IBM Project Name: Real-Time Communication System Powered by AI for Specially Abled

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```
import numpy as np
from tensorflow.keras.models import load_model from tensorflow.keras.preprocessing import
image from keras.models import Sequential from keras.layers import Dense from keras.layers
import Convolution2D from keras.layers import MaxPooling2D from keras.layers import
Dropout from keras.layers import Flatten model=Sequential()
model.add(Convolution2D(32,(3,3),activation="relu",input_shape=(64,64,3)))
model.add(MaxPooling2D(pool_size=(2,2))) model.add(Flatten())
model.add(Dense(200,activation='relu')) model.add(Dense(9,activation="softmax"))
model.compile(loss="categorical_crossentropy",metrics=["accuracy"],optimizer='adam')
len(x_train)
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
in
----> 1 len(x_train)
NameError: name 'x_train' is not defined
len(x_test)
model.fit(x_train,epochs=10,validation_data=x_test,steps_per_epoch=len(x_train)//10,validation
_steps=len(x_test))
model.save("aslpng.h5") Testing
the model
```

```
from keras.models import load_model import

numpy as np

import cv2 from tensorflow.keras.models import

load_model from tensorflow.keras.preprocessing

import image

import numpy as np

model=load_model('asl_model_84_54.h5')

img=image.load_img(r'E:\Projects\SmartBridge\ModelGen\Dataset\test_set\D\2.png',

                   target_size=(64,64))

model=load_model("aslpng.h5")

img = image.load_img(r"/content/drive/MyDrive/IBM project/test_set/D/10.png",target_size=(64,64))

img x =

image.img_to_array(img) x

x.shape x =

np.expand_dims(x,axis=0)

x.shape pred =

model.predict(x) pred

class_name=["A","B","C","D","E","F","G","H","I"]

pred_id = pred.argmax(axis=1)[0] pred_id print("the

alphabet is ",str(class_name[pred_id]))
```