


## Ideation Phase

### Brainstorm & Idea Prioritization Template

Date	24 June 2025
Team ID	LTVIP2025TMID35526
Project Name	Smart Sorting: Identifying Rotten Fruits and Vegetables Using Transfer Learning
Maximum Marks	4 Marks

#### Brainstorm & Idea Prioritization Template:

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

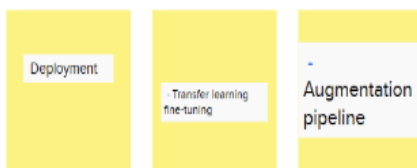
<div>Template</div> <div></div> <div><p>✓ Team Members Involved:</p><div><div>1. <b>Data Scientist</b>Leads the model selection, training, and validation using transfer learning (e.g., MobileNetV2).</div><div>2. <b>Software Developer</b>Implements backend API (Flask/Django), model integration, and deployment pipelines.</div><div>3. <b>UX/UI Designer</b>Designs the intuitive web/mobile interface for uploading images, displaying results, and managing user interaction.</div><div>4. <b>Domain Expert (Agriculture)</b>Provides expertise on fruit and vegetable conditions, labels data, and validates model outputs.</div></div></div>	<div><p>✓ Collaboration Tools:</p><div><div>Communication &amp; Video Conferencing</div><ul style="list-style-type: none"><li>• <b>Slack</b>For instant messaging, channels, and file sharing.</li><li>• <b>Microsoft Teams</b>Chat, video calls, and collaboration in one place.</li><li>• <b>Google Meet</b>Simple video meetings integrated with Google Calendar.</li><li>• <b>Zoom</b>High-quality video conferences and screen sharing.</li></ul></div></div>	<div><div>1</div><p>✓ Problem Statement :</p><p>"We aim to develop an advanced, AI-powered smart sorting system that leverages state-of-the-art image recognition and transfer learning techniques to accurately classify fresh and rotten fruits and vegetables in real time. The current manual sorting processes used by farmers, wholesalers, and retailers are time-consuming, inconsistent, and prone to human error, often resulting in significant post-harvest losses, reduced product quality, and increased food waste.</p><p>Our solution will enable users to capture images of produce via a web or mobile application interface, automatically analyze the visual characteristics of the items—such as color, texture, and shape—and deliver a clear prediction of whether each item is fresh or spoiled. By providing a reliable, scalable, and user-friendly tool that integrates seamlessly into existing workflows, the system will empower stakeholders across the agricultural supply chain to improve quality control, optimize inventory management, and minimize economic and environmental impacts associated with produce spoilage."</p></div>
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## Step-2: Brainstorm, Idea Listing and Gro

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# Idea Grouping

### Person 1



### Person 2



### Person 3



### Person 4



### 3 Group ideas

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Image Collection	Use mobile app camera; allow bulk upload; integrate cloud storage
Model Training	Fine-tune MobileNetV2; experiment with EfficientNet; data augmentation
User Feedback	Let users confirm/correct predictions
Prediction UX	Show confidence score; color-coded results
Notifications	SMS/email alerts on spoilage detected
Deployment	Use AWS Lambda for inference; Docker containers; Kubernetes
Integration	Link with inventory management systems
Accessibility	Multilingual support; offline mode

### Step-3: Idea Prioritization

#### 4 Idea Prioritization

