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Project Name	AI - powered Nutrition Analyzer for Fitness Enthusiasts

# AI\_powered\_Nutrition\_Analyzer\_for\_Fitness\_Enthusiasts

## 1 Image Preprocessing

```
[4]: #Import The ImageDataGenerator Library
      from keras.preprocessing.image import ImageDataGenerator
```

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

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

```
[11]: #Loading our data and performing data agumentation
      #performing data agumentation to train data
      x_train = train_datagen.flow_from_directory(
          '/content/TRAIN_SET',target_size=(64, 64),
          ↪batch_size=5,color_mode='rgb',class_mode='sparse')
```

Found 2626 images belonging to 5 classes.

```
[12]: #performing data agumentation to test data x_test =
      test_datagen.flow_from_directory('/content/TEST_SET',target_size
      =(64,
      ↪64), batch_size=5,color_mode='rgb',class_mode='sparse')
```

Found 1055 images belonging to 5 classes.

```
[13]: print(x_train.class_indices) #checking the number of
      classes
```

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

```
[14]: print(x_test.class_indices)#checking the number of
      classes
```

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

```
[15]: from collections import Counter as c  
      c(x_train.labels)
```

```
[15]: Counter({0: 606, 1: 445, 2: 479, 3: 621, 4: 475})
```