

Project Development Phase Model Performance Test

Date	10 November 2022
Team ID	PNT2022TMID35991
Project Name	Project - AI-Based Localization And Classification Of Skin Disease With Erythema
Maximum Marks	10 Marks

Model Performance Testing:

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

S.No.	Parameter	Values	Screenshot
1.	Model Summary	-	<pre> Layer (type) Output Shape Param # Connected to ----- input_1 (InputLayer) (None, None, None, 3 0) 0 input_1[0][0] conv2d_1 (Conv2D) (None, None, None, 3 864 0) 864 input_1[0][0] batch_normalization_1 (BatchNor (None, None, None, 3 128 0) 128 conv2d_1[0][0] leaky_re_lu_1 (LeakyReLU) (None, None, None, 3 0) 0 batch_normalization_1[0][0] zero_padding2d_1 (ZeroPadding2D (None, None, None, 3 0) 0 leaky_re_lu_1[0][0] conv2d_2 (Conv2D) (None, None, None, 6 18432 0) 18432 zero_padding2d_1[0][0] batch_normalization_2 (BatchNor (None, None, None, 6 256 0) 256 conv2d_2[0][0] leaky_re_lu_2 (LeakyReLU) (None, None, None, 6 0) 0 batch_normalization_2[0][0] conv2d_3 (Conv2D) (None, None, None, 3 2848 0) 2848 leaky_re_lu_2[0][0] batch_normalization_3 (BatchNor (None, None, None, 3 128 0) 128 conv2d_3[0][0] leaky_re_lu_3 (LeakyReLU) (None, None, None, 3 0) 0 batch_normalization_3[0][0] conv2d_4 (Conv2D) (None, None, None, 6 18432 0) 18432 leaky_re_lu_3[0][0] conv2d_5 (Conv2D) (None, None, None, 1 4718592 0) 4718592 leaky_re_lu_4[0][0] conv2d_6 (Conv2D) (None, None, None, 5 1179648 0) 1179648 leaky_re_lu_5[0][0] conv2d_7 (Conv2D) (None, None, None, 2 294912 0) 294912 leaky_re_lu_6[0][0] batch_normalization_5 (BatchNor (None, None, None, 1 4896 0) 4896 conv2d_7[0][0] batch_normalization_6 (BatchNor (None, None, None, 5 2848 0) 2848 conv2d_8[0][0] batch_normalization_7 (BatchNor (None, None, None, 2 1824 0) 1824 conv2d_9[0][0] leaky_re_lu_5 (LeakyReLU) (None, None, None, 1 0) 0 batch_normalization_5[0][0] leaky_re_lu_6 (LeakyReLU) (None, None, None, 5 0) 0 batch_normalization_6[0][0] leaky_re_lu_7 (LeakyReLU) (None, None, None, 2 0) 0 batch_normalization_7[0][0] conv2d_8 (Conv2D) (None, None, None, 2 261375 0) 261375 leaky_re_lu_5[0][0] conv2d_9 (Conv2D) (None, None, None, 2 138815 0) 138815 leaky_re_lu_6[0][0] conv2d_10 (Conv2D) (None, None, None, 2 65535 0) 65535 leaky_re_lu_7[0][0] Total params: 62,001,757 Trainable params: 61,949,149 Non-trainable params: 52,608 None Saved Keras model to yolo.h5 Read 62001757 of 62001757.0 from Darknet weights. </pre>

2.	Accuracy	Training Accuracy - Validation Accuracy -	<div>Training Accuracy</div> <table><tr><th></th><th>precision</th><th>recall</th><th>f1-score</th><th>support</th></tr><tr><td>0</td><td>1.00</td><td>1.00</td><td>1.00</td><td>7</td></tr><tr><td>1</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>2</td><td>1.00</td><td>1.00</td><td>1.00</td><td>3</td></tr><tr><td>accuracy</td><td></td><td></td><td>1.00</td><td>11</td></tr><tr><td>macro avg</td><td>1.00</td><td>1.00</td><td>1.00</td><td>11</td></tr><tr><td>weighted avg</td><td>1.00</td><td>1.00</td><td>1.00</td><td>11</td></tr></table> <div>Testing Accuracy</div> <table><tr><th></th><th>precision</th><th>recall</th><th>f1-score</th><th>support</th></tr><tr><td>0</td><td>1.00</td><td>1.00</td><td>1.00</td><td>7</td></tr><tr><td>1</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>2</td><td>1.00</td><td>1.00</td><td>1.00</td><td>3</td></tr><tr><td>accuracy</td><td></td><td></td><td>1.00</td><td>11</td></tr><tr><td>macro avg</td><td>1.00</td><td>1.00</td><td>1.00</td><td>11</td></tr><tr><td>weighted avg</td><td>1.00</td><td>1.00</td><td>1.00</td><td>11</td></tr></table> <div>Losses:</div> <div><p>Loss per Epoch</p><table><caption>Loss per Epoch Data</caption><tr><th>Epoch</th><th>Training Loss</th><th>Validation Loss</th></tr><tr><td>0</td><td>5500</td><td>3200</td></tr><tr><td>1</td><td>500</td><td>300</td></tr><tr><td>2</td><td>200</td><td>100</td></tr><tr><td>3</td><td>100</td><td>50</td></tr><tr><td>4</td><td>50</td><td>20</td></tr><tr><td>5</td><td>20</td><td>10</td></tr><tr><td>10</td><td>10</td><td>5</td></tr><tr><td>20</td><td>5</td><td>2</td></tr><tr><td>30</td><td>2</td><td>1</td></tr><tr><td>40</td><td>1</td><td>0.5</td></tr><tr><td>50</td><td>0.5</td><td>0.2</td></tr></table></div>		precision	recall	f1-score	support	0	1.00	1.00	1.00	7	1	1.00	1.00	1.00	1	2	1.00	1.00	1.00	3	accuracy			1.00	11	macro avg	1.00	1.00	1.00	11	weighted avg	1.00	1.00	1.00	11		precision	recall	f1-score	support	0	1.00	1.00	1.00	7	1	1.00	1.00	1.00	1	2	1.00	1.00	1.00	3	accuracy			1.00	11	macro avg	1.00	1.00	1.00	11	weighted avg	1.00	1.00	1.00	11	Epoch	Training Loss	Validation Loss	0	5500	3200	1	500	300	2	200	100	3	100	50	4	50	20	5	20	10	10	10	5	20	5	2	30	2	1	40	1	0.5	50	0.5	0.2
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3.	Confidence Score (Only Yolo Projects)	Class Detected - Confidence Score -	<table><caption>Avg Confidence Scores</caption><tr><th>Class</th><th>Avg Confidence Score</th></tr><tr><td>Psoriasis</td><td>0.58</td></tr><tr><td>Melanoma</td><td>0.73</td></tr><tr><td>Rosacea</td><td>0.47</td></tr></table>	Class	Avg Confidence Score	Psoriasis	0.58	Melanoma	0.73	Rosacea	0.47																																																																																																		
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