

Project Design Phase-II

Solution Requirements (Functional & Non-functional)

Date	25 June 2025
Team ID	LTVIP2025TMID35506
Project Title	CleanTech:Transforming Waste Management with Transfer Learning
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 via institutional email
FR-2	Image Upload	Upload of waste category images (e.g., organic, plastic, metal)
FR-3	Model Prediction	Predict waste category using Transfer Learning model
FR-4	Result Display	Show classification result with confidence score
FR-5	Data Storage	Store uploaded image and result in database
FR-6	Admin Dashboard	View user activity, manage data and monitor model performance
FR-7	Feedback Mechanism	Users provide feedback on model accuracy

Non-Functional Requirements

Following are the functional requirements of the proposed solution.

NFR No.	Non-Functional Requirement	Description
NFR-1	Usability	Clean and simple UI for ease of use across all age groups
NFR-2	Security	Secure user authentication

		and file upload mechanisms
NFR-3	Reliability	The model should give consistent outputs across repeated inputs
NFR-4	Performance	Image classification should take less than 5 seconds per image
NFR-5	Availability	System should maintain 99% uptime
NFR-6	Scalability	Model and application should handle growth in user base and image data