

Project Design Phase

Solution Architecture

| | |
|---------------|--|
| Date | 27th January 2025 |
| Team ID | LTVIP2025TMID36392 |
| Project Name | Enchanted Wing: Marvels of Butterfly Species |
| Maximum Marks | 4 Marks |

Solution Architecture:

The Butterfly Image Classifier is built with a simple yet scalable architecture:

- **Model Layer:**
Trained a MobileNetV2 model using labeled butterfly images. The model outputs the predicted species from uploaded images.
- **Application Layer:**
A Python-based Streamlit app loads the trained model, handles image uploads, and displays predictions with confidence scores.
- **User Interface Layer:**
A clean web UI where users can upload butterfly images and instantly get species names. Basic error handling is included for non-image inputs.

Example - Solution Architecture Diagram:

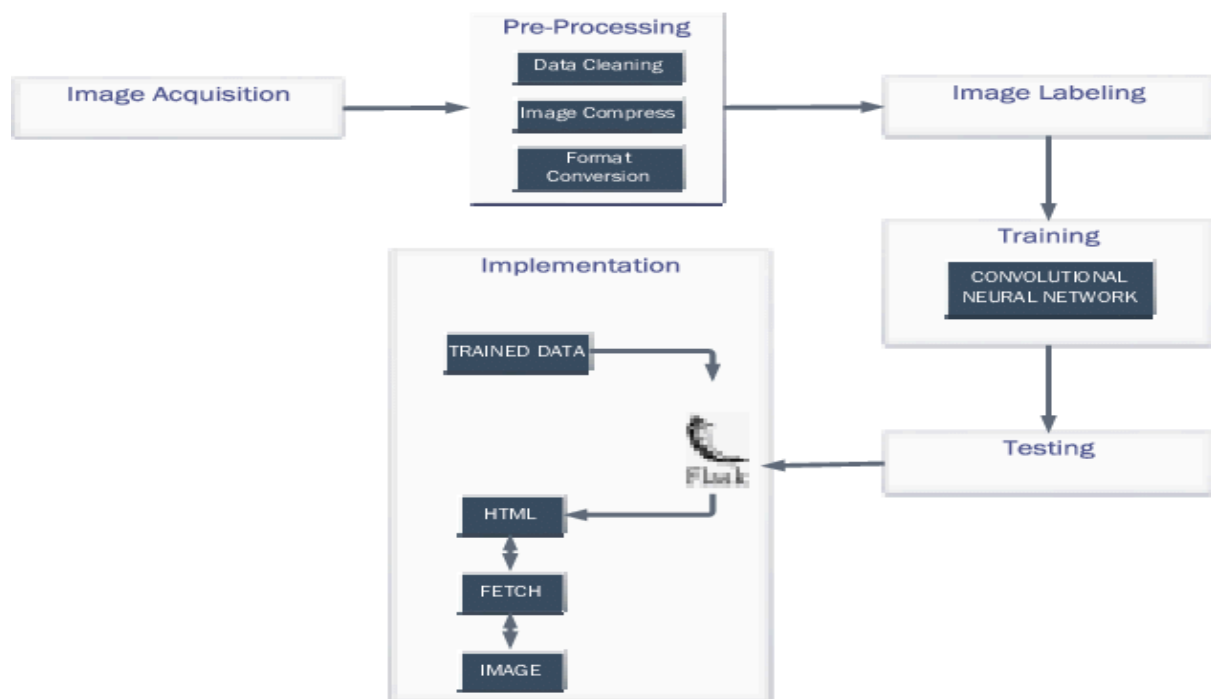


Figure 1: Architecture and data flow of identifying a butterfly