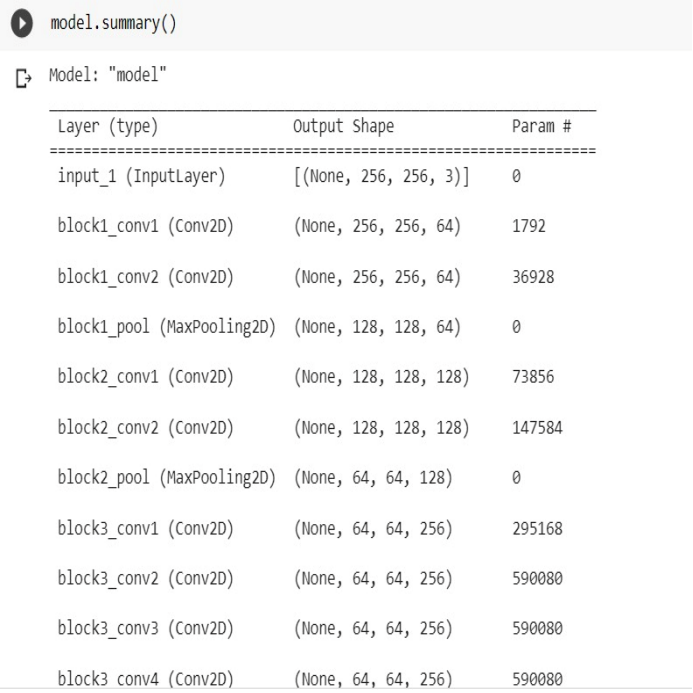


PROJECT DEVELOPMENT PHASE MODEL PERFORMANCE TEST

Date	19 November 2022
Team ID	PNT2022TMID52645
Project Name	Project - Fertilizers Recommendation System For Disease Prediction
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> model.summary() Model: "model" _____ Layer (type) Output Shape Param # ----- input_1 (InputLayer) [(None, 256, 256, 3)] 0 block1_conv1 (Conv2D) (None, 256, 256, 64) 1792 block1_conv2 (Conv2D) (None, 256, 256, 64) 36928 block1_pool (MaxPooling2D) (None, 128, 128, 64) 0 block2_conv1 (Conv2D) (None, 128, 128, 128) 73856 block2_conv2 (Conv2D) (None, 128, 128, 128) 147584 block2_pool (MaxPooling2D) (None, 64, 64, 128) 0 block3_conv1 (Conv2D) (None, 64, 64, 256) 295168 block3_conv2 (Conv2D) (None, 64, 64, 256) 590080 block3_conv3 (Conv2D) (None, 64, 64, 256) 590080 block3_conv4 (Conv2D) (None, 64, 64, 256) 590080 </pre>

2.	Accuracy	Training Accuracy – 95% Validation Accuracy – 96%	<pre>model.fit_generator(train, steps_per_epoch=16, epochs=50, verbose=1, callbacks=cb, validation_data=val, validation_steps=16) /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. """Entry point for launching an IPython kernel. Epoch 1/50 16/16 [=====] - ETA: 0s - loss: 4.7898 - accuracy: 0.6934 Epoch 1: val_accuracy improved from -inf to 0.90430, saving model to best_model.h5 16/16 [=====] - 799s 51s/step - loss: 4.7898 - accuracy: 0.6934 - val_loss: 1.1782 - val_accuracy: 0.9043 Epoch 2/50 16/16 [=====] - ETA: 0s - loss: 1.2273 - accuracy: 0.9043 Epoch 2: val_accuracy improved from 0.90430 to 0.97266, saving model to best_model.h5 16/16 [=====] - 781s 50s/step - loss: 1.2273 - accuracy: 0.9043 - val_loss: 0.4871 - val_accuracy: 0.9727 Epoch 3/50 16/16 [=====] - ETA: 0s - loss: 0.8745 - accuracy: 0.9336 Epoch 3: val_accuracy did not improve from 0.97266 16/16 [=====] - 790s 51s/step - loss: 0.8745 - accuracy: 0.9336 - val_loss: 0.3597 - val_accuracy: 0.9707 Epoch 4/50 16/16 [=====] - ETA: 0s - loss: 0.6920 - accuracy: 0.9551 Epoch 4: val_accuracy did not improve from 0.97266 16/16 [=====] - 784s 50s/step - loss: 0.6920 - accuracy: 0.9551 - val_loss: 0.2227 - val_accuracy: 0.9727 Epoch 5/50 16/16 [=====] - ETA: 0s - loss: 0.5757 - accuracy: 0.9549 Epoch 5: val_accuracy did not improve from 0.97266 16/16 [=====] - 761s 49s/step - loss: 0.5757 - accuracy: 0.9549 - val_loss: 0.3777 - val_accuracy: 0.9688 Epoch 5: early stopping <keras.callbacks.History at 0x7f1afaaf9910></pre>
----	----------	--	--

Model Accuracy :

```
model.fit_generator(train, steps_per_epoch=16, epochs=50, verbose=1, callbacks=cb, validation_data=val, validation_steps=16)

/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.
    """Entry point for launching an IPython kernel.
Epoch 1/50
16/16 [=====] - ETA: 0s - loss: 4.7898 - accuracy: 0.6934
Epoch 1: val_accuracy improved from -inf to 0.90430, saving model to best_model.h5
16/16 [=====] - 799s 51s/step - loss: 4.7898 - accuracy: 0.6934 - val_loss: 1.1782 - val_accuracy: 0.9043
Epoch 2/50
16/16 [=====] - ETA: 0s - loss: 1.2273 - accuracy: 0.9043
Epoch 2: val_accuracy improved from 0.90430 to 0.97266, saving model to best_model.h5
16/16 [=====] - 781s 50s/step - loss: 1.2273 - accuracy: 0.9043 - val_loss: 0.4871 - val_accuracy: 0.9727
Epoch 3/50
16/16 [=====] - ETA: 0s - loss: 0.8745 - accuracy: 0.9336
Epoch 3: val_accuracy did not improve from 0.97266
16/16 [=====] - 790s 51s/step - loss: 0.8745 - accuracy: 0.9336 - val_loss: 0.3597 - val_accuracy: 0.9707
Epoch 4/50
16/16 [=====] - ETA: 0s - loss: 0.6920 - accuracy: 0.9551
Epoch 4: val_accuracy did not improve from 0.97266
16/16 [=====] - 784s 50s/step - loss: 0.6920 - accuracy: 0.9551 - val_loss: 0.2227 - val_accuracy: 0.9727
Epoch 5/50
16/16 [=====] - ETA: 0s - loss: 0.5757 - accuracy: 0.9549
Epoch 5: val_accuracy did not improve from 0.97266
16/16 [=====] - 761s 49s/step - loss: 0.5757 - accuracy: 0.9549 - val_loss: 0.3777 - val_accuracy: 0.9688
Epoch 5: early stopping
<keras.callbacks.History at 0x7f1afaaf9910>
```