

Project Development Phase Model Performance Test

Date	19 November 2022
Team ID	PNT2022TMID42702
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 Trainable params: 15,750,473 Non-trainable params: 0
2.	Accuracy	Training Accuracy – 99.40% Validation Accuracy -90.44%

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

```
In [ ]: model.fit_generator(x_train, steps_per_epoch=24, epochs=10, validation_data = x_test, validation_steps= 40)
        #steps_per_epoch = no. of train images//batch size

/usr/local/lib/python3.7/dist-packages/ipykernel_launcher.py:1: UserWarning: `Model.fit_generator` is deprecated and will be removed in a future version. Please use `Model.fit`, which supports generators.
  """Entry point for launching an IPython kernel.
Epoch 1/10
24/24 [=====] - ETA: 0s - loss: 0.7714 - accuracy: 0.7442
WARNING:tensorflow:Your input ran out of data; interrupting training. Make sure that your dataset or generator can generate at least `steps_per_epoch * epochs` batches (in this case, 40 batches). You may need to use the repeat() function when building your dataset.
24/24 [=====] - 2691s 113s/step - loss: 0.7714 - accuracy: 0.7442 - val_loss: 0.3322 - val_accuracy: 0.9031
Epoch 2/10
24/24 [=====] - 986s 41s/step - loss: 0.1882 - accuracy: 0.9488
Epoch 3/10
24/24 [=====] - 521s 22s/step - loss: 0.0964 - accuracy: 0.9745
Epoch 4/10
24/24 [=====] - 287s 12s/step - loss: 0.0617 - accuracy: 0.9819
Epoch 5/10
24/24 [=====] - 154s 6s/step - loss: 0.0464 - accuracy: 0.9868
Epoch 6/10
24/24 [=====] - 92s 4s/step - loss: 0.0332 - accuracy: 0.9928
Epoch 7/10
24/24 [=====] - 63s 3s/step - loss: 0.0251 - accuracy: 0.9948
Epoch 8/10
24/24 [=====] - 50s 2s/step - loss: 0.0176 - accuracy: 0.9964
Epoch 9/10
24/24 [=====] - 42s 2s/step - loss: 0.0134 - accuracy: 0.9973
Epoch 10/10
24/24 [=====] - 44s 2s/step - loss: 0.0143 - accuracy: 0.9967

Out[ ]:
```