

Ideation Phase

Brainstorm & Idea Prioritization Template

Date	30 June 2025
Team ID	LTVIP2025TMID41462
Project Name	Smart Sorting : Transfer Learning For Identifying Rotten Fruits And Vegetables
Maximum Marks	

Objective:

The objective of this project is to develop an intelligent image classification system that can accurately categorize fruits and vegetables into four distinct classes — fresh fruit, fresh vegetable, rotten fruit, and rotten vegetable — using computer vision and deep learning techniques.

Step-1: Team Gathering, Collaboration and Select the Problem Statement

The team conducted an initial discussion session to identify key real-world problems where Artificial Intelligence can bring impactful solutions. We explored various areas including agriculture, food safety, and logistics.

After a shortlisting phase, we selected the problem statement:

"Develop a smart system that can classify fruits and vegetables based on their freshness using computer vision."

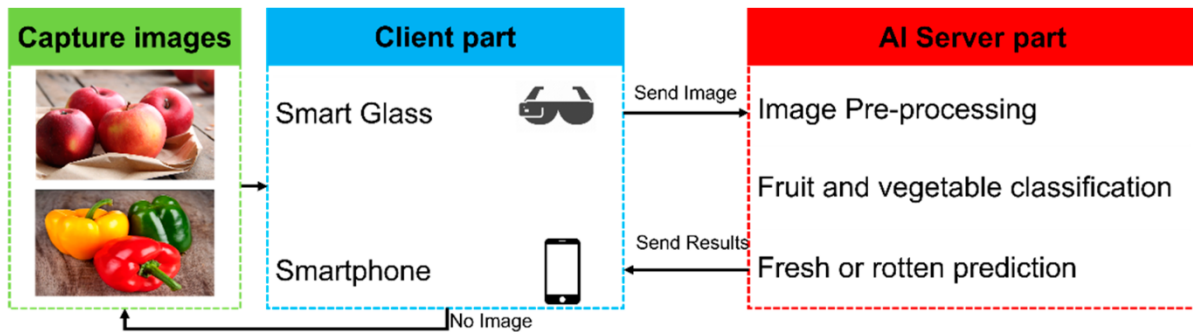
This problem is critical in reducing food waste, optimizing food sorting in markets, and ensuring better food quality for consumers.



Step-2: Brainstorm, Idea Listing and Grouping

We brainstormed various ideas and grouped them under the following categories:

- Classify fresh/stale fruits using image processing
- Detect mold or discoloration
- Build a web app with Flask
- Use MobileNetV2 for fast, lightweight model
- Host model as .h5 and load dynamically



Step-3: Idea Prioritization

We used the Impact vs. Feasibility Matrix to score each idea:

Idea	Impact	Feasibility	Priority
Classify fresh/rotten produce using Mobile Net	High	High	Selected
Integrate IOT hardware	Medium	Low	Postponed
Use CNN from scratch	Medium	Low	Not Selected
Deploy as Android App	High	Medium	Future Scope

Final Prioritized Idea:

Smart Sorting Web App that classifies produce into 4 categories using a trained CNN model.