

**Team ID : PNT2022TMID42545**

**Date : 15 NOV 2022**

## **Sprint - 1**

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

Mounted at /content/drive

#Extracting Data

```
!unzip "/content/drive/MyDrive/IBM Project/Dataset_Collection.zip"
  inflating: Dataset_Collection/Train/Watermelon/r_15_100.jpg
  inflating: Dataset_Collection/Train/Watermelon/r_160_100.jpg
  inflating: Dataset_Collection/Train/Watermelon/r_161_100.jpg
  inflating: Dataset_Collection/Train/Watermelon/r_162_100.jpg
  inflating: Dataset_Collection/Train/Watermelon/r_163_100.jpg
  inflating: Dataset_Collection/Train/Watermelon/r_164_100.jpg
  inflating: Dataset_Collection/Train/Watermelon/r_165_100.jpg
  inflating: Dataset_Collection/Train/Watermelon/r_166_100.jpg
  inflating: Dataset_Collection/Train/Watermelon/r_167_100.jpg
  inflating: Dataset_Collection/Train/Watermelon/r_16_100.jpg
  inflating: Dataset_Collection/Train/Watermelon/r_170_100.jpg
  inflating: Dataset_Collection/Train/Watermelon/r_177_100.jpg
  inflating: Dataset_Collection/Train/Watermelon/r_179_100.jpg
  inflating: Dataset_Collection/Train/Watermelon/r_17_100.jpg
  inflating: Dataset_Collection/Train/Watermelon/r_182_100.jpg
  inflating: Dataset_Collection/Train/Watermelon/r_184_100.jpg
  inflating: Dataset_Collection/Train/Watermelon/r_185_100.jpg
  inflating: Dataset_Collection/Train/Watermelon/r_186_100.jpg
  inflating: Dataset_Collection/Train/Watermelon/r_187_100.jpg
  inflating: Dataset_Collection/Train/Watermelon/r_188_100.jpg
  inflating: Dataset_Collection/Train/Watermelon/r_189_100.jpg
  inflating: Dataset_Collection/Train/Watermelon/r_18_100.jpg
```

```
inflating: Dataset_Collection/Train/Watermelon/r_190_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_191_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_192_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_193_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_194_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_195_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_196_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_197_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_198_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_199_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_19_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_1_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_200_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_201_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_202_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_203_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_204_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_205_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_206_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_207_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_208_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_209_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_20_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_210_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_211_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_212_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_213_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_214_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_215_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_216_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_217_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_218_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_219_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_21_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_220_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_221_100.jpg
inflating: Dataset_Collection/Train/Watermelon/r_222_100.jpg
```

Image Augmentation / PreProcessing :

```
#Import req. Lib.
from tensorflow.keras.preprocessing.image import ImageDataGenerator

#Augmentation On Training Variable
train_datagen = ImageDataGenerator(rescale= 1./255,
                                   zoom_range=0.2,
                                   horizontal_flip =True)

#Augmentation On Testing Variable
test_datagen = ImageDataGenerator(rescale= 1./255)

#Augmentation On Training Variable
ftrain = train_datagen.flow_from_directory('/content/Dataset_Collection/Train',
                                          target_size=(64,64),
                                          class_mode='categorical',
                                          batch_size=100)

Found 4111 images belonging to 5 classes.

#Augmentation On Training Variable
ftest = test_datagen.flow_from_directory('/content/Dataset_Collection/Test',
                                         target_size=(64,64),
                                         class_mode='categorical',
                                         batch_size=100)

Found 429 images belonging to 5 classes.
```

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