

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

Date	19 February 2026
Team ID	LTVIP2026TMIDS64562
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	<ul style="list-style-type: none">• Support multiple image formats (JPG, PNG, JPEG)• Batch image processing capability• Image preprocessing and validation
FR-2	Classification Engine	<ul style="list-style-type: none">• Binary classification (Healthy/Rotten)• Confidence score calculation• Real-time prediction results
FR-3	Web Interface	<ul style="list-style-type: none">• Responsive design for multiple devices• Intuitive user experience• Results visualization and display
FR-4	Model management	<ul style="list-style-type: none">• 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