

Project Development Phase Model Performance Test

Date	19 November2022
Team ID	PNT2022TMID46941
Project Name	Natural Disaster Intensity Analysis And Classification using Artificial Intelligence
Maximum Marks	10Marks

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:813,604 Trainable params:813,604 Non-trainableparams:0	<pre> Model: "sequential" Layer (type) Output Shape Param # ----- conv2d (conv2D) (None, 62, 62, 32) 896 max_pooling2d (MaxPooling2D) (None, 31, 31, 32) 0 conv2d_1 (conv2D) (None, 29, 29, 32) 9248 max_pooling2d_1 (MaxPooling2D) (None, 14, 14, 32) 0 flatten (flatten) (None, 6272) 0 dense (Dense) (None, 128) 882944 dense_1 (Dense) (None, 4) 516 </pre>
2.	Accuracy	Training Accuracy - 94.3%Validation Accuracy- 83.33%	<pre> Epoch 1/10: 100% 10s - loss: 1.1200 - accuracy: 0.8000 - val_loss: 0.8000 - val_accuracy: 0.8000 Epoch 2/10: 100% 10s - loss: 0.8100 - accuracy: 0.8100 - val_loss: 0.8100 - val_accuracy: 0.8100 Epoch 3/10: 100% 10s - loss: 0.7100 - accuracy: 0.7100 - val_loss: 0.7100 - val_accuracy: 0.7100 Epoch 4/10: 100% 10s - loss: 0.5100 - accuracy: 0.5100 - val_loss: 0.5100 - val_accuracy: 0.5100 Epoch 5/10: 100% 10s - loss: 0.4100 - accuracy: 0.4100 - val_loss: 0.4100 - val_accuracy: 0.4100 Epoch 6/10: 100% 10s - loss: 0.3100 - accuracy: 0.3100 - val_loss: 0.3100 - val_accuracy: 0.3100 Epoch 7/10: 100% 10s - loss: 0.2100 - accuracy: 0.2100 - val_loss: 0.2100 - val_accuracy: 0.2100 Epoch 8/10: 100% 10s - loss: 0.1100 - accuracy: 0.1100 - val_loss: 0.1100 - val_accuracy: 0.1100 Epoch 9/10: 100% 10s - loss: 0.0100 - accuracy: 0.0100 - val_loss: 0.0100 - val_accuracy: 0.0100 Epoch 10/10: 100% 10s - loss: 0.0100 - accuracy: 0.0100 - val_loss: 0.0100 - val_accuracy: 0.0100 </pre>

Model Summary:

Model: "sequential"

Layer (type)	Output Shape	Param #
conv2d (Conv2D)	(None, 62, 62, 32)	896
max_pooling2d (MaxPooling2D)	(None, 31, 31, 32)	0
conv2d_1 (Conv2D)	(None, 29, 29, 32)	9248
max_pooling2d_1 (MaxPooling2D)	(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