Project Development Phase
Model Performance Test

Date	10 November 2022
Team ID	PNT2022TMID34027
Project Name	Project – Emerging methods for early detection of forest fire
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	-	**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 [==========] - 140s 10s/step - loss: 2.4805 - accuracy: 0.6307 - val_loss: 0.9644 - val_accuracy Epoch 2/10 14/14 [==========] - 32s 2s/step - loss: 0.5925 - accuracy: 0.7867 - val_loss: 0.1540 - val_accuracy: Epoch 3/10 14/14 [==========] - 27s 2s/step - loss: 0.2832 - accuracy: 0.8578 - val_loss: 0.0988 - val_accuracy: Epoch 4/10 14/14 [==========] - 26s 2s/step - loss: 0.2280 - accuracy: 0.8922 - val_loss: 0.0923 - val_accuracy: Epoch 5/10 14/14 [==========] - 27s 2s/step - loss: 0.2053 - accuracy: 0.9060 - val_loss: 0.0847 - val_accuracy: Epoch 6/10 14/14 [==========] - 26s 2s/step - loss: 0.2059 - accuracy: 0.9128 - val_loss: 0.0771 - val_accuracy: Epoch 7/10 14/14 [==========] - 28s 2s/step - loss: 0.1643 - accuracy: 0.9450 - val_loss: 0.0727 - val_accuracy: Epoch 8/10 14/14 [==========] - 29s 2s/step - loss: 0.1560 - accuracy: 0.9266 - val_loss: 0.0857 - val_accuracy: Epoch 9/10 14/14 [==========] - 26s 2s/step - loss: 0.1683 - accuracy: 0.9289 - val_loss: 0.0980 - val_accuracy: Epoch 10/10 14/14 [==========] - 28s 2s/step - loss: 0.1716 - accuracy: 0.9266 - val_loss: 0.0932 - val_accuracy: <keras.callbacks.History at 0x7f00be91aad0>

2.	Accuracy	Training Accuracy -
		
		Validation Accuracy -
			`[ ] model.save("forest.h5")`
			Predictions
			`[ ] #import load model from keras.model`
			`from keras.models import load_model`
			`#import image from keras`
			`from tensorflow.keras.preprocessing import image`
			`import numpy as np`
			`#import cv2`
			`import cv2`
			`#load the saved model`
			`model=load_model('forest.h5')`
			`img=image.load_img('/content/drive/MyDrive/drive/dataset/Dataset/Dataset/test_set/forest/0.48007200_1`
			`x=image.img_to_array(img)`
			`res=cv2.resize(x,dsize=(128,128),interpolation=cv2.INTER_CUBIC)`
			`#expand the image shape`
			`x=np.expand_dims(res,axis=0)`
			`[ ] pred=model.predict(x)`
			1/1 [==========] - 0s 355ms/step

3.	Confidence Score (Only Yolo Projects)	Class Detected - Confidence Score -	