Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	31 January 2025
Team ID	**LTVIP2025TMID35093**
Project Name	: **Smart Sorting & Transfer Learning for Identifying Rotten Fruits and Vegetables**
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form Registration through Gmail Registration through LinkedIn
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	Image Classification	Upload image from camera or file Classify image as fresh or rotten using ML model Display result with confidence score
FR-4	Smart Sorting	Use motor/servo to push item to correct bin (Fresh/Rotten) Log result with timestamp Provide manual override option
FR-5	Dashboard	Show classification logs Display statistics (e.g., number of rotten items per day) Admin can export data to CSV
FR-6	User Login	Login via email & password Session management & logout
FR-7	Notifications	Alert vendors if % of rotten items is high Notify admin of sorting errors or system issues

❁ Non-Functional Requirements

NFR No.	Non-Functional Requirement	Description
NFR-1	Usability	Interface should be simple and easy for rural vendors to use; multilingual support where needed.
NFR-2	Security	Secure login with hashed passwords; restrict access to dashboard for admin only.
NFR-3	Reliability	AI model should maintain accuracy > 90% and failover mechanisms should be in place in case of camera or sensor issues.
NFR-4	Performance	Inference and sorting should be completed within 3 seconds per item.
NFR-5	Availability	System should be accessible 24/7; must handle power failures with local backup.
NFR-6	Scalability	Should be scalable to support multiple sorting stations at different vendor locations in future.