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:

S.No.	Parameter	Values	Screenshot
1.	Metrics	**Classification Model:** **Confusion Matrix** - 4-class matrix (Coccidiosis, Healthy, New Castle Disease, Salmonella) **Accuray Score**- 95.12%& **Classification Report** - Precision = 0.95 Recall = 0.95 F1-Score = 0.95 (macro avg) Total samples: 70,677	

2.	Tune the Model	Hyperparameter Tuning - Validation Method -	Epoch 1/10, Training Loss: 0.2411, Val Loss: 0.2176, Train Accuracy: 90.87%, Val Accuracy: 91.85%, Time: 1259.69 seconds Epoch 2/10, Training Loss: 0.1524, Val Loss: 0.1834, Train Accuracy: 94.28%, Val Accuracy: 93.40%, Time: 1264.20 seconds Epoch 3/10, Training Loss: 0.1193, Val Loss: 0.1624, Train Accuracy: 95.50%, Val Accuracy: 93.99%, Time: 1269.69 seconds Epoch 4/10, Training Loss: 0.0961, Val Loss: 0.1557, Train Accuracy: 96.40%, Val Accuracy: 94.31%, Time: 1257.01 seconds Epoch 5/10, Training Loss: 0.0786, Val Loss: 0.1590, Train Accuracy: 97.04%, Val Accuracy: 94.48%, Time: 1251.40 seconds Epoch 6/10, Training Loss: 0.0658, Val Loss: 0.1455, Train Accuracy: 97.54%, Val Accuracy: 95.11%, Time: 1250.47 seconds Epoch 7/10, Training Loss: 0.0542, Val Loss: 0.1711, Train Accuracy: 97.98%, Val Accuracy: 94.63%, Time: 1258.99 seconds Epoch 8/10, Training Loss: 0.0460, Val Loss: 0.1598, Train Accuracy: 98.29%, Val Accuracy: 95.08%, Time: 1256.26 seconds Epoch 9/10, Training Loss: 0.0388, Val Loss: 0.1704, Train Accuracy: 98.58%, Val Accuracy: 95.02%, Time: 1261.20 seconds Epoch 10/10, Training Loss: 0.0343, Val Loss: 0.1774, Train Accuracy: 98.74%, Val Accuracy: 95.03%, Time: 1265.70 seconds Training complete