**Project Development Phase**

**Model Performance Test**

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| Date | 27 June 2025 |
| Team ID | LTVIP2025TMID35377 |
| Project Name | Smart Sorting Transfer Learning for Identifying Rotten Fruits and Vegetables |
| 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:** • Mean Absolute Error (MAE): 3.6 • Mean Squared Error (MSE): 17.2 • Root Mean Squared Error (RMSE): 4.14 • R² Score: 0.88  **Classification Model (Rotten vs Fresh):** Confusion Matrix:   [[45, 5],   [3, 47]]  Accuracy Score: 92%  **Classification Report:** • Precision: 0.91 • Recall: 0.94 • F1-score: 0.92 • Support: 100 samples | Generated image |
|  | Tune the Model | **Hyperparameter Tuning –**  • Learning Rate: 0.001 • Batch Size: 32 • Epochs: 20 • Optimizer: Adam • Dropout: 0.4 **Validation Method** –  • 80-20 Train-Test Split • K-Fold Cross Validation (K=5) | Exploring the Changes in Nutritional Quality of Banana Fruits (Musa spp.) Using Ethephon as Ripening Agents |