

Project Design Phase
Proposed Solution Template

Date	15 June 2025
Team ID	LTVIP2025TMID43861
Project Name	Transfer Learning-Based Classification of Poultry Diseases for Enhanced Health Management
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in the proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Poultry farmers, especially in rural areas, face difficulty in identifying and treating poultry diseases due to lack of veterinary access, limited disease awareness, and delayed diagnosis. This leads to bird mortality, financial loss, and health risks in poultry farming.
2.	Idea / Solution description	Develop a mobile-based AI system that uses transfer learning to classify poultry diseases from images (e.g., Salmonella, Newcastle Disease, Coccidiosis, and Healthy cases). The app will provide immediate disease prediction and corresponding treatment advice. It is designed to work offline and be user-friendly for farmers.
3.	Novelty / Uniqueness	The solution leverages deep learning and transfer learning to make disease diagnosis accessible in remote areas. Unlike traditional veterinary services or manual inspection, it delivers instant results using a simple photo, and works even without internet once installed. This makes it highly practical and innovative for underserved farming communities.
4.	Social Impact / Customer Satisfaction	The system empowers farmers with immediate knowledge, reducing dependence on external vets. Early disease detection minimizes bird deaths and improves poultry health management. It promotes self-reliance, improves income stability, and contributes to food security, ultimately enhancing the quality of life in rural communities.

5.	Business Model (Revenue Model)	The app can be distributed using a freemium model — free disease detection for limited uses, with paid features like disease history, advanced analytics, or consulting services. It can also be monetized through partnerships with veterinary pharma companies, NGOs, or government agricultural schemes.
6.	Scalability of the Solution	The solution can be scaled nationally and globally by expanding to other livestock species (goats, cows, etc.) and more poultry diseases. It can support multilingual interfaces and integrate into digital agriculture platforms. With proper partnerships and awareness campaigns, adoption can grow across diverse geographies.