Ideation Phase
Define the Problem Statements
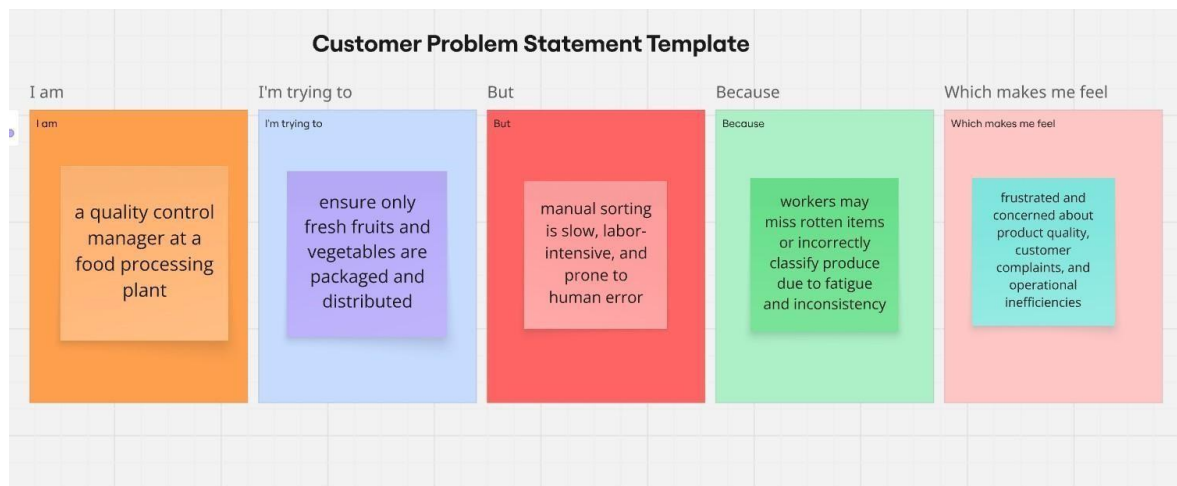
Date	10 February 2026
Team ID	LTVIP2026TMIDS35857
Project Name	Smart Sorting: Transfer Learning for Identifying rotten fruits and vegetables
Maximum Marks	2 Marks

Define Problem Statements (Customer Problem Statement Template):

Rotten fruits and vegetables pose a major challenge in the food industry and households, leading to increased waste, reduced quality, and higher operational costs. Traditional sorting methods rely heavily on manual inspection, which is time-consuming, inconsistent, and prone to human error.

By leveraging transfer learning and computer vision, this project aims to build an automated smart sorting system that accurately identifies and separates rotten produce in real time. This will significantly enhance sorting efficiency, reduce waste, and ensure only fresh produce reaches consumers across industrial, retail, and home settings.

Example:

Customer Problem Statement Template

	I am	I'm trying to	But	Because	Which makes me feel
	a quality control manager at a food processing plant	ensure only fresh fruits and vegetables are packaged and distributed	manual sorting is slow, labor-intensive, and prone to human error	workers may miss rotten items or incorrectly classify produce due to fatigue and inconsistency	frustrated and concerned about product quality, customer complaints, and operational inefficiencies

Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	a quality control manager at a food processing plant	ensure only fresh fruits and vegetables are packaged and distributed	manual sorting is slow, laborintensive, and prone to human error	workers may miss rotten items or incorrectly classify produce due to fatigue and inconsistency	frustrated and concerned about product quality, customer complaints, and operational inefficiencies
PS-2	a supermarket inventory manager	make sure that only fresh produce is placed on shelves	I cannot reliably check the freshness of every item in large shipments	there's no automated system for identifying spoilage at the receiving stage	stressed and dissatisfied, as it can lead to customer dissatisfaction and increased waste

| PS-3 | a tech-savvy homeowner managing my family's grocery consumption | reduce food waste and save money by using all produce before it spoils | I often forget about items in the fridge until it's too late | I don't have real-time alerts or visual monitoring of produce conditions | guilty and wasteful, wishing for a smarter way to manage food freshness at home |