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

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| Date | 19 February 2026 |
| Team ID | LTVIP2026TMIDS89552 |
| Project Name | Smart Sorting: Transfer Learning for Identifying Rotten Fruits and Vegetables |
| Maximum Marks | |

**Model Performance Testing:**

Project team shall fill the following information in model performance testing template.

| S.No. | Parameter | Screenshot / Values |
|---|---|---|
| 1 | **Data Rendered** | Dataset contains **28 classes** (Healthy & Rotten categories of fruits and vegetables). Total ~3358 training images and 1120 validation images. Images displayed correctly in training preview and web interface upload section. |
| 2 | **Data Preprocessing** | Images resized to **224×224**. Applied normalization (1./255) for VGG16. Data augmentation used: rotation, zoom, horizontal flip. Categorical encoding for 28 output classes. |
| 3 | **Utilization of Filters** | CNN filters in VGG16 automatically extract features like edges, texture, color patterns, and spoilage spots. Transfer learning used with last 8 layers fine-tuned. |
| 4 | **Calculation Fields Used** | Softmax activation for 28-class classification. Confidence score calculated using np.max(prediction_probs). Accuracy and loss calculated during training. |
| 5 | **Dashboard Design** | Flask-based simple web interface. Features: Image Upload, Prediction Display. |
| 6 | **Story Design** | User flow: Upload Image → Preprocessing → Model Prediction → Display Result . |