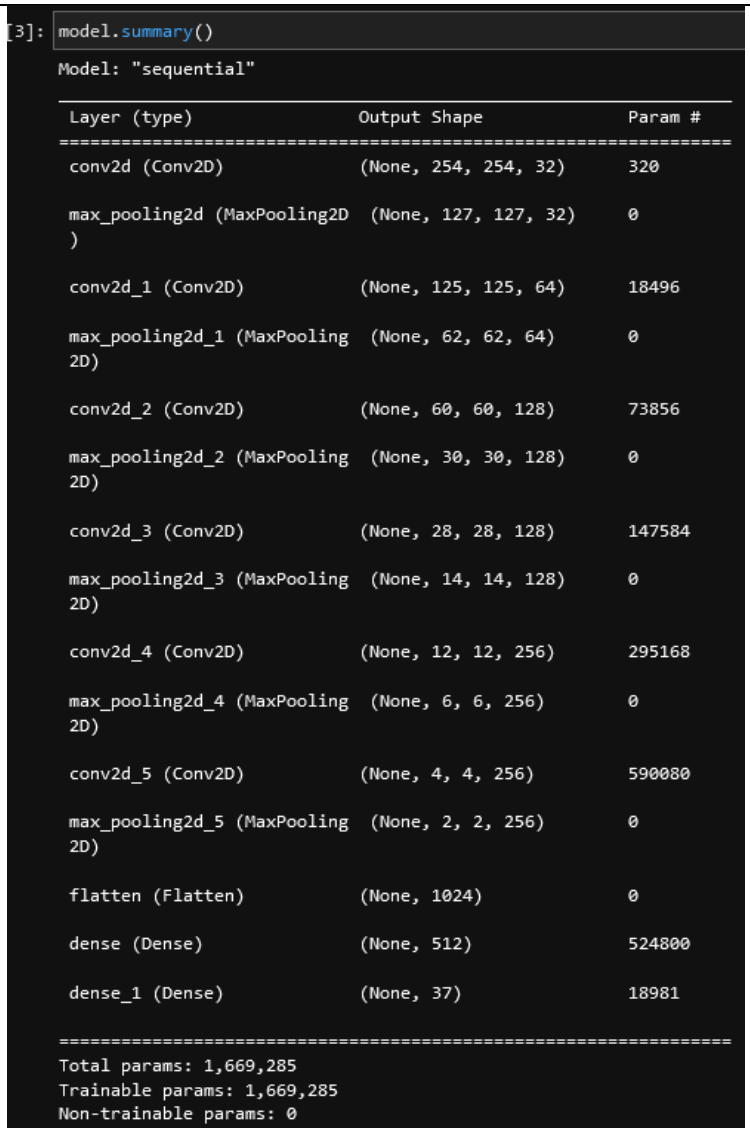
**Project Development Phase**
**Model Performance Test**

| | |
|---|---|
| Date | 10 November 2022 |
| Team ID | PNT2022TMID35886 |
| 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 | - |  |

```
[3]: model.summary()
Model: "sequential"
_________________________________________________________________
 Layer (type)                Output Shape              Param #
=================================================================
 conv2d (Conv2D)             (None, 254, 254, 32)      320

 max_pooling2d (MaxPooling2D  (None, 127, 127, 32)     0
 )

 conv2d_1 (Conv2D)           (None, 125, 125, 64)      18496

 max_pooling2d_1 (MaxPooling  (None, 62, 62, 64)       0
 2D)

 conv2d_2 (Conv2D)           (None, 60, 60, 128)       73856

 max_pooling2d_2 (MaxPooling  (None, 30, 30, 128)      0
 2D)

 conv2d_3 (Conv2D)           (None, 28, 28, 128)       147584

 max_pooling2d_3 (MaxPooling  (None, 14, 14, 128)      0
 2D)

 conv2d_4 (Conv2D)           (None, 12, 12, 256)       295168

 max_pooling2d_4 (MaxPooling  (None, 6, 6, 256)        0
 2D)

 conv2d_5 (Conv2D)           (None, 4, 4, 256)         590080

 max_pooling2d_5 (MaxPooling  (None, 2, 2, 256)        0
 2D)

 flatten (Flatten)           (None, 1024)              0

 dense (Dense)               (None, 512)               524800

 dense_1 (Dense)             (None, 37)                18981

=================================================================
Total params: 1,669,285
Trainable params: 1,669,285
Non-trainable params: 0
```

| | | | |
|---|---|---|---|
| 2. | Accuracy | Training Accuracy – **99.41%**<br><br>Validation Accuracy – **99.25%** | `Epoch 99/100`<br>`100/100 [==============================] - 315s 3s/step`<br>Training:<br>`loss: 0.0161 - accuracy: 0.9941`<br>Validation:<br>`val_loss: 0.0259 - val_accuracy: 0.9925`<br><br>Since the ModelCheckpoint callback was used only the best model (99$^{th}$ epoch) among all epochs is saved. |
| 3 | Confidence Score (Only Yolo Projects) | Class Detected -<br><br>Confidence Score - | |