Project Development Phase
Model Performance Test

Date	10 November 2022
Team ID	PNT2022TMID13305
Project Name	Project - Real-Time Communication System Powered By AI For Specially Abled
Maximum Marks	10 Marks

Model Performance Testing:

Project team shall fill the following information in model performance testing template.

S.No.	Parameter	Values	Screenshot

1.	Model Summary	-	`from keras.models import Sequential`
			`from keras.layers import Dense`
			`from keras.layers import Convolution2D`
			`#from tensorflow.keras.layers import Conv2D, MaxPooling2D`
			`from keras.layers import Dropout`
			`from keras.layers import MaxPooling2D`
			`from keras.layers import Flatten`
			
			`model=Sequential()`
			
			`model.add(Convolution2D(32,(3,3), input_shape=(64,64,1), activation = 'relu'))`
			
			`model.add(MaxPooling2D(pool_size=(2,2)))`
			
			`model.add(Flatten())`
			
			`model.add(Dense( units=512, activation='relu'))`
			
			`model.add(Dense(units=9, activation='softmax'))`

2.	Accuracy	Training Accuracy - 99.6%
		
		Validation Accuracy -98.3%
			`model.add(Dense(units=9, activation='softmax'))`
			
			`model.compile(loss='categorical_crossentropy', optimizer='adam', metrics=['accuracy'])`
			
			`model.fit(x_train, steps_per_epoch=30, epochs=10, validation_data=x_test,validation_steps=50)`
			
			`Epoch 1/10`
			`30/30 [==============================] - ETA: 0s - loss: 1.2421 - accuracy: 0.6843WARNING:tensorflow:Your input ran out of dat a; interrupting training. Make sure that your dataset or generator can generate at least `steps_per_epoch * epochs` batches (in this case, 50 batches). You may need to use the repeat() function when building your dataset.`
			`30/30 [==============================] - 80s 3s/step - loss: 1.2421 - accuracy: 0.6843 - val_loss: 0.3881 - val_accuracy: 0.906 7`
			`Epoch 2/10`
			`30/30 [==============================] - 38s 1s/step - loss: 0.2717 - accuracy: 0.9249`
			`Epoch 3/10`
			`30/30 [==============================] - 27s 895ms/step - loss: 0.1312 - accuracy: 0.9644`
			`Epoch 4/10`
			`30/30 [==============================] - 22s 729ms/step - loss: 0.0793 - accuracy: 0.9800`
			`Epoch 5/10`
			`30/30 [==============================] - 20s 668ms/step - loss: 0.0520 - accuracy: 0.9878`
			`Epoch 6/10`
			`30/30 [==============================] - 16s 540ms/step - loss: 0.0328 - accuracy: 0.9930`
			`Epoch 7/10`
			`30/30 [==============================] - 15s 488ms/step - loss: 0.0280 - accuracy: 0.9939`
			`Epoch 8/10`
			`30/30 [==============================] - 14s 477ms/step - loss: 0.0204 - accuracy: 0.9959`
			`Epoch 9/10`
			`30/30 [==============================] - 15s 480ms/step - loss: 0.0184 - accuracy: 0.9966`
			`Epoch 10/10`
			`30/30 [==============================] - 15s 496ms/step - loss: 0.0117 - accuracy: 0.9982`
			
			`<keras.callbacks.History at 0x156cb9c9040>`
			
			`model.save('aslpng')`