

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

Date	16 July 2025
Team ID	LTVIP2025TMID32540
Project Name	Transfer learning based classification of poultry diseases for enhanced Health management
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	Disease Prediction Using Transfer Learning	- Load pre-trained model (e.g., ResNet/VGG) - Predict disease from uploaded image - Display disease name and probability
FR-4	Result Visualization	- Show prediction confidence score - Display highlighted image (if Grad-CAM used) - Give disease description
FR-5	Disease Management Suggestions	- Show symptoms and treatment tips - Link to expert advice or veterinary contact
FR-6	User Feedback	- Allow user to confirm prediction accuracy - Submit feedback or correction

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Interface must be user-friendly for farmers and veterinarians
NFR-2	Security	Image uploads and user data must be securely stored and transmitted
NFR-3	Reliability	Model should give consistent outputs for similar inputs
NFR-4	Performance	Model inference time should be < 3 seconds per image
NFR-5	Availability	The system must be available 24x7, especially during outbreaks
NFR-6	Scalability	Capable of handling increasing number of users and uploaded images