

**Project Development Phase**  
**Model Performance Test**

Date	19 February 2026
Team ID	LTVIP2026TMIDS83873
Project Name	Smart Sorting Transfer Learning for Identifying Rotten Fruits and Vegetables
Maximum Marks	10 Marks

**Model Performance Testing:**

S.No	Parameter	Values
1	Model Architecture	VGG16 (Transfer Learning)
2	Input Size	224x224x3
3	Dataset	28 Fruit & Vegetable Categories
4	Confusion Matrix	Generated (Fresh vs Rotten)
5	Accuracy Score	92%
6	Precision	91%
7	Recall	92%
8	F1-Score	91%

**Tune the Model :**

**Hyperparameter Tuning:**

- Learning Rate adjusted ( $0.001 \rightarrow 0.0001$ )
- Dropout layer added
- Dense layers fine-tuned

**Validation Method:**

- Train-Test Split (80:20)

- Validation dataset evaluation