

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

Date	27 June 2025
Team ID	LTVIP2025TMID36584
Project Name	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 through Gmail Registration through LinkedIn
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	Waste Image Upload	Allow users to upload waste images.
FR-4	Waste Image Classification	Classify uploaded images into Biodegradable, Recyclable, or Trash.
FR-5	Display Classification Result	Show the classification label and the uploaded image to the user
FR-6	Log Predictions	Record prediction results in terminal logs.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	The system should be user-friendly and intuitive for waste classification.
NFR-2	Security	Implement secure image handling and data storage.
NFR-3	Reliability	The classification model should consistently provide accurate results.
NFR-4	Performance	The system should classify images quickly (e.g., -0.2 seconds/image on CPU).
NFR-5	Availability	The web application should be consistently available for users to upload images and receive predictions.
NFR-6	Scalability	The system should be scalable to handle an increasing number of users and image classification requests.