

Define the Problem Statements

Smart Sorting : Transfer Learning For Identifying Rotten Fruits and Vegetables

Team ID: LTVIP2026TMIDS38627

Customer Problem Statement Template:

In industries like food processing, retail, and even smart homes, identifying and removing rotten fruits and vegetables is a critical but time-consuming and error-prone task when done manually. Traditional methods depend heavily on human inspection, which can be inconsistent and unscalable.

Smart Sorting aims to solve this by using **transfer learning** to automatically detect rotten produce with high accuracy through image recognition. This improves operational efficiency, reduces food waste, and ensures better quality control across the supply chain.

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	Manually checking every item is time consuming, error prone, and inconsistent	Human inspection varies with fatigue and lighting conditions and cannot scale efficiently	Frustrated and concerned about food safety, waste and customer satisfaction
PS-2	A supermarket inventory manager	Quickly remove spoiled produce from the shelves to maintain quality and hygiene	Detecting spoiled items manually in large stock is tedious and inefficient	Spoilage can go unnoticed until customer trust and product arise	Stressed and under pressure to ensure customer complaints or health risks arise

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	Manually checking every item is time-consuming, error-prone, and inconsistent	Human inspection varies with fatigue and lighting conditions and cannot scale efficiently	Frustrated and concerned about food safety, wastage and customer satisfaction