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

Date	25 Jun 2025
Team ID	LTVIP2025TMID33049
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 poultry disease detection system using transfer learning.

Makes your solution more accessible and inclusive for farmers in rural India who prefer local languages.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Farmers can register using a mobile form with email and phone. Option to register using Gmail account
FR-2	User Account Confirmation	System sends verification email with confirmation link - OTP-based confirmation via mobile number
FR-3	Image Upload Module	Upload clear images of poultry faces or birds. System validates file type and quality
FR-4	Disease Detection Engine	AI model processes uploaded images using transfer learning. Displays predicted disease with a confidence score
FR-5	Result History & Record Keeping	Stores and displays history of past uploaded images Shows disease type, date, and confidence score
FR-6	Educational Support & Helpdesk	Displays disease-related info (symptoms, action steps) Provides contact form or support chatbot

Non-functional Requirements:

Non-functional requirements define the quality, performance, and reliability expectations for the poultry disease detection platform.

These ensure the solution is user-friendly, secure, and efficient even in low-connectivity environments.

the system should allow easy updates to the AI model, disease database, and language packs without affecting the user experience

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Interface must be simple and intuitive for users with minimal technical background (e.g., rural poultry farmers)
NFR-2	**Security**	All user data, images, and prediction results must be securely stored with end-to-end encryption
NFR-3	**Reliability**	The system must provide accurate and consistent predictions under various conditions
NFR-4	**Performance**	Disease prediction results should be displayed within 2–3 seconds per image upload
NFR-5	**Availability**	System should function 24/7, including offline support during low or no internet connectivity
NFR-6	**Scalability**	Must support increasing number of users and image uploads without affecting performance or accuracy