

Ideation Phase

Define the Problem Statements

Date	19 February 2026
Team ID	LTVIP2026TMIDS77295
Project Name	Smart Sorting: Transfer Learning for Identifying Rotten Fruits and Vegetables

Customer Problem Statement Template:

I am	a supermarket quality inspector responsible for checking fruits and vegetables before they are displayed for sale.
I'm trying to	ensure that only fresh and good-quality products reach customers so that the store maintains high standards and customer satisfaction.
But	manually inspecting each fruit and vegetable takes a significant amount of time, especially when handling large quantities daily. It is also difficult to maintain consistent accuracy throughout long working hours.
Because	manual inspection depends completely on human observation, which can vary due to fatigue, lighting conditions, or human error. Small signs of spoilage may sometimes go unnoticed, leading to customer complaints or wastage.
Which makes me feel	stressed and concerned about product quality, store reputation, and potential financial losses due to selling spoiled items or discarding products late.

I am	a farmer or warehouse manager managing bulk storage and distribution of fruits and vegetables.
I'm trying to	minimize food wastage and maintain product quality during storage and transportation to maximize profits and customer trust.
But	sorting fresh and rotten produce manually in large storage areas is time-consuming and inefficient. It becomes even more difficult when dealing with thousands of items daily.
Because	there is no automated and intelligent system available to quickly detect spoilage based on visual patterns like color changes, texture differences, or decay spots. As a result, spoiled products may mix with fresh ones.
Which makes me feel	frustrated and worried about economic losses, reduced shelf life of products, and damage to business reputation.



Example:

Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	I am a supermarket quality inspector responsible for checking fruits and vegetables before they are displayed for sale.	I'm trying to ensure that only fresh and good-quality products reach customers so that the store maintains high standards and customer satisfaction.	But manually inspecting each fruit and vegetable takes a significant amount of time, especially when handling large quantities daily. It is also difficult to maintain consistent accuracy throughout long working hours.	Because manual inspection depends completely on human observation, which can vary due to fatigue, lighting conditions, or human error. Small signs of spoilage may sometimes go unnoticed, leading to customer complaints or wastage.	Which makes me feel stressed and concerned about product quality, store reputation, and potential financial losses due to selling spoiled items or discarding products late.

Problem Statement – 1 (PS-1)

 <p>I am</p>	<p>a supermarket quality inspector</p> <p>ensure high quality of fresh fruits and vegetables reach customers</p>	
<p>I'm trying to</p>	<p>manually inspecting each fruit and vegetable is slow and time-consuming</p>	
<p>But</p> 	<p>human observation leads to missed spoilage due to fatigue and errors</p> <p>human observation leads to missed spoilage due to fatigue and errors</p>	
<p>Which makes me feel</p>	<p>Stressed and concerned about product quality and store reputation</p> 	

Example:

Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-2	I am a farmer or warehouse manager managing bulk storage and distribution of fruits and vegetables.	I'm trying to minimize food wastage and maintain product quality during storage and transportation to maximize profits and customer trust.	But sorting fresh and rotten produce manually in large storage areas is time-consuming and inefficient. It becomes even more difficult when dealing with thousands of items daily.	Because there is no automated and intelligent system available to quickly detect spoilage based on visual patterns like color changes, texture differences, or decay spots. As a result, spoiled products may mix with fresh ones.	Which makes me feel frustrated and worried about economic losses, reduced shelf life of products, and damage to business reputation.

