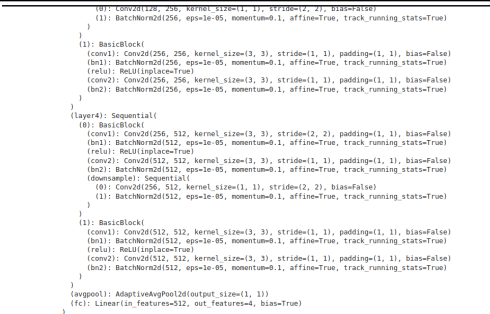
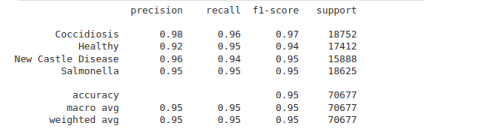
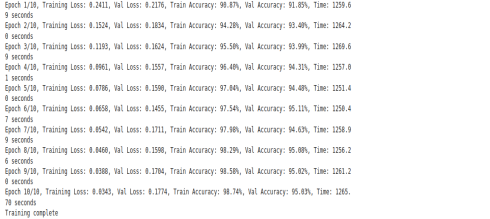


Project Development Phase Model Performance Test

Date	26 June 2025
Team ID	LTVIP2025TMID44653
Project Name	Transfer Learning-Based Classification of Poultry Diseases for Enhanced Health Management
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	<ul style="list-style-type: none">- Architecture: ResNet-18 (pretrained)- Last Layer Modified: Final fully connected layer adapted to 4 classes (Coccidiosis, Healthy, New Castle Disease, Salmonella)- Optimizer: Adam- Loss Function: CrossEntropyLoss- Epochs: 10																																									
2.	Accuracy	<ul style="list-style-type: none">- Best Training Accuracy: 98.74% (Epoch 10)- Best Validation Accuracy: 95.11% (Epoch 6)- Final Test Accuracy: 95.12%	 <table><thead><tr><th></th><th>precision</th><th>recall</th><th>f1-score</th><th>support</th></tr></thead><tbody><tr><td>Coccidiosis</td><td>0.98</td><td>0.96</td><td>0.97</td><td>18752</td></tr><tr><td>Healthy</td><td>0.92</td><td>0.95</td><td>0.94</td><td>17412</td></tr><tr><td>New Castle Disease</td><td>0.96</td><td>0.94</td><td>0.95</td><td>15888</td></tr><tr><td>Salmonella</td><td>0.95</td><td>0.95</td><td>0.95</td><td>18625</td></tr><tr><td>accuracy</td><td></td><td></td><td>0.95</td><td>76677</td></tr><tr><td>macro avg</td><td>0.95</td><td>0.95</td><td>0.95</td><td>76677</td></tr><tr><td>weighted avg</td><td>0.95</td><td>0.95</td><td>0.95</td><td>76677</td></tr></tbody></table>		precision	recall	f1-score	support	Coccidiosis	0.98	0.96	0.97	18752	Healthy	0.92	0.95	0.94	17412	New Castle Disease	0.96	0.94	0.95	15888	Salmonella	0.95	0.95	0.95	18625	accuracy			0.95	76677	macro avg	0.95	0.95	0.95	76677	weighted avg	0.95	0.95	0.95	76677
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3.	Fine Tunning Result(if Done)	<ul style="list-style-type: none">- Fine-tuning was applied over 10 epochs- Accuracy improved from 90.87% → 98.74% on training set- Validation improved to 95.11% (at Epoch 6)- Final f1-score: 0.95 (macro avg)	 <pre>Epoch 1/10, Training Loss: 0.2411, Val. Loss: 0.2176, Train Accuracy: 90.87%, Val. Accuracy: 91.89%, Time: 1259.6 9 seconds Epoch 2/10, Training Loss: 0.1534, Val. Loss: 0.1834, Train Accuracy: 94.28%, Val. Accuracy: 93.48%, Time: 1264.2 8 seconds Epoch 3/10, Training Loss: 0.1185, Val. Loss: 0.1624, Train Accuracy: 95.59%, Val. Accuracy: 95.99%, Time: 1269.6 9 seconds Epoch 4/10, Training Loss: 0.0961, Val. Loss: 0.1557, Train Accuracy: 96.44%, Val. Accuracy: 94.32%, Time: 1257.8 1 seconds Epoch 5/10, Training Loss: 0.0786, Val. Loss: 0.1590, Train Accuracy: 97.84%, Val. Accuracy: 94.48%, Time: 1251.4 8 seconds Epoch 6/10, Training Loss: 0.0658, Val. Loss: 0.1455, Train Accuracy: 97.54%, Val. Accuracy: 95.12%, Time: 1258.4 7 seconds Epoch 7/10, Training Loss: 0.0542, Val. Loss: 0.1711, Train Accuracy: 97.98%, Val. Accuracy: 94.63%, Time: 1258.9 9 seconds Epoch 8/10, Training Loss: 0.0448, Val. Loss: 0.1590, Train Accuracy: 98.29%, Val. Accuracy: 95.08%, Time: 1256.2 8 seconds Epoch 9/10, Training Loss: 0.0388, Val. Loss: 0.1784, Train Accuracy: 98.58%, Val. Accuracy: 95.62%, Time: 1261.2 8 seconds Epoch 10/10, Training Loss: 0.0343, Val. Loss: 0.1774, Train Accuracy: 98.74%, Val. Accuracy: 95.63%, Time: 1265. 78 seconds Training complete</pre>																																								