# Project Development Phase
# Model Performance Test

| Date | 18 November 2022 |
|---|---|
| Team ID | PNT2022TMID06911 |
| 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 |
|---|---|---|
| 1. | Model Summary | Total params: 15,750,473 <br> Trainable params: 15,750,473 <br> Non-trainable params: 0 |
| 2. | Accuracy | Training Accuracy – 99.91% <br><br> Validation Accuracy -97.67% |

# Screenshot:

## 1.Model Summary

```
Model: "sequential"
_____
 Layer (type)                Output Shape              Param #
=================================================================
 conv2d (Conv2D)             (None, 62, 62, 32)        320

 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: 15,750,473
Trainable params: 15,750,473
Non-trainable params: 0
_____
```

## 2.Accuracy

```
/usr/local/lib/python3.7/dist-packages/ipykernel_launcher.py:2: UserWarning: `Model.fit_generator` is deprecated and will be removed in a future versio

Epoch 1/10
18/18 [==============================] - 97s 5s/step - loss: 0.0055 - accuracy: 0.9991 - val_loss: 0.2245 - val_accuracy: 0.9760
Epoch 2/10
18/18 [==============================] - 86s 5s/step - loss: 0.0044 - accuracy: 0.9994 - val_loss: 0.2355 - val_accuracy: 0.9760
Epoch 3/10
18/18 [==============================] - 85s 5s/step - loss: 0.0032 - accuracy: 0.9996 - val_loss: 0.2541 - val_accuracy: 0.9756
Epoch 4/10
18/18 [==============================] - 88s 5s/step - loss: 0.0034 - accuracy: 0.9997 - val_loss: 0.2707 - val_accuracy: 0.9760
Epoch 5/10
18/18 [==============================] - 86s 5s/step - loss: 0.0030 - accuracy: 0.9997 - val_loss: 0.2608 - val_accuracy: 0.9760
Epoch 6/10
18/18 [==============================] - 85s 5s/step - loss: 0.0031 - accuracy: 0.9994 - val_loss: 0.2538 - val_accuracy: 0.9760
Epoch 7/10
18/18 [==============================] - 84s 5s/step - loss: 0.0028 - accuracy: 0.9993 - val_loss: 0.2577 - val_accuracy: 0.9760
Epoch 8/10
18/18 [==============================] - 86s 5s/step - loss: 0.0026 - accuracy: 0.9997 - val_loss: 0.2712 - val_accuracy: 0.9760
Epoch 9/10
18/18 [==============================] - 83s 4s/step - loss: 0.0022 - accuracy: 0.9996 - val_loss: 0.2839 - val_accuracy: 0.9778
Epoch 10/10
18/18 [==============================] - 83s 5s/step - loss: 0.0014 - accuracy: 0.9999 - val_loss: 0.2773 - val_accuracy: 0.9760
<keras.callbacks.History at 0x7f6ff9335350>
```