Project Development Phase
Model Performance Test

Date	15 November 2022
Team ID	PNT2022TMID17255
Project Name	Real-Time Communication System Powered by AI for Specially Abled
Maximum Marks	10 Marks

Model Performance Testing:

S.No.	Parameter	Values	Screenshot
1.	Model Summary	Total params: 15,751,049 Trainable params: 15,751,049 Non-trainable params: 0	Screenshot-1
2.	Accuracy	Training Accuracy – 97.53 Validation Accuracy -98.60	Screenshot-2

Screenshots – Please refer to the next page for Screenshots

Screenshot-1 :

```
model.summary()
```

Model: "sequential"

Layer (type)	Output Shape	Param #
conv2d (Conv2D)	(None, 62, 62, 32)	896
max_pooling2d (MaxPooling2D)	(None, 31, 31, 32)	0
flatten (Flatten)	(None, 30752)	0
dense (Dense)	(None, 512)	15745536
dense_1 (Dense)	(None, 9)	4617

```
Total params: 15,751,049
Trainable params: 15,751,049
Non-trainable params: 0
```

Screenshot-2:

```
Epoch 1/10
24/24 [==============================] - 9s 332ms/step - loss: 1.2047 - accuracy: 0.6211 - val_loss: 0.4829 - val_accuracy: 0.8594
Epoch 2/10
24/24 [==============================] - 9s 367ms/step - loss: 0.4532 - accuracy: 0.8464 - val_loss: 0.3805 - val_accuracy: 0.8836
Epoch 3/10
24/24 [==============================] - 9s 377ms/step - loss: 0.2979 - accuracy: 0.9010 - val_loss: 0.2808 - val_accuracy: 0.9141
Epoch 4/10
24/24 [==============================] - 8s 323ms/step - loss: 0.2077 - accuracy: 0.9375 - val_loss: 0.2841 - val_accuracy: 0.9430
Epoch 5/10
24/24 [==============================] - 8s 323ms/step - loss: 0.1857 - accuracy: 0.9505 - val_loss: 0.3101 - val_accuracy: 0.9438
Epoch 6/10
24/24 [==============================] - 8s 322ms/step - loss: 0.1099 - accuracy: 0.9635 - val_loss: 0.2054 - val_accuracy: 0.9477
Epoch 7/10
24/24 [==============================] - 8s 322ms/step - loss: 0.1363 - accuracy: 0.9596 - val_loss: 0.2326 - val_accuracy: 0.9578
Epoch 8/10
24/24 [==============================] - 8s 322ms/step - loss: 0.1232 - accuracy: 0.9583 - val_loss: 0.1680 - val_accuracy: 0.9664
Epoch 9/10
24/24 [==============================] - 8s 323ms/step - loss: 0.0975 - accuracy: 0.9740 - val_loss: 0.2348 - val_accuracy: 0.9477
Epoch 10/10
24/24 [==============================] - 9s 380ms/step - loss: 0.0909 - accuracy: 0.9753 - val_loss: 0.2134 - val_accuracy: 0.9680
<keras.callbacks.History at 0x7fe4882de650>
```