

**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	<b>Metrics</b>	<b>Classification Model:</b> <ul style="list-style-type: none"><li>• Accuracy Score – ~80–90% (depending on training)</li><li>• Classification Report – Includes Precision, Recall, F1-score for all 28 classes</li></ul>	Confusion Matrix
2	<b>Tune the Model</b>	<b>Hyperparameter Tuning:</b> <ul style="list-style-type: none"><li>• Learning Rate adjustment (Adam optimizer)</li><li>• Number of Frozen Layers modified (last 8 layers unfrozen)</li><li>• Epoch tuning (10–20 epochs with EarlyStopping)</li><li>• Batch Size optimization (e.g., 16 / 32)</li></ul> <b>Validation Method:</b> <ul style="list-style-type: none"><li>• Train–Validation split using <code>flow_from_directory()</code></li><li>• Validation Accuracy monitoring</li><li>• EarlyStopping (monitor='val_accuracy', patience=3)</li></ul>	Before vs After fine-tuning accuracy graph