

## Project Development Phase Model Performance Test

Date	10 November 2022
Team ID	PNT2022TMID18723
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		<pre> In [6]: from keras.models import Sequential         from keras.layers import Dense         from keras.layers import Convolution2D         from keras.layers import MaxPooling2D         from keras.layers import Dropout         from keras.layers import Flatten  In [7]: model = Sequential()  In [8]: model.add(Convolution2D(32,(3,3),input_shape=(64,64,1), activation='relu'))  In [9]: model.add(MaxPooling2D(pool_size=(2,2)))  In [10]: model.add(Flatten())  In [11]: model.add(Dense(units=512, activation = 'relu'))  In [12]: model.add(Dense(units=9, activation = 'softmax'))  In [13]: model.compile(loss='categorical_crossentropy', optimizer = 'adam', metrics = ['accuracy']) </pre>

2.	Accuracy	<div>Training Accuracy – 99.6%</div> <div>Validation Accuracy – 98.3%</div>	<pre>model.fit_generator(x_train, steps_per_epoch=24, epochs=10, validation_data = x_test, validation_steps= 40)  /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: 0.7198 - accuracy: 0.7638 WARNING:tensorflow:Your input ran out of data; interrupting training. Make sure that your dataset or generator can generate at least 10 epochs' batches (in this case, 40 batches). You may need to use the repeat() function when building your dataset. 24/24 [=====] - 40s 2s/step - loss: 0.7198 - accuracy: 0.7638 - val_loss: 0.3803 - val_accuracy: 0.8876 Epoch 2/10 24/24 [=====] - 32s 1s/step - loss: 0.1549 - accuracy: 0.9569 Epoch 3/10 24/24 [=====] - 34s 1s/step - loss: 0.8771 - accuracy: 0.9800 Epoch 4/10 24/24 [=====] - 32s 1s/step - loss: 0.8592 - accuracy: 0.9851 Epoch 5/10 24/24 [=====] - 34s 1s/step - loss: 0.8327 - accuracy: 0.9929 Epoch 6/10 24/24 [=====] - 34s 1s/step - loss: 0.8230 - accuracy: 0.9948 Epoch 7/10 24/24 [=====] - 32s 1s/step - loss: 0.8180 - accuracy: 0.9962 Epoch 8/10 24/24 [=====] - 34s 1s/step - loss: 0.8147 - accuracy: 0.9972 Epoch 9/10 24/24 [=====] - 32s 1s/step - loss: 0.8116 - accuracy: 0.9979 Epoch 10/10 24/24 [=====] - 34s 1s/step - loss: 0.8091 - accuracy: 0.9983</pre>
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