Brainstorm & Idea Prioritization Template

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Project Name: Smart Sorting of Fruits and Vegetables

Brainstorm & Idea Prioritization

This document presents our brainstorming, ideation, and prioritization for the project 'Smart Sorting of Fruits and Vegetables'. Our goal is to automate the manual process of sorting agricultural produce using computer vision and web-based interaction.

Technologies used: HTML, CSS, JavaScript, Python, Flask, OpenCV.

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

Our team identified inefficiencies in the manual sorting of agricultural produce. The current process is slow, inconsistent, and requires human labor. We decided to create a smart sorting system that uses cameras and software to analyze, classify, and sort fruits and vegetables efficiently.

Step-2: Brainstorm, Idea Listing and Grouping

Brainstormed Ideas:

- Use camera modules to capture real-time images of produce.

- Train a machine learning model to classify fruits and vegetables based on color, shape, and defects.

- Develop a frontend to show sorting decisions and allow user interaction.

- Backend built in Flask to handle classification requests and data logging.

- Maintain a sortable database for produce classification history.

Step-3: Idea Prioritization

Ideas were prioritized based on feasibility and impact.

Priority	Feature	Justification
High	Camera + Vision Classification	Core feature enabling smart sorting.
High	Flask Backend for Processing	Connects UI to classification logic.
Medium	Web UI Dashboard	Displays live sorting and logs actions.
Low	Actuator Integration	Nice-to-have for real-world deployment.
Low	Alert Notifications	Useful for anomalies but not critical.

Conclusion

The brainstorming process helped our team explore multiple creative directions. We have narrowed our focus to the most impactful and feasible features. The result will be a smart, accessible, and scalable solution to improve agricultural productivity.