already satisfied: termcolor>=1.1.0 in c:\users\naren karthick\anaconda3\lib\site-packages (from tensorflow) (2.1.0)

Requirement already satisfied: tensorflow-estimator<2.11,>=2.10.0 in c:\users\naren karthick\anaconda3\lib\site-packages (from tensorflow) (2.10.0)

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Requirement already satisfied: protobuf<3.20,>=3.9.2 in c:\users\naren karthick\anaconda3\lib\site-packages (from tensorflow) (3.19.6)

Requirement already satisfied: wheel<1.0,>=0.23.0 in c:\users\naren karthick\anaconda3\lib\site-packages (from astunparse>=1.6.0->tensorflow) (0.36.2)

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karthick\anaconda3\lib\site-packages (from packaging->tensorflow)
(2.4.7)

```

```
import keras
```

```
from keras.preprocessing.image import ImageDataGenerator
```

```
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)
```

```
x_train = train_datagen.flow_from_directory (r'C:\Users\Naren
Karthick\Desktop\Dataset\train_set\forest',
```

```
target_size = (128,128),
batch_size = 32,
class_mode= 'binary')
Found 0 images belonging to 0 classes.
x_train = train_datagen.flow_from_directory (r'C:\Users\Naren
Karthick\Desktop\Dataset\train_set\with fire',
target_size = (128,128),
batch_size = 32,
class_mode= 'binary')
Found 0 images belonging to 0 classes.
x_train = train_datagen.flow_from_directory (r'C:\Users\Naren
Karthick\Desktop\Dataset\test_set\forest',
target_size = (128,128),
batch_size = 32,
class_mode= 'binary')
Found 0 images belonging to 0 classes.
x_train = train_datagen.flow_from_directory (r'C:\Users\Naren
Karthick\Desktop\Dataset\train_set\with fire',
target_size = (128,128),
batch_size = 32,
class_mode= 'binary')
Found 0 images belonging to 0 classes.
```