Project Development Phase
Model Performance Test

Date	10 November 2022
Team ID	PNT2022TMID27490
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	-	`model.summary()` Model: "sequential" _____ Layer (type) Output Shape Param # ===== conv2d_1 (Conv2D) (None, 126, 126, 32) 896 max_pooling2d (MaxPooling2D) (None, 63, 63, 32) 0 flatten (Flatten) (None, 127008) 0 dense (Dense) (None, 300) 38102700 dense_1 (Dense) (None, 150) 45150 dense_2 (Dense) (None, 9) 1359 dense_3 (Dense) (None, 300) 3000 dense_4 (Dense) (None, 150) 45150 dense_5 (Dense) (None, 6) 906 ===== Total params: 38,199,161 Trainable params: 38,199,161 Non-trainable params: 0
2.	Accuracy	Training Accuracy - Validation Accuracy -	`model.fit(x_train, steps_per_epoch=len(x_train),validation_data=x_test,validation_steps=len(x_test),epochs=10)` Epoch 1/10 356/356 [==========] - 294s 821ms/step - loss: 1.4784 - accuracy: 0.4540 - val_loss: 1.2836 - val_accuracy: 0.7147 Epoch 2/10 356/356 [==========] - 290s 815ms/step - loss: 1.0785 - accuracy: 0.5955 - val_loss: 1.8063 - val_accuracy: 0.5680 Epoch 3/10 356/356 [==========] - 289s 809ms/step - loss: 0.8824 - accuracy: 0.6930 - val_loss: 1.8846 - val_accuracy: 0.3880 Epoch 4/10 356/356 [==========] - 290s 813ms/step - loss: 0.7073 - accuracy: 0.7643 - val_loss: 1.9312 - val_accuracy: 0.3573 Epoch 5/10 356/356 [==========] - 289s 812ms/step - loss: 0.5931 - accuracy: 0.7980 - val_loss: 1.2552 - val_accuracy: 0.5560 Epoch 6/10 356/356 [==========] - 289s 812ms/step - loss: 0.5508 - accuracy: 0.8188 - val_loss: 2.1893 - val_accuracy: 0.4853 Epoch 7/10 356/356 [==========] - 289s 810ms/step - loss: 0.4766 - accuracy: 0.8378 - val_loss: 1.4635 - val_accuracy: 0.7560 Epoch 8/10 356/356 [==========] - 289s 812ms/step - loss: 0.4310 - accuracy: 0.8588 - val_loss: 2.5084 - val_accuracy: 0.4227 Epoch 9/10 356/356 [==========] - 293s 823ms/step - loss: 0.4152 - accuracy: 0.8646 - val_loss: 1.8773 - val_accuracy: 0.5547 Epoch 10/10 356/356 [==========] - 293s 822ms/step - loss: 0.3686 - accuracy: 0.8765 - val_loss: 2.6036 - val_accuracy: 0.5320

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S.No.	Parameter	Values	Screenshot
3.	Model Summary	-	`model.summary()` Model: "sequential" _____ Layer (type) Output Shape Param # conv2d_1 (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
4.	Accuracy	Training Accuracy - Validation Accuracy -	`model.fit(x_train, steps_per_epoch=len(x_train),validation_data=x_test,validation_steps=len(x_test),epochs=10)` Epoch 1/10 169/169 [==========] - 144s 852ms/step - loss: 0.5092 - accuracy: 0.7923 - val_loss: 0.9665 - val_accuracy: 0.6145 Epoch 2/10 169/169 [==========] - 142s 841ms/step - loss: 0.3892 - accuracy: 0.8568 - val_loss: 1.7423 - val_accuracy: 0.5747 Epoch 3/10 169/169 [==========] - 142s 838ms/step - loss: 0.3450 - accuracy: 0.8845 - val_loss: 1.7142 - val_accuracy: 0.6139 Epoch 4/10 169/169 [==========] - 142s 842ms/step - loss: 0.3118 - accuracy: 0.8982 - val_loss: 2.0814 - val_accuracy: 0.5623 Epoch 5/10 169/169 [==========] - 145s 856ms/step - loss: 0.2226 - accuracy: 0.9266 - val_loss: 3.4725 - val_accuracy: 0.5261 Epoch 6/10 169/169 [==========] - 144s 853ms/step - loss: 0.1762 - accuracy: 0.9408 - val_loss: 2.4493 - val_accuracy: 0.5765 Epoch 7/10 169/169 [==========] - 144s 852ms/step - loss: 0.1802 - accuracy: 0.9422 - val_loss: 2.6436 - val_accuracy: 0.5706 Epoch 8/10 169/169 [==========] - 146s 864ms/step - loss: 0.1448 - accuracy: 0.9497 - val_loss: 2.4450 - val_accuracy: 0.5356 Epoch 9/10 169/169 [==========] - 149s 881ms/step - loss: 0.1307 - accuracy: 0.9569 - val_loss: 2.7819 - val_accuracy: 0.5919 Epoch 10/10 169/169 [==========] - 148s 876ms/step - loss: 0.1575 - accuracy: 0.9469 - val_loss: 2.3024 - val_accuracy: 0.6352