

## Image Preprocessing

Date	09-11-2022
Team ID	PNT2022TMID04276
Project Name	AI-Powered Nutrition Analyzer For Fitness Enthusiasts

Original file is located at

<https://colab.research.google.com/drive/1kvKID8OQQLMsU1rTD8SI1U2EQCfIRTes>

### Import The ImageDataGenerator Library

```
import keras
```

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

### Configure ImageDataGenerator Class

```
train_datagen=ImageDataGenerator(rescale=1./255, shear_range=0.2, zoom_range=0.2, horizontal_flip=True)
```

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

### Apply Image DataGenerator Functionality To Trainset And Testset

```
from google.colab import drive
drive.mount('/content/drive')
```

```
x_train =
train_datagen.flow_from_directory(r'/content/drive/MyDrive/Project/Dataset/TRAIN_SET', target_size=(
64, 64), batch_size=5, color_mode='rgb', class_mode='sparse')
```

```
x_test
=test_datagen.flow_from_directory(r'/content/drive/MyDrive/Project/Dataset/TRAIN_SET', target_size=
(64, 64), batch_size=5, color_mode='rgb', class_mode='sparse')
```

```
print(x_train.class_indices)
```

```
print(x_test.class_indices)
```

```
from collections import Counter as c
```

```
c(x_train.labels)
```

Import The ImageDataGenerator Library

```
[1] import keras
```

```
[2] from keras.preprocessing.image import ImageDataGenerator
```

Configure ImageDataGenerator Class

```
[3] train_datagen=ImageDataGenerator(rescale=1./255, shear_range=0.2, zoom_range=0.2, horizontal_flip=True)
```

```
[4] test_datagen=ImageDataGenerator(rescale=1./255)
```

```
[5] from google.colab import drive  
drive.mount('/content/drive')
```

Mounted at /content/drive

Apply Image DataGenerator Functionality To Trainset And Testset

```
[9] x_train = train_datagen.flow_from_directory(r'/content/drive/MyDrive/Project/Dataset/TRAIN_SET', target_size=(64, 64), batch_size=5, color_mode='rgb', class_mode='sparse')
```

Found 4118 images belonging to 5 classes.

```
[10] x_test = test_datagen.flow_from_directory(r'/content/drive/MyDrive/Project/Dataset/TRAIN_SET', target_size=(64, 64), batch_size=5, color_mode='rgb', class_mode='sparse')
```

Found 4118 images belonging to 5 classes.

```
[22] print(x_train.class_indices)
```

```
{'APPLES': 0, 'BANANA': 1, 'ORANGE': 2, 'PINEAPPLE': 3, 'WATERMELON': 4}
```

```
[23] print(x_test.class_indices)
```

```
{'APPLES': 0, 'BANANA': 1, 'ORANGE': 2, 'PINEAPPLE': 3, 'WATERMELON': 4}
```

Activate Windows

Go to Settings to activate Windows.