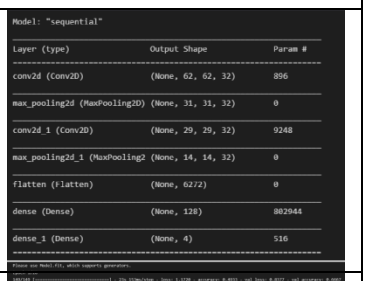
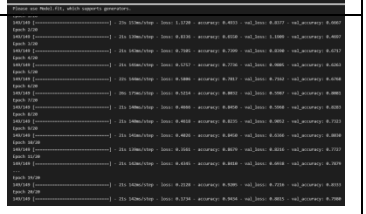
ProjectDevelopmentPhase
ModelPerformanceTest

Date	19 November2022
Team ID	PNT2022TMID54341
ProjectName	Natural Disaster Intensity Analysis andClassificationusingArtificial Intelligence
MaximumMarks	10Marks

ModelPerformanceTesting:

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

S.No.	Parameter	Values	Screenshot
1.	ModelSummary	Totalparams:813,604 Trainableparams:813,604 Non-trainableparams:0	
2.	Accuracy	Training Accuracy – 94.3%ValidationAccuracy- 83.33%	

ModelSummary:

```
Model: "sequential"
_________________________________________________________________
Layer (type)                 Output Shape              Param #
=================================================================
conv2d (Conv2D)              (None, 62, 62, 32)        896
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max_pooling2d (MaxPooling2D) (None, 31, 31, 32)        0
_________________________________________________________________
conv2d_1 (Conv2D)            (None, 29, 29, 32)        9248
_________________________________________________________________
max_pooling2d_1 (MaxPooling2 (None, 14, 14, 32)        0
_________________________________________________________________
flatten (Flatten)            (None, 6272)              0
_________________________________________________________________
dense (Dense)                (None, 128)               802944
_________________________________________________________________
dense_1 (Dense)              (None, 4)                 516
=================================================================
```

Accuracy:

```
Please use Model.fit, which supports generators.
Epoch 1/20
149/149 [==============================] - 23s 153ms/step - loss: 1.1720 - accuracy: 0.4933 - val_loss: 0.8377 - val_accuracy: 0.6667
Epoch 2/20
149/149 [==============================] - 21s 139ms/step - loss: 0.8336 - accuracy: 0.6550 - val_loss: 1.1909 - val_accuracy: 0.4697
Epoch 3/20
149/149 [==============================] - 21s 143ms/step - loss: 0.7105 - accuracy: 0.7399 - val_loss: 0.8390 - val_accuracy: 0.6717
Epoch 4/20
149/149 [==============================] - 21s 141ms/step - loss: 0.5757 - accuracy: 0.7736 - val_loss: 0.9805 - val_accuracy: 0.6263
Epoch 5/20
149/149 [==============================] - 22s 144ms/step - loss: 0.5806 - accuracy: 0.7817 - val_loss: 0.7162 - val_accuracy: 0.6768
Epoch 6/20
149/149 [==============================] - 26s 175ms/step - loss: 0.5214 - accuracy: 0.8032 - val_loss: 0.5987 - val_accuracy: 0.8081
Epoch 7/20
149/149 [==============================] - 21s 140ms/step - loss: 0.4666 - accuracy: 0.8450 - val_loss: 0.5968 - val_accuracy: 0.8283
Epoch 8/20
149/149 [==============================] - 21s 140ms/step - loss: 0.4618 - accuracy: 0.8235 - val_loss: 0.9052 - val_accuracy: 0.7323
Epoch 9/20
149/149 [==============================] - 21s 141ms/step - loss: 0.4026 - accuracy: 0.8450 - val_loss: 0.6366 - val_accuracy: 0.8030
Epoch 10/20
149/149 [==============================] - 21s 139ms/step - loss: 0.3561 - accuracy: 0.8679 - val_loss: 0.8216 - val_accuracy: 0.7727
Epoch 11/20
149/149 [==============================] - 21s 142ms/step - loss: 0.4345 - accuracy: 0.8410 - val_loss: 0.6938 - val_accuracy: 0.7879
...
Epoch 19/20
149/149 [==============================] - 21s 142ms/step - loss: 0.2128 - accuracy: 0.9205 - val_loss: 0.7216 - val_accuracy: 0.8333
Epoch 20/20
149/149 [==============================] - 21s 142ms/step - loss: 0.1734 - accuracy: 0.9434 - val_loss: 0.8815 - val_accuracy: 0.7980
```