**Project Design Phase**

**Solution Architecture**

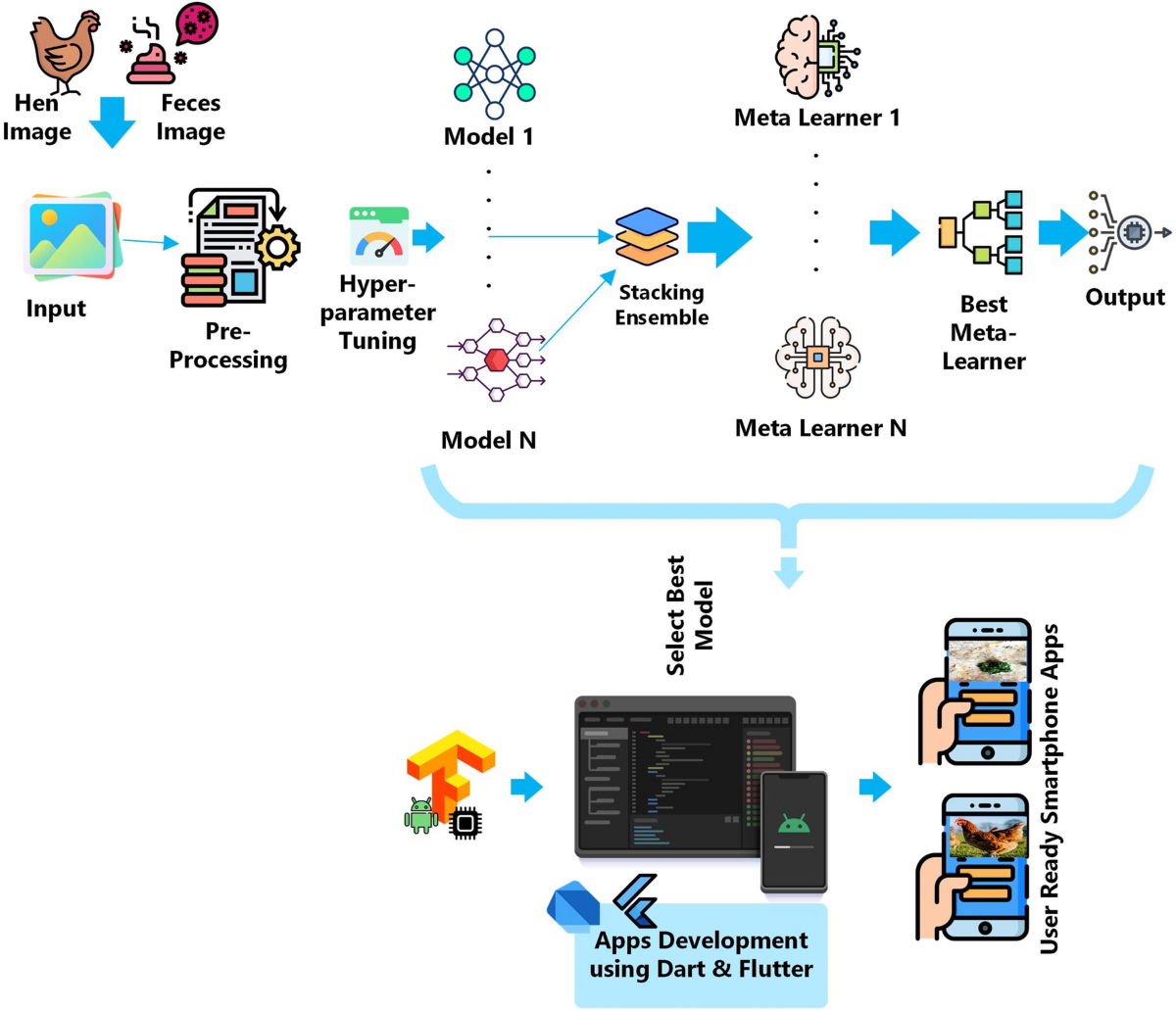
|  |  |
| --- | --- |
| Date | 30 June 2025 |
| Team ID | LTVIP2025TMID35759 |
| Project Name | Transfer Learning-Based Classification of Poultry Diseases for Enhanced Health Management |
| Maximum Marks | 4 Marks |

**Solution Architecture:**

The proposed solution architecture integrates user-friendly interfaces with a powerful backend driven by transfer learning models. Farmers or users can upload poultry images or enter symptoms via a mobile/web app. This data is processed through a pre-trained convolutional neural network (CNN) that classifies the disease. The system connects with a backend API that manages predictions, stores data securely, and delivers real-time insights back to the user all hosted via scalable cloud services.

* *User Interface (Mobile/Web App):* For image upload or symptom entry.
* Backend API (Flask/FastAPI): Handles request routing and communication with the ML model.
* *Transfer Learning Model (e.g., ResNet, VGG):* Classifies poultry diseases based on trained image patterns.
* *Database (MySQL/MongoDB):* Stores user data, predictions, and disease metadata.
* *Cloud Hosting (AWS/GCP/Azure):* Ensures availability, scalability, and secure access.
* *Notification System (Optional):* Sends alerts or recommendations based on detected disease.

**Example - Solution Architecture Diagram**

****