

Image Preprocessing

In [1]:

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

In [2]:

```
# Training Datagen
train_datagen = ImageDataGenerator(rescale=1/255, zoom_range=0.2, horizontal_flip=True, vertical_flip=False)
# Testing Datagen
test_datagen = ImageDataGenerator(rescale=1/255)
```

In [3]:

```
import tensorflow as tf
import os
from tensorflow.keras.models import Sequential
from tensorflow.keras.layers import Dense, Conv2D, Flatten, Dropout, MaxPooling2D
from tensorflow.keras.preprocessing.image import ImageDataGenerator
import numpy as np
import matplotlib.pyplot as plt
import IPython.display as display
from PIL import Image
import pathlib
```

Apply ImageDataGenerator Functionality To Train And Test set

In [4]:

```
from google.colab import drive
```

In [5]:

```
!unzip '/content/conversation engine for deaf and dumb (7).zip'
```

Streaming output truncated to the last 5000 lines.

```
extracting: Dataset/training_set/G/1225.png
extracting: Dataset/training_set/G/1226.png
extracting: Dataset/training_set/G/1227.png
extracting: Dataset/training_set/G/1228.png
extracting: Dataset/training_set/G/1229.png
  inflating: Dataset/training_set/G/123.png
extracting: Dataset/training_set/G/1230.png
extracting: Dataset/training_set/G/1231.png
extracting: Dataset/training_set/G/1232.png
  inflating: Dataset/training_set/G/1233.png
  inflating: Dataset/training_set/G/1234.png
  inflating: Dataset/training_set/G/1235.png
  inflating: Dataset/training_set/G/1236.png
  inflating: Dataset/training_set/G/1237.png
  inflating: Dataset/training_set/G/1238.png
  inflating: Dataset/training_set/G/1239.png
  inflating: Dataset/training_set/G/124.png
  inflating: Dataset/training_set/G/1240.png
  inflating: Dataset/training_set/G/1241.png
  inflating: Dataset/training_set/G/1242.png
  inflating: Dataset/training_set/G/1243.png
  inflating: Dataset/training_set/G/1244.png
  inflating: Dataset/training_set/G/1245.png
extracting: Dataset/training_set/G/1246.png
  inflating: Dataset/training_set/G/1247.png
  inflating: Dataset/training_set/G/1248.png
  inflating: Dataset/training_set/G/1249.png
  inflating: Dataset/training_set/G/125.png
  inflating: Dataset/training_set/G/1250.png
```

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```
inflating: Dataset/training_set/I/997.png  
inflating: Dataset/training_set/I/998.png  
inflating: Dataset/training_set/I/999.png
```

In [6]:

```
from tensorflow.keras.preprocessing.image import ImageDataGenerator  
print("This dataset has been created and uploaded by IBM-TeamID-IBM-Project-45753-1660732074")
```

This dataset has been created and uploaded by IBM-TeamID-IBM-Project-45753-1660732074

In [7]:

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

In [8]:

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