

## Image Preprocessing

### Configure Image Data Generator Class

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Team ID	PNT2022TMID13691
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- ❖ Image Data Generator class is instantiated and the configuration for the types of data augmentation
- ❖ There are five main types of data augmentation techniques for image data; specifically:
  - Image shifts via the width\_shift\_range and height\_shift\_range arguments.
  - The image flips via the horizontal\_flip and vertical\_flip arguments.
  - Image rotations via the rotation\_range argument
  - Image brightness via the brightness\_range argument.
  - Image zoom via the zoom\_range argument.

An instance of the Image Data Generator class can be constructed for train and test.

```
#setting parameter for Image Data agumentation to the training data
train_datagen = ImageDataGenerator(rescale=1./255,shear_range=0.2,zoom_range=0.2,horizontal_flip=True)
#Image Data agumentation to the testing data
test_datagen=ImageDataGenerator(rescale=1./255)
```