ADD THE DENSE LAYERS

Team ID : PNT2022TMID06334

Title: Real-Time Communication System Powered by AI for Specially Abled

Loading the Dataset & Image Data Generation

from tensorflow.keras.preprocessing.image import ImageDataGenerator

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)

Training Dataset

x_train=train_datagen.flow_from_directory(r'/content/drive/MyDrive/Dataset/training_set',target_size

=(64,64), class_mode='categorical',batch_size=900)

Testing Dataset

x_test=test_datagen.flow_from_directory(r'/content/drive/MyDrive/Dataset/test_set',target_size=(64,6

4), class_mode='categorical',batch_size=900)

Found 15760 images belonging to 9 classes.

Found 2250 images belonging to 9 classes.

print("Len x-train : ", len(x_train))

print("Len x-test : ", len(x_test))

Len x-train : 18

Len x-test : 3

The Class Indices in Training Dataset

x_train.class_indices

{'A': 0, 'B': 1, 'C': 2, 'D': 3, 'E': 4, 'F': 5, 'G': 6, 'H': 7, 'I': 8}

Model Creation

Importing Libraries

from tensorflow.keras.models import Sequential

from tensorflow.keras.layers import Convolution2D,MaxPooling2D,Flatten,Dense

Creating Model

model=Sequential()

Adding Layers

model.add(Convolution2D(32,(3,3),activation='relu',input_shape=(64,64,3)))

model.add(MaxPooling2D(pool_size=(2,2)))

model.add(Flatten())

Adding Dense Layers

model.add(Dense(300,activation='relu'))

model.add(Dense(150,activation='relu'))

model.add(Dense(9,activation='softmax'))

Compiling the Model

model.compile(loss='categorical_crossentropy',optimizer='adam',metrics=['accuracy'])

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