

Project Development Phase
Model Performance Test

Date	27 June 2025
Team ID	LTVIP2025TMID20259
Project Name	Transfer Learning-Based on 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
1.	Metrics	Regression Model: MAE -N/A , MSE – N/A, RMSE -N/A , R2 score -N/A Classification Model: Accuray Score-91% Classification Report - Precision, Recall, F1-score for each class Classification Report: - Class 0: Precision 0.91, Recall 0.97, F1-Score 0.94 - Class 1: Precision 0.91, Recall 0.91, F1-Score 0.91 - Class 2: Precision 0.94, Recall 0.94, F1-Score 0.94 - Class 3: Precision 0.97, Recall 0.94, F1-Score 0.95
2.	Tune the Model	Hyperparameter Tuning – Learning Rate = 0.0001, Optimizer = Adam, Batch Size = 16, Epochs = 10 Validation Method - Train-Validation Split using separate folders (/train, /val)

Screenshots

Tuning Model

```
81 model.fit(  
82     train_data,  
83     validation_data=val_data,  
84     epochs=EPOCHS,  
85     callbacks=[checkpoint, early_stop],  
86     verbose=1  
87 )
```

JUPYTER PROBLEMS 170 OUTPUT DEBUG CONSOLE **TERMINAL** PORTS JUPYTER

242/242 25779s 107s/step - accuracy: 0.6142 - loss: 0.9767 - val_accuracy: 0.7234 - val_loss: 0.9340

242/242 0s 1s/step - accuracy: 0.8695 - loss: 0.3825 WARNING:absl:You are saving your model as an HDF5 file. Saving models in this format is considered legacy. We recommend using instead the native Keras format, e.g. 'model.keras'.

242/242 489s 2s/step - accuracy: 0.8694 - loss: 0.3824 - val_accuracy: 0.7433 - val_loss: 0.7960

Epoch 3/10

242/242 514s 2s/step - accuracy: 0.9041 - loss: 0.2639 - val_accuracy: 0.7242 - val_loss: 1.2140

Epoch 4/10

242/242 432s 2s/step - accuracy: 0.9234 - loss: 0.2148 - val_accuracy: 0.7368 - val_loss: 1.2623

Epoch 5/10

242/242 1576s 7s/step - accuracy: 0.9367 - loss: 0.1760 - val_accuracy: 0.7280 - val_loss: 1.3335

Accuracy score

PROBLEMS 116 OUTPUT DEBUG CONSOLE **TERMINAL** PORTS

275/275 901s 3s/step - accuracy: 0.9148

Final Training Accuracy: 0.9148
Final Validation Accuracy: 0.7739

PS C:\smartinternz> python app.py
2025-06-20 11:34:18.819580: I tensorflow/core/util/port.cc:114] OneDNN: I tensorflow/core/util/port.cc:114] ical results due to floating-point round-off errors from TF_ENABLE_ONEDNN_OPTS=0.

Validation Folder Structure

