

PNT2022TMID50371

Image Preprocessing

Applying ImageDataGenerator Functionality To Train And Test Set

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

```
# Testing Datagen
```

```
test_datagen = ImageDataGenerator(rescale=1/255)
```

```
# Training Datagen
```

```
train_datagen =
```

```
ImageDataGenerator(rescale=1/255, zoom_range=0.2, horizontal_flip=True, vertical_flip=False)
```

```
# Training Dataset
```

```
x_train=train_datagen.flow_from_directory(r'/content/drive/MyDrive/Dataset/training_set', target_size=(64,64), class_mode='categorical', batch_size=900)
```

```
# Testing Dataset
```

```
x_test=test_datagen.flow_from_directory(r'/content/drive/MyDrive/Dataset/test_set', target_size=(64,64), class_mode='categorical', batch_size=900)
```

```
print("Len x-train : ", len(x_train))
```

```
print("Len x-test : ", len(x_test))
```

```
# The Class Indices in Training Dataset
```

```
x_train.class_indices
```

```
traindf=pd.read_csv('/content/drive/images_and_labels.txt', dtype=str, sep='\s')
```

```
traindf.columns = ['image', 'label', 'none1', 'none2', 'none3']
```

```
traindf.drop(['none1', 'none2', 'none3'], axis=1)
```

```
datagen=ImageDataGenerator(rescale=1./255., validation_split=0.25)
```

```
train_generator=datagen.flow_from_dataframe
(
    dataframe=traindf,
    directory="/content/drive/",
    x_col="image",
    y_col="label",
    subset="training",
    batch_size=32,
    seed=42,
    shuffle=True,
    class_mode="categorical",
    target_size=(150,150)
)
validation_generator=datagen.flow_from_dataframe
(
    dataframe=traindf,
    directory="/content/drive/",
    x_col="image",
    y_col="label",
    subset="validation",
    batch_size=32,
    seed=42,
    shuffle=True,
    class_mode="categorical",
    target_size=(150,150)
```

