

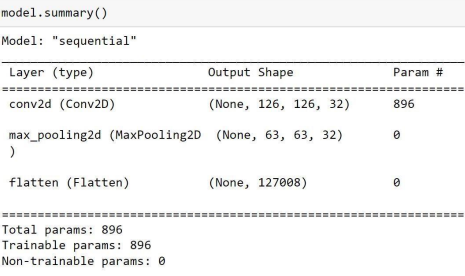
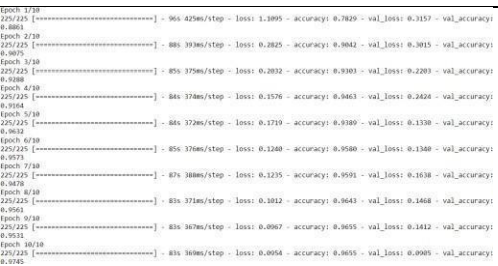
Project Development Phase

Model Performance Test

| | |
|---------------|--|
| Date | 20 November 2022 |
| Team ID | PNT2022TMID38677 |
| 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 | Total params: 896 Trainable params: 896 Non-trainable params: 0 |  <pre> 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 </pre> |
| 2. | Accuracy | Training Accuracy – 96.55 Validation Accuracy – 97.45 |  <pre> Epoch 1/10: - loss: 1.1895 - accuracy: 0.7829 - val_loss: 0.3157 - val_accuracy: 0.8865 Epoch 2/10: - loss: 0.2825 - accuracy: 0.8842 - val_loss: 0.3015 - val_accuracy: 0.8875 Epoch 3/10: - loss: 0.2032 - accuracy: 0.9303 - val_loss: 0.2203 - val_accuracy: 0.9088 Epoch 4/10: - loss: 0.1576 - accuracy: 0.8463 - val_loss: 0.2428 - val_accuracy: 0.9184 Epoch 5/10: - loss: 0.1719 - accuracy: 0.9389 - val_loss: 0.1330 - val_accuracy: 0.9632 Epoch 6/10: - loss: 0.1248 - accuracy: 0.9580 - val_loss: 0.1348 - val_accuracy: 0.9773 Epoch 7/10: - loss: 0.1235 - accuracy: 0.9591 - val_loss: 0.1638 - val_accuracy: 0.9828 Epoch 8/10: - loss: 0.1012 - accuracy: 0.8643 - val_loss: 0.1468 - val_accuracy: 0.9561 Epoch 9/10: - loss: 0.0967 - accuracy: 0.8655 - val_loss: 0.1412 - val_accuracy: 0.9511 Epoch 10/10: - loss: 0.0954 - accuracy: 0.8655 - val_loss: 0.0905 - val_accuracy: 0.9745 </pre> |

Model Summary

```
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
=====

Accuracy :

```
Epoch 1/10
225/225 [=====] - 96s 425ms/step - loss: 1.1095 - accuracy: 0.7829 - val_loss: 0.3157 - val_accuracy: 0.8861
Epoch 2/10
225/225 [=====] - 88s 393ms/step - loss: 0.2825 - accuracy: 0.9042 - val_loss: 0.3015 - val_accuracy: 0.9075
Epoch 3/10
225/225 [=====] - 85s 375ms/step - loss: 0.2032 - accuracy: 0.9303 - val_loss: 0.2203 - val_accuracy: 0.9288
Epoch 4/10
225/225 [=====] - 84s 374ms/step - loss: 0.1576 - accuracy: 0.9463 - val_loss: 0.2424 - val_accuracy: 0.9164
Epoch 5/10
225/225 [=====] - 84s 372ms/step - loss: 0.1719 - accuracy: 0.9389 - val_loss: 0.1330 - val_accuracy: 0.9632
Epoch 6/10
225/225 [=====] - 85s 376ms/step - loss: 0.1240 - accuracy: 0.9580 - val_loss: 0.1340 - val_accuracy: 0.9573
Epoch 7/10
225/225 [=====] - 87s 388ms/step - loss: 0.1235 - accuracy: 0.9591 - val_loss: 0.1638 - val_accuracy: 0.9478
Epoch 8/10
225/225 [=====] - 83s 371ms/step - loss: 0.1012 - accuracy: 0.9643 - val_loss: 0.1468 - val_accuracy: 0.9561
Epoch 9/10
225/225 [=====] - 83s 367ms/step - loss: 0.0967 - accuracy: 0.9655 - val_loss: 0.1412 - val_accuracy: 0.9531
Epoch 10/10
225/225 [=====] - 83s 369ms/step - loss: 0.0954 - accuracy: 0.9655 - val_loss: 0.0905 - val_accuracy: 0.9745
```