**Ideation Phase**

**Smart Sorting : Transfer Learning For Identifying**

**Rotten Fruits and Vegetables**

**(Define the Problem Statements)**

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| Date | 27 June 2025 |
| Team ID | LTVIP2025TMID59623 |
| Project Name | Smart sorting: transfer Learning For Identifying Rotten Fruits and Vegetables |
| Maximum Marks | 2 Marks |

**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.

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| **Problem Statement (PS)** | **I am (Customer)** | **I’m trying to** | **But** | **Because** | **Which makes me feel** |
| PS-1 | A quailty 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 | Frustated and concerned about food safety,wastage and customer satisfaction |
| PS-2 | A super market 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 |

