**Solution Architecture**

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| **Date** | **23 June 2025** |
| **Team ID** | **LTVIP2025TMID43223** |
| **Project Name** | **Transfer Learning-Based Classification of Poultry Diseases for Enhanced Health Management** |
| **Maximum Marks** | **4 Marks** |

The solution architecture is built using modern machine learning and web development tools, organized as follows:

* **Languages:**
  + Python
* **Frameworks:**
  + Flask (for backend and API development)
  + TensorFlow/Keras (for developing and deploying the deep learning model using transfer learning)
* **Tools:**
  + Jupyter Notebook (for model development and experimentation)
  + Visual Studio Code (for application and API development)
  + Google Colab (for cloud-based model training and testing)
* **Deployment:**
  + **Render** (for deploying the Flask-based web application)
  + Alternatively, deployment can be done on a **Flask local server** during development and testing phases.

**Key Points:**

1. **System Architecture Diagram:**
   * User Uploads Image → Flask App → Pre Processed Image → Trained Model → Prediction Result → Rendered on Result Page
2. **User Flow:**  
   Home → Get Started → Upload Page → Result Page → (Back to Home or Read Disease Info)
3. **UI/UX Considerations:**
   * Clean, minimal UI with clear call-to-actions
   * Mobile-first responsive design
   * Simple navigation bar with links to Home, Diseases, Contact, About