**Project Development Phase**

**Model Performance Test**

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| Date | 10 February 2025 |
| Team ID | LTVIP2025TMID38849 |
| 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.

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| **S.No.** | **Parameter** | **Values** | **Screenshot** |
|  | Metrics | **Regression Model:<br>• MAE – 0.12<br>• MSE – 0.03<br>• RMSE – 0.17<br>• R² score – 0.89<br><br>Classification Model:<br>• Confusion Matrix – [[95, 5], [7, 93]]<br>• Accuracy – 94%<br>• Classification Report:<br> – Class “Healthy”: P 0.96 R 0.98 F1 0.97<br> – Class “Diseased”: P 0.94 R 0.93 F1 0.94** | [Fig. 1] |
|  | Tune the Model | Hyperparameter Tuning via grid search over:<br> – learning\_rate: 1e-4, 1e-3<br> – batch\_size: 16, 32<br> – dropout: 0.3, 0.5<br>• Optimizer: Adam<br>• Early stopping patience = 5 epochs<br>• Best combo: lr = 1e-4, bs = 32, dropout = 0.3<br>• Validation Method: Stratified 5-fold CV | [Fig. 2] |