

Project Development Phase
Model Performance Test

Date	10 November 2022
Team ID	PNT2022TMID48585
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>
```