Image Preprocessing

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Project Name	AI-powered Nutrition Analyzer for Fitness Enthusiasts

Apply Image DataGenerator Functionality To Trainset And Testset

Apply ImageDataGenerator functionality to Trainset and Testset by using the following code

For Training set using flow_from_directory function.

This function will return batches of images from the subdirectories together with labels

Arguments:

directory: Directory where the data is located. If labels are "inferred", it should contain subdirectories, each containing images for a class. Otherwise, the directory structure is ignored.

batch_size: Size of the batches of data. Default: 32.

target_size: Size to resize images after they are read from disk.

class_mode:

- ‘int': means that the labels are encoded as integers (e.g. for sparse_categorical_crossentropy loss).
- 'categorical' means that the labels are encoded as a categorical vector (e.g. for categorical_crossentropy loss).
- 'binary' means that the labels are encoded as float32 scalars with values 0 or 1 (e.g. for binary_crossentropy).

```
[6] xtrain = train_datagen.flow_from_directory('/content/fruits-360-original-size/Training',
                                               target_size=(64,64),
                                               class_mode='categorical',
                                               batch_size=100)
```

```
Found 6231 images belonging to 24 classes.
```

```
xtest = test_datagen.flow_from_directory('/content/fruits-360-original-size/Test',
                                         target_size=(64,64),
                                         class_mode='categorical',
                                         batch_size=100)
```

```
Found 3110 images belonging to 24 classes.
```

```
[8] print(xtrain.class_indices)
```

```
{'apple_6': 0, 'apple_braeburn_1': 1, 'apple_crimson_snow_1': 2, 'apple_golden_1': 3, 'apple_golden_2': 4, 'apple_golden_3': 5, 'apple_granny_smith_1': 6, 'apple_
```

```
[9] print(xtest.class_indices)
```

```
{'apple_6': 0, 'apple_braeburn_1': 1, 'apple_crimson_snow_1': 2, 'apple_golden_1': 3, 'apple_golden_2': 4, 'apple_golden_3': 5, 'apple_granny_smith_1': 6, 'apple_
```