

## Project Design Phase Proposed Solution Template

Date	26-06-2025
Team ID	LTVIP2025TMID46028
Project Name	<b>Smart-Sorting-Transfer-Learning-for-Identifying-Rotten-Fruits-and-Vegetables</b>
Maximum Marks	2 Marks

### Proposed Solution for smartsortApp

S. No.	Parameter	Description
1	<b>Problem Statement</b> (Problem to be solved)	Manual sorting of fruits and vegetables is labor-intensive, inaccurate, and leads to increased food waste and labor costs. There's no simple tech-based tool for real-time freshness detection.
2	<b>Idea / Solution Description</b>	Smart Sorting is a deep learning-based web app that allows users to upload an image and get a classification — Fresh or Rotten — using a VGG16 model. It is built using Flask and designed for ease of use in supermarkets, warehouses, or homes.
3	<b>Novelty / Uniqueness</b>	<ul style="list-style-type: none"> <li>- Uses pre-trained AI model (VGG16)</li> <li>- Live prediction from uploaded images</li> <li>- Lightweight Flask web backend</li> <li>- Real-time usability with minimal resources</li> </ul>
4	<b>Social Impact / Customer Satisfaction</b>	Reduces food waste through early detection <ul style="list-style-type: none"> <li>- Improves efficiency in supermarkets and industries</li> <li>- Supports consumer awareness in smart homes</li> </ul>
5	<b>Business Model (Revenue Model)</b>	<ul style="list-style-type: none"> <li>- Open-source educational tool</li> <li>- Future scope: License to supermarkets, agritech companies</li> <li>- Could be integrated with hardware (smart fridge)</li> </ul>
6	<b>Scalability of the Solution</b>	Can be deployed on cloud (Render) <ul style="list-style-type: none"> <li>- Extendable to camera integration, mobile apps</li> <li>- Works across retail, warehouse, and home environments</li> </ul>