

## Project Development Phase Model Performance Test

Date	09 November 2022
Team ID	592396
Project Name	Project –Potato Disease Classification
Maximum Marks	10 Marks

### Model Performance Testing:

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

S. N o.	Parameter	Values	Screenshot																																																																																																			
1.	Model Summary	<div>Model: "sequential_2"</div> <table><thead><tr><th>Layer (type)</th><th>Output Shape</th><th>Param #</th></tr></thead><tbody><tr><td>sequential (Sequential)</td><td>(32, 256, 256, 3)</td><td>0</td></tr><tr><td>conv2d (Conv2D)</td><td>(32, 254, 254, 32)</td><td>896</td></tr><tr><td>max_pooling2d (MaxPooling2D)</td><td>(32, 127, 127, 32)</td><td>0</td></tr><tr><td>conv2d_1 (Conv2D)</td><td>(32, 125, 125, 64)</td><td>18496</td></tr><tr><td>max_pooling2d_1 (MaxPooling2D)</td><td>(32, 62, 62, 64)</td><td>0</td></tr><tr><td>conv2d_2 (Conv2D)</td><td>(32, 60, 60, 64)</td><td>36928</td></tr><tr><td>max_pooling2d_2 (MaxPooling2D)</td><td>(32, 30, 30, 64)</td><td>0</td></tr><tr><td>conv2d_3 (Conv2D)</td><td>(32, 28, 28, 64)</td><td>36928</td></tr><tr><td>max_pooling2d_3 (MaxPooling2D)</td><td>(32, 14, 14, 64)</td><td>0</td></tr><tr><td>conv2d_4 (Conv2D)</td><td>(32, 12, 12, 64)</td><td>36928</td></tr><tr><td>max_pooling2d_4 (MaxPooling2D)</td><td>(32, 6, 6, 64)</td><td>0</td></tr><tr><td>conv2d_5 (Conv2D)</td><td>(32, 4, 4, 64)</td><td>36928</td></tr><tr><td>max_pooling2d_5 (MaxPooling2D)</td><td>(32, 2, 2, 64)</td><td>0</td></tr><tr><td>flatten (Flatten)</td><td>(32, 256)</td><td>0</td></tr><tr><td>dense (Dense)</td><td>(32, 64)</td><td>16448</td></tr></tbody></table>	Layer (type)	Output Shape	Param #	sequential (Sequential)	(32, 256, 256, 3)	0	conv2d (Conv2D)	(32, 254, 254, 32)	896	max_pooling2d (MaxPooling2D)	(32, 127, 127, 32)	0	conv2d_1 (Conv2D)	(32, 125, 125, 64)	18496	max_pooling2d_1 (MaxPooling2D)	(32, 62, 62, 64)	0	conv2d_2 (Conv2D)	(32, 60, 60, 64)	36928	max_pooling2d_2 (MaxPooling2D)	(32, 30, 30, 64)	0	conv2d_3 (Conv2D)	(32, 28, 28, 64)	36928	max_pooling2d_3 (MaxPooling2D)	(32, 14, 14, 64)	0	conv2d_4 (Conv2D)	(32, 12, 12, 64)	36928	max_pooling2d_4 (MaxPooling2D)	(32, 6, 6, 64)	0	conv2d_5 (Conv2D)	(32, 4, 4, 64)	36928	max_pooling2d_5 (MaxPooling2D)	(32, 2, 2, 64)	0	flatten (Flatten)	(32, 256)	0	dense (Dense)	(32, 64)	16448	<div>Model: "sequential_2"</div> <table><thead><tr><th>Layer (type)</th><th>Output Shape</th><th>Param #</th></tr></thead><tbody><tr><td>sequential (Sequential)</td><td>(32, 256, 256, 3)</td><td>0</td></tr><tr><td>conv2d (Conv2D)</td><td>(32, 254, 254, 32)</td><td>896</td></tr><tr><td>max_pooling2d (MaxPooling2D)</td><td>(32, 127, 127, 32)</td><td>0</td></tr><tr><td>conv2d_1 (Conv2D)</td><td>(32, 125, 125, 64)</td><td>18496</td></tr><tr><td>max_pooling2d_1 (MaxPooling2D)</td><td>(32, 62, 62, 64)</td><td>0</td></tr><tr><td>conv2d_2 (Conv2D)</td><td>(32, 60, 60, 64)</td><td>36928</td></tr><tr><td>max_pooling2d_2 (MaxPooling2D)</td><td>(32, 30, 30, 64)</td><td>0</td></tr><tr><td>conv2d_3 (Conv2D)</td><td>(32, 28, 28, 64)</td><td>36928</td></tr><tr><td>max_pooling2d_3 (MaxPooling2D)</td><td>(32, 14, 14, 64)</td><td>0</td></tr><tr><td>conv2d_4 (Conv2D)</td><td>(32, 12, 12, 64)</td><td>36928</td></tr><tr><td>max_pooling2d_4 (MaxPooling2D)</td><td>(32, 6, 6, 64)</td><td>0</td></tr><tr><td>conv2d_5 (Conv2D)</td><td>(32, 4, 4, 64)</td><td>36928</td></tr><tr><td>max_pooling2d_5 (MaxPooling2D)</td><td>(32, 2, 2, 64)</td><td>0</td></tr><tr><td>flatten (Flatten)</td><td>(32, 256)</td><td>0</td></tr><tr><td>dense (Dense)</td><td>(32, 64)</td><td>16448</td></tr><tr><td>dense_1 (Dense)</td><td>(32, 3)</td><td>195</td></tr></tbody></table>	Layer (type)	Output Shape	Param #	sequential (Sequential)	(32, 256, 256, 3)	0	conv2d (Conv2D)	(32, 254, 254, 32)	896	max_pooling2d (MaxPooling2D)	(32, 127, 127, 32)	0	conv2d_1 (Conv2D)	(32, 125, 125, 64)	18496	max_pooling2d_1 (MaxPooling2D)	(32, 62, 62, 64)	0	conv2d_2 (Conv2D)	(32, 60, 60, 64)	36928	max_pooling2d_2 (MaxPooling2D)	(32, 30, 30, 64)	0	conv2d_3 (Conv2D)	(32, 28, 28, 64)	36928	max_pooling2d_3 (MaxPooling2D)	(32, 14, 14, 64)	0	conv2d_4 (Conv2D)	(32, 12, 12, 64)	36928	max_pooling2d_4 (MaxPooling2D)	(32, 6, 6, 64)	0	conv2d_5 (Conv2D)	(32, 4, 4, 64)	36928	max_pooling2d_5 (MaxPooling2D)	(32, 2, 2, 64)	0	flatten (Flatten)	(32, 256)	0	dense (Dense)	(32, 64)	16448	dense_1 (Dense)	(32, 3)	195
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	Accuracy	Training Accuracy – 91.67  Validation Accuracy - 88.02	Epoch 1/10 54/54 [=====] - 228s 4s/step - loss: 0.9325 - accuracy: 0.4566 - val_loss: 0.8695 - val_accuracy: 0.4896 Epoch 2/10 54/54 [=====] - 214s 4s/step - loss: 0.8255 - accuracy: 0.5752 - val_loss: 0.6760 - val_accuracy: 0.6719 Epoch 3/10 54/54 [=====] - 219s 4s/step - loss: 0.6091 - accuracy: 0.7367 - val_loss: 0.6742 - val_accuracy: 0.7188 Epoch 4/10 54/54 [=====] - 222s 4s/step - loss: 0.5864 - accuracy: 0.7569 - val_loss: 0.5244 - val_accuracy: 0.7656 Epoch 5/10 54/54 [=====] - 224s 4s/step - loss: 0.4395 - accuracy: 0.8160 - val_loss: 0.3923 - val_accuracy: 0.8281 Epoch 6/10 54/54 [=====] - 224s 4s/step - loss: 0.3848 - accuracy: 0.8356 - val_loss: 0.3557 - val_accuracy: 0.8125 Epoch 7/10 54/54 [=====] - 224s 4s/step - loss: 0.3933 - accuracy: 0.8322 - val_loss: 0.3899 - val_accuracy: 0.8333 Epoch 8/10 54/54 [=====] - 222s 4s/step - loss: 0.2709 - accuracy: 0.8987 - val_loss: 0.3135 - val_accuracy: 0.8646 Epoch 9/10 54/54 [=====] - 217s 4s/step - loss: 0.2425 - accuracy: 0.9086 - val_loss: 0.3119 - val_accuracy: 0.8906 Epoch 10/10 54/54 [=====] - 218s 4s/step - loss: 0.2525 - accuracy: 0.9167 - val_loss: 0.3327 - val_accuracy: 0.8802