

Project Design Phase-II

Solution Requirements (Functional & Non-functional)

Date	15 February 2025
Team ID	LTVIP2025TMID42449
Project Name	Butterfly Species Classification System
Maximum Marks	4 Marks

1 Functional Requirements

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Image Classification	Classify butterfly images across 75 species using MobileNetV2 Output confidence scores for predictions
FR-2	Data Preprocessing	Resize images to 224x224 pixels Apply augmentation (rotation, flipping)
FR-3	Educational Content Delivery	Display species facts (e.g., habitat, lifecycle) Retrieve data from SQLite database
FR-4	User Interface	Allow image uploads via Streamlit Display predictions and facts in real-time

2 Non-functional Requirements

NFR No.	Non-Functional Requirement	Description
NFR-1	Accuracy	Achieve 95% classification accuracy on test set
NFR-2	Performance	Process image predictions within 2 seconds
NFR-3	Usability	Intuitive Streamlit UI with clear navigation
NFR-4	Scalability	Support multiple concurrent users via cloud deployment
NFR-5	Availability	Ensure 99.9% uptime for hosted application