Project Development Phase
Model Performance Test

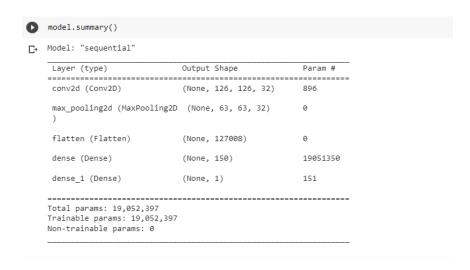| Date	14 November 2022
Team ID	SHRIIBMSI20220027543
Project Name	Emerging Methods for Early Detection of Forest Fires
Maximum Marks	10 Marks

Model Performance Testing:

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

S.No.	Parameter	Values
1.	Model Summary	Total params: 19,052,397 Trainable params: 19,052,397 Non-trainable params: 0
2.	Accuracy	Training Accuracy – 92.43 Validation Accuracy – 97.52

Screenshot:
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

   dense (Dense)               (None, 150)               19051350

   dense_1 (Dense)             (None, 1)                 151

  =================================================================
  Total params: 19,052,397
  Trainable params: 19,052,397
  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 [==============================] - 26s 2s/step - loss: 4.5654 - accuracy: 0.5596 - val_loss: 0.1747 - val_accuracy: 0.9256
     Epoch 2/10
     14/14 [==============================] - 27s 2s/step - loss: 0.5489 - accuracy: 0.8349 - val_loss: 0.1706 - val_accuracy: 0.9008
     Epoch 3/10
     14/14 [==============================] - 26s 2s/step - loss: 0.2108 - accuracy: 0.9083 - val_loss: 0.1145 - val_accuracy: 0.9669
     Epoch 4/10
     14/14 [==============================] - 25s 2s/step - loss: 0.1988 - accuracy: 0.9106 - val_loss: 0.1140 - val_accuracy: 0.9669
     Epoch 5/10
     14/14 [==============================] - 24s 2s/step - loss: 0.1875 - accuracy: 0.9083 - val_loss: 0.0900 - val_accuracy: 0.9752
     Epoch 6/10
     14/14 [==============================] - 24s 2s/step - loss: 0.1780 - accuracy: 0.9266 - val_loss: 0.0839 - val_accuracy: 0.9752
     Epoch 7/10
     14/14 [==============================] - 25s 2s/step - loss: 0.1601 - accuracy: 0.9243 - val_loss: 0.0773 - val_accuracy: 0.9752
     Epoch 8/10
     14/14 [==============================] - 25s 2s/step - loss: 0.1696 - accuracy: 0.9151 - val_loss: 0.0679 - val_accuracy: 0.9752
     Epoch 9/10
     14/14 [==============================] - 24s 2s/step - loss: 0.1766 - accuracy: 0.9335 - val_loss: 0.1377 - val_accuracy: 0.9504
     Epoch 10/10
     14/14 [==============================] - 26s 2s/step - loss: 0.1675 - accuracy: 0.9243 - val_loss: 0.0939 - val_accuracy: 0.9752
     <keras.callbacks.History at 0x7f111d754c90>
```