

Project Development Phase

Model Performance Test

Date	17-11-2022
Team ID	PNT2022TMID00565
Project Name	Fertilizers Recommendation System for Disease Prediction
Maximum Marks	8marks

Model Performance Testing:

Project team shall fill the following information in model performance testing template.

S.No.	Parameter	Values	Screenshot
1.	Model Summary	Total params: 896 Trainable params: 896 Non- trainable params: 0	<pre> Model: "sequential" Layer (type) Output Shape Param # ===== conv2d (Conv2D) (None, 126, 126, 32) 896 max_pooling2d (MaxPooling2D) (None, 63, 63, 32) 0 flatten (Flatten) (None, 127008) 0 ===== Total params: 896 Trainable params: 896 Non-trainable params: 0 </pre>

2.	Accuracy	Training Accuracy – 96.55 Validation Accuracy – 95.45	Epoch 1/10 225/225 [=====] - 86s 375ms/step - loss: 0.8389 - accuracy: 0.7940 - val_loss: 0.2412 - val_accuracy: 0.9158 Epoch 2/10 225/225 [=====] - 71s 316ms/step - loss: 0.2745 - accuracy: 0.9077 - val_loss: 0.1980 - val_accuracy: 0.9353 Epoch 3/10 225/225 [=====] - 73s 324ms/step - loss: 0.2111 - accuracy: 0.9266 - val_loss: 0.1529 - val_accuracy: 0.9582 Epoch 4/10 225/225 [=====] - 74s 329ms/step - loss: 0.1655 - accuracy: 0.9434 - val_loss: 0.1418 - val_accuracy: 0.9579 Epoch 5/10 225/225 [=====] - 73s 323ms/step - loss: 0.1413 - accuracy: 0.9504 - val_loss: 0.1780 - val_accuracy: 0.9454 Epoch 6/10 225/225 [=====] - 74s 327ms/step - loss: 0.1172 - accuracy: 0.9623 - val_loss: 0.0872 - val_accuracy: 0.9739 Epoch 7/10 225/225 [=====] - 75s 331ms/step - loss: 0.0964 - accuracy: 0.9681 - val_loss: 0.1041 - val_accuracy: 0.9638 Epoch 8/10 225/225 [=====] - 76s 339ms/step - loss: 0.1110 - accuracy: 0.9636 - val_loss: 0.1054 - val_accuracy: 0.9686 Epoch 9/10 225/225 [=====] - 76s 338ms/step - loss: 0.0933 - accuracy: 0.9662 - val_loss: 0.1148 - val_accuracy: 0.9638 Epoch 10/10 225/225 [=====] - 76s 338ms/step - loss: 0.0816 - accuracy: 0.9734 - val_loss: 0.1381 - val_accuracy: 0.9555
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Model Summary

Model: "sequential"

Layer (type)	Output Shape	Param #
conv2d (Conv2D)	(None, 126, 126, 32)	896
max_pooling2d (MaxPooling2D)	(None, 63, 63, 32)	0
flatten (Flatten)	(None, 127008)	0
Total params: 896		
Trainable params: 896		
Non-trainable params: 0		

Epoch 1/10
475/475 [=====] - 189s 396ms/step - loss: 1.2710 - accuracy: 0.6086 - val_loss: 0.7966 - val_accuracy: 0.7283
Epoch 2/10
475/475 [=====] - 165s 348ms/step - loss: 0.5702 - accuracy: 0.7967 - val_loss: 0.5633 - val_accuracy: 0.8009
Epoch 3/10
475/475 [=====] - 135s 285ms/step - loss: 0.4293 - accuracy: 0.8471 - val_loss: 0.7283 - val_accuracy: 0.7623
Epoch 4/10
475/475 [=====] - 133s 281ms/step - loss: 0.3579 - accuracy: 0.8740 - val_loss: 0.4030 - val_accuracy: 0.8653
Epoch 5/10
475/475 [=====] - 130s 273ms/step - loss: 0.3234 - accuracy: 0.8876 - val_loss: 0.3041 - val_accuracy: 0.8929
Epoch 6/10
475/475 [=====] - 131s 275ms/step - loss: 0.2816 - accuracy: 0.9014 - val_loss: 0.3339 - val_accuracy: 0.8885
Epoch 7/10
475/475 [=====] - 140s 294ms/step - loss: 0.2425 - accuracy: 0.9167 - val_loss: 0.4148 - val_accuracy: 0.8700
Epoch 8/10
475/475 [=====] - 135s 283ms/step - loss: 0.2438 - accuracy: 0.9153 - val_loss: 0.1830 - val_accuracy: 0.9382
Epoch 9/10
475/475 [=====] - 133s 279ms/step - loss: 0.2115 - accuracy: 0.9298 - val_loss: 0.2326 - val_accuracy: 0.9169
Epoch 10/10
475/475 [=====] - 131s 276ms/step - loss: 0.2159 - accuracy: 0.9252 - val_loss: 0.1770 - val_accuracy: 0.9403