

Project Development Phase Model Performance Test

Date	10 November 2022
Team ID	PNT2022TMID44936
Project Name	Fertilizers Recommendation System for Disease Prediction
Maximum Marks	10 Marks

Model Performance Testing:

S.No	Parameter	Values	Screenshot												
1.	Model Summary		<pre>model.summary()</pre> <p>Model: "sequential"</p> <table><thead><tr><th>Layer (type)</th><th>Output Shape</th><th>Param #</th></tr></thead><tbody><tr><td>conv2d (Conv2D)</td><td>(None, 62, 62, 64)</td><td>1792</td></tr><tr><td>max_pooling2d (MaxPooling2D)</td><td>(None, 31, 31, 64)</td><td>0</td></tr><tr><td>flatten (Flatten)</td><td>(None, 61504)</td><td>0</td></tr></tbody></table> <p>===== Total params: 1,792 Trainable params: 1,792 Non-trainable params: 0 =====</p>	Layer (type)	Output Shape	Param #	conv2d (Conv2D)	(None, 62, 62, 64)	1792	max_pooling2d (MaxPooling2D)	(None, 31, 31, 64)	0	flatten (Flatten)	(None, 61504)	0
Layer (type)	Output Shape	Param #													
conv2d (Conv2D)	(None, 62, 62, 64)	1792													
max_pooling2d (MaxPooling2D)	(None, 31, 31, 64)	0													
flatten (Flatten)	(None, 61504)	0													
2.	Accuracy	<p>Fruit</p> <p>Training Accuracy – 96.9%</p> <p>Validation Accuracy – 96.5%</p> <p>Vegetable</p> <p>Training Accuracy – 93.0%</p> <p>Validation Accuracy – 95.8%</p>	<p>Fruit</p> <pre>entry points for launching an ipython kernel:</pre> <pre>Epoch 1/10 225/225 [=====] - 1340s 6s/step - loss: 0.6356 - accuracy: 0.7664 - val_loss: 0.2746 - val_accuracy: 0.9112 Epoch 2/10 225/225 [=====] - 115s 512ms/step - loss: 0.2658 - accuracy: 0.9092 - val_loss: 0.1272 - val_accuracy: 0.9129 Epoch 3/10 225/225 [=====] - 116s 520ms/step - loss: 0.3125 - accuracy: 0.9111 - val_loss: 0.1539 - val_accuracy: 0.9474 Epoch 4/10 225/225 [=====] - 115s 520ms/step - loss: 0.1725 - accuracy: 0.9395 - val_loss: 0.0889 - val_accuracy: 0.9679 Epoch 5/10 225/225 [=====] - 115s 580ms/step - loss: 0.1419 - accuracy: 0.9488 - val_loss: 0.1201 - val_accuracy: 0.9562 Epoch 6/10 225/225 [=====] - 114s 580ms/step - loss: 0.1171 - accuracy: 0.9611 - val_loss: 0.1369 - val_accuracy: 0.9476 Epoch 7/10 225/225 [=====] - 114s 580ms/step - loss: 0.1066 - accuracy: 0.9638 - val_loss: 0.1161 - val_accuracy: 0.9580 Epoch 8/10 225/225 [=====] - 115s 512ms/step - loss: 0.1084 - accuracy: 0.9638 - val_loss: 0.0632 - val_accuracy: 0.9760 Epoch 9/10 225/225 [=====] - 115s 580ms/step - loss: 0.0878 - accuracy: 0.9698 - val_loss: 0.1117 - val_accuracy: 0.9580 Epoch 10/10 225/225 [=====] - 115s 512ms/step - loss: 0.0898 - accuracy: 0.9695 - val_loss: 0.0812 - val_accuracy: 0.9653 (Header: callbacks.History at 0x7f94acc550b0)</pre> <p>Vegetable</p> <pre>/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 1/10 475/475 [=====] - 2540s 5s/step - loss: 1.1399 - accuracy: 0.6122 - val_loss: 0.6337 - val_accuracy: 0.7758 Epoch 2/10 475/475 [=====] - 187s 392ms/step - loss: 0.5842 - accuracy: 0.8086 - val_loss: 0.6368 - val_accuracy: 0.7777 Epoch 3/10 475/475 [=====] - 166s 358ms/step - loss: 0.4399 - accuracy: 0.8416 - val_loss: 0.3436 - val_accuracy: 0.8781 Epoch 4/10 475/475 [=====] - 173s 364ms/step - loss: 0.3538 - accuracy: 0.8739 - val_loss: 0.2538 - val_accuracy: 0.9099 Epoch 5/10 475/475 [=====] - 171s 368ms/step - loss: 0.3088 - accuracy: 0.8960 - val_loss: 0.2759 - val_accuracy: 0.9058 Epoch 6/10 475/475 [=====] - 172s 362ms/step - loss: 0.2832 - accuracy: 0.9084 - val_loss: 0.2343 - val_accuracy: 0.9201 Epoch 7/10 475/475 [=====] - 168s 355ms/step - loss: 0.2486 - accuracy: 0.9127 - val_loss: 0.1633 - val_accuracy: 0.9435 Epoch 8/10 475/475 [=====] - 184s 388ms/step - loss: 0.2266 - accuracy: 0.9205 - val_loss: 0.1554 - val_accuracy: 0.9465 Epoch 9/10 475/475 [=====] - 178s 375ms/step - loss: 0.1995 - accuracy: 0.9308 - val_loss: 0.1892 - val_accuracy: 0.9345 Epoch 10/10 475/475 [=====] - 178s 370ms/step - loss: 0.1348 - accuracy: 0.9389 - val_loss: 0.1287 - val_accuracy: 0.9588 (Header: callbacks.History at 0x7f94bac76c5d)</pre>												