

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	<p>Classification Model:</p> <ul style="list-style-type: none"> • Accuracy Score – ~80–90% (depending on training) • Classification Report – Includes Precision, Recall, F1-score for all 28 classes 	Confusion Matrix
2	Tune the Model	<p>Hyperparameter Tuning:</p> <ul style="list-style-type: none"> • 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) <p>Validation Method:</p> <ul style="list-style-type: none"> • Train–Validation split using <code>flow_from_directory()</code> • Validation Accuracy monitoring • EarlyStopping (<code>monitor='val_accuracy'</code>, <code>patience=3</code>) 	Before vs After fine-tuning accuracy graph