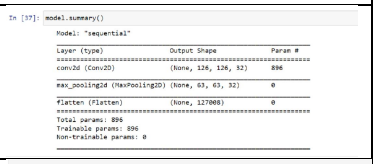
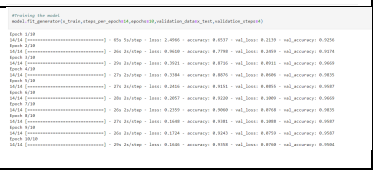
Project Development Phase
Model Performance Test

Date	10 November 2022
Team ID	PNT2022TMID52907
Project Name	Emerging Methods for Early Forest Fire Detection
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	
2.	Accuracy	Training Accuracy – 93.8% Validation Accuracy -92.8%	

Model Summary:

```
In [37]: 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:

```
#Training the model
model.fit_generator(x_train,steps_per_epoch=14,epochs=10,validation_data=x_test,validation_steps=4)
```

```
Epoch 1/10
14/14 [==============================] - 65s 5s/step - loss: 2.4966 - accuracy: 0.6537 - val_loss: 0.2139 - val_accuracy: 0.9256
Epoch 2/10
14/14 [==============================] - 26s 2s/step - loss: 0.9610 - accuracy: 0.7798 - val_loss: 0.2459 - val_accuracy: 0.9174
Epoch 3/10
14/14 [==============================] - 29s 2s/step - loss: 0.3921 - accuracy: 0.8716 - val_loss: 0.0911 - val_accuracy: 0.9669
Epoch 4/10
14/14 [==============================] - 27s 2s/step - loss: 0.3384 - accuracy: 0.8876 - val_loss: 0.0606 - val_accuracy: 0.9835
Epoch 5/10
14/14 [==============================] - 27s 2s/step - loss: 0.2416 - accuracy: 0.9151 - val_loss: 0.0855 - val_accuracy: 0.9587
Epoch 6/10
14/14 [==============================] - 28s 2s/step - loss: 0.2057 - accuracy: 0.9220 - val_loss: 0.1009 - val_accuracy: 0.9669
Epoch 7/10
14/14 [==============================] - 26s 2s/step - loss: 0.2359 - accuracy: 0.9060 - val_loss: 0.0768 - val_accuracy: 0.9835
Epoch 8/10
14/14 [==============================] - 27s 2s/step - loss: 0.1648 - accuracy: 0.9381 - val_loss: 0.1088 - val_accuracy: 0.9587
Epoch 9/10
14/14 [==============================] - 26s 2s/step - loss: 0.1724 - accuracy: 0.9243 - val_loss: 0.0759 - val_accuracy: 0.9587
Epoch 10/10
14/14 [==============================] - 29s 2s/step - loss: 0.1646 - accuracy: 0.9358 - val_loss: 0.0760 - val_accuracy: 0.9504
```