Project Design Phase
Proposed Solution Template

Date	27 June 2025
Team ID	LTVIP2025TMID59908
Project Name	Smart Sorting: Transfer Learning for Identifying Rotten Fruits and Vegetables
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in the proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Post-harvest losses due to spoiled produce affect both retailers and consumers. Traditional visual sorting techniques fail to keep up with high volumes and often miss early signs of rot. This project uses transfer learning to build an image-based classification system that distinguishes fresh fruits and vegetables from rotten ones. This automation helps ensure food quality, reduce wastage, and boost consumer trust.
2.	Idea / Solution description	This project proposes an automated image-based classification system using transfer learning to distinguish fresh and rotten fruits and vegetables.
3.	Novelty / Uniqueness	The novelty lies in applying transfer learning with deep learning models to achieve accurate, real-time freshness detection of fruits and vegetables.
4.	Social Impact / Customer Satisfaction	The project reduces food wastage and ensures only fresh produce reaches consumers, promoting public health and environmental sustainability. It boosts customer satisfaction by enhancing trust in product quality and reducing the chances of purchasing spoiled items.
5.	Business Model (Revenue Model)	The business model involves offering the solution as a **subscription-based software service (SaaS)** to supermarkets, food processing units, and logistics companies.
6.	Scalability of the Solution	The solution is highly scalable as it leverages deep learning models that can be deployed on cloud servers or edge devices.