**Project Design Phase**

**Proposed Solution Template**

| Date | 26 june 2025 |
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| Team ID | LTVIP2025TMID33880 |
| Project Name | Transfer Learning-Based Classification Of PoultryDiseases 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** |
| --- | --- | --- |
|  | Problem Statement (Problem to be solved) | Poultry farming faces significant losses due to late or inaccurate disease detection. Traditional methods are slow, costly, and depend heavily on expert knowledge. There is a need for a faster, automated, and more accurate solution for classifying poultry diseases. |
|  | Idea / Solution description | The proposed solution uses transfer learning-based deep learning models to classify poultry diseases from images. Pretrained models like ResNet or VGG are fine-tuned on poultry disease datasets to identify infections at an early stage with high accuracy. This solution can be integrated into a mobile or web-based application for ease of use by farmers. |
|  | Novelty / Uniqueness | Unlike generic classification methods, this project leverages transfer learning to reduce the need for large datasets and training time. The system is tailored for poultry diseases, and its adaptability across various poultry environments makes it unique. |
|  | Social Impact / Customer Satisfaction | Early detection and treatment reduce poultry mortality and increase productivity. Farmers can manage poultry health more efficiently, leading to increased income and food safety. The solution empowers rural farmers with modern technology and enhances animal welfare. |
|  | Business Model (Revenue Model) | The model can be commercialized as a subscription-based mobile/web app for poultry farmers, veterinary services, or agritech companies. Additional revenue can be generated through partnerships with poultry feed companies, government schemes, and agricultural extension programs. |
|  | Scalability of the Solution | The solution is highly scalable. It can be expanded to classify diseases in other livestock (e.g., cattle, goats). The model can also be continuously improved with more data and adapted to different geographies and poultry breeds. |