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

Date	27 June 2025
Team ID	LTVIP2025TMID59414
Project Name	Smart Sorting: Transfer learning for 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	Image upload and processing	• Support multiple image formats (JPG, PNG, JPEG) • Batch image processing capability • Image preprocessing and validation
FR-2	Classification Engine	• Binary classification (Healthy/Rotten) • Confidence score calculation • Real-time prediction results
FR-3	Web Interface	• Responsive design for multiple devices • Intuitive user experience • Results visualization and display
FR-4	Model management	• Load pre-trained VGG16 model • Model interface and prediction • Error handling and validation

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Intuitive web interface requiring minimal training
NFR-2	**Security**	Secure image upload and processing, data privacy protection
NFR-3	**Reliability**	System uptime > 99%, consistent classification results
NFR-4	**Performance**	Image processing time < 5 seconds, Model accuracy > 95%
NFR-5	**Compatibility**	Cross-browser support, Multiple image format support
NFR-6	**Scalability**	Support for multiple concurrent users and batch processing