Project Development Phase
Model Performance Test

Date	19 February 2026
Team ID	LTVIP2026TMIDS89552
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.

S.No.	Parameter	Values	Screenshot
1	**Metrics**	**Classification Model:** • Accuracy Score – ~80–90% (depending on training)• Classification Report – Includes Precision, Recall, F1-score for all 28 classes	Confusion Matrix
2	**Tune the Model**	**Hyperparameter Tuning:** • Learning Rate adjustment (Adam optimizer) • Number of Frozen Layers modified (last 8 layers unfrozen) • Epoch tuning (10–20 epochs with EarlyStopping) • Batch Size optimization (e.g., 16 / 32) **Validation Method:**• Train–Validation split using flow_from_directory() • Validation Accuracy monitoring • EarlyStopping (monitor='val_accuracy', patience=3)	Before vs After fine-tuning accuracy graph